Department of Business and Management

Chair of Financial Statement Analysis

Strategic Growth Prospects:
A potential acquisition for Amazon

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Introduction

The present study comes at the end of a two-year master's program in Corporate Finance at LUISS Guido Carli University; a wonderful journey characterized by excellent professors, lots of new friends and colleagues, an Erasmus experience and an internship for an important public company, leading the consulting industry.

Throughout the entire course of study, what represented a constant is the objective (constantly supported both by the professors and colleagues) to deeply understand and master the skills that a high-level professional must have when dealing with public companies and financial institutions, two fundamental players of the world's economy and society. This mentality, formed by healthy curiosity and dedication to learning, is one of the key elements that the LUISS university transmits to its students, setting for them the best conditions for professional development.

The thesis is aimed at consolidating the skills acquired within this master's program, with the objective to provide a qualitative point of view regarding a possible acquisition to be undertaken by Amazon. To this purpose, many lessons learned in various subjects and passionate professors, as well as in personal professional experience, have been employed in the research, analysis and conclusions of the present study.

The idea behind the choice to develop an assessment regarding the feasibility of the acquisition of TopCashback by Amazon, came within the process of elaborating and understanding the significant changes that the COVID-19 pandemic caused (and will continue to cause) to the global economy. In a context characterized by significant changes in customers' behavior and in companies' strategies, new important trends in M&A Markets emerged, as well as the need to keep up with times and to try riding the wave of change. What is partially driving the markets, is the sharp growth that the e-commerce industry has experienced, as better discussed later in this study. This growth is due to the lock-down period that many people, of very different nationalities, age and spending capacity, have experienced during the first months of 2020. Nowadays, the majority of people is well aware of the possibility to rely on both small and large online retailers, to make their purchases of goods that are then delivered directly to their respective homes, partially removing the need to purchase personally in physic shops. Indeed, a global survey[1] conducted by PricewaterhouseCoopers collected impressive results, among which the most significant for the considered acquisition are:

- 45% of the interviewees said they are using their mobile phone more as a shopping channel, after the COVID-19 pandemic.
- 44% of millennials have an Amazon Prime subscription.

[1] S. J. Barr, O. Ozturk, *"The consumer transformed – Global Consumer Insights Survey 2020"*, PwC, 2020

- 35% of the interviewees are now buying groceries online since the pandemic outbreak.

Because of the significant rise in the frequency of online purchases, customers are now increasingly careful about which online retailer is more convenient for a specific purchase that they're planning. When choosing among reliable and popular online retailers, consumers are often preferring the ones that are able to carry concrete advantages for them, in terms of delivery times, discounts, limited time offers and reward programs. The great majority of companies around the world needs to understand how these changes will affect their lines of business and try to reinvent part of their strategy in order to avoid being negatively impacted by the pandemic and consequently losing market shares.

Against this background, the choice to implement tangible reward programs, as a cash-back system, appears to be a valuable and disruptive strategy for Amazon, especially for the potential increase in the retention rate of the company's customers that it could experience. Undoubtedly, Amazon comes at a position of strength, given that it is the largest online retailer over the markets and, as reported further in the study, it experienced an important increase in sales during the pandemic. Even if Amazon has a competitive advantage, if compared to the large physics retailers, it still has room to improve itself and to exploit this period of economic changes by adopting the right strategies. These are some of the principal reasons, better explained at the end of the thesis, that support the statement that a possible valuable strategy for Amazon would be the one to start providing some rewards programs to its customers, in the form of cash-back. Cash-back is increasingly common over the markets and it can happen in some different ways, the more common is the one that sees a percentage of what has been purchased by the customers, being returned to them so as to be used to get a discount on the price of the subsequent goods purchased (the one that is most fit to Amazon), but it is also common for credit card issuers to provide a certain form of cash-back connected to the credit card's usage. This mechanism rewards significantly the customers that make many purchases on the same website (or with the same credit card), which, by doing so, can get an important percentage of the money they already spent directly "back" to them. By implementing such a strategy, Amazon would incentivize the customers to boost the frequency of their purchases on the company's website, implying more sales as well as a higher retention of the customers, that generally is the ultimate goal of the majority of retailers. The choice to acquire TopCashback, rather than implementing the service by itself lies in a number of reasons, among which the more evident are: at first, to undertake an inorganic growth strategy (through acquisitions) is more efficient for large public companies, secondly, TopCashback experienced an impressive growth over the year, a clear sign of a right vision and an important level of expertise, and lastly, as it can be seen in the last two chapters, the price of the target company can be considered as "cheap" for a colossus like Amazon.

With the objective to drive the reader, in the more straightforward way as possible, throughout the entire process of assessing the feasibility of the hypothetic acquisition that sees Amazon as the acquirer and TopCashback as the target company, this thesis is structured in four chapters, divided in paragraphs, structured in the following way:

1) *M&A Outlook in recent years*: the chapter starts with an assessment of the top trends prevailing on the M&A market and the relative current outlook, followed by the track record of the most relevant deals occurred in the period 2019-2020. The last part of the chapter is focused on the share price considerations that occur for both the companies, once a deal is closed. The main goal of the chapter is to define a big picture of what happened, and what is happening, to the M&A market in the last two years, deriving some key considerations about the effects that the pandemic had on the world's economy and about what is actually driving the value for dealmakers.
2) *The theory behind M&A*: The second chapter of this thesis is a sort of "guidebook" reporting the theory that is needed when approaching to the M&A's world; at first the concepts of mergers and acquisitions in general are introduced (in terms of rationale, types and integration strategies). This section is followed by the role that investment bankers play in this type of deals, both by the sell-side and buy-side points of view, reporting how these important financial players help both parts to get fair terms for the deal. The core of the chapter is represented by the third paragraph, that is the theoretical explanation of the most-used valuation techniques employed by dealmakers and analysts in the process of assessing the fair value of the company to be purchased. The closing of the chapter is about the synergies that can be generated, for the acquirer or for the merged company, with a deal and the relative methods to be estimated.
3) *Amazon and TopCashback: valuation and deal considerations*: this chapter is the most analytic part of the thesis, aimed at producing a reliable value for TopCashback's equity, as a main output. Before the effective valuation takes place, both companies are described and analyzed, with some first considerations about the possible combinations between the two firms. Then, after an analysis of the target company's financial statements, the effective valuation of TopCashback is reported: firstly, the results obtained with the discounted cash flows (DCF) analysis are discussed, then the countercheck provided by the comparables multiple analysis is presented. The entire analysis has been conducted on Microsoft Excel and the relevant data has been taken from reliable sources as Orbis and Thomson Reuters Eikon. Once an effective and reliable value for TopCashback's equity is defined, the chapter is concluded with an interpretation of the potential synergies that may arise from the acquisition and with an assessment of the deal's rationale, with some first key conclusions.
4) *The deal: price, premium and considerations*: the final chapter of the thesis is composed by the definition of a possible range for the price of TopCashback's equity, which is then incorporated with a possible premium to be paid for the target company's ownership. The second part of the chapter starts with the results obtained thanks to an interview conducted with three Amazon's employees, regarding the perspectives for e-commerce and the overall attractiveness of the deal (more broadly, of cash-back); the interviewees are presented as anonymous, in order to avoid any possible conflict between them and Amazon. The final chapter is concluded with the final word on the deal,

represented by three macro categories of reasons why the acquisition should be undertaken, or at least considered, by Amazon.

TopCashback, the target company, is private, and this implies that a number of consistent assumptions have been made in order to estimate its true value in the more reliable way as possible. When projecting the assumptions, two fundamental principles have been followed. The first principle is to seek for coherence among the various assumptions; this is relevant especially for the valuation process (e.g. for the selection of the appropriate cost of equity), in which a mismatch between the various components may lead to dangerous errors. The second principle is to follow a conservative approach, that is traduced in avoid making statements or driving conclusions, if these are not supported by evidence; to be conservative means also to try avoiding overestimation errors in the valuation process, regarding both TopCashback's equity value and the premium to be paid.
The thesis comes at the end with the general conclusions on the analysis developed, presenting some limitations encountered during the assessment, as well as some possible ideas for professionals that are willing to deepen the study. After the general conclusions, an Executive Summary is presented, containing the main topics and findings of the thesis, divided in four sections corresponding to the relative chapters. The Executive Summary is followed by an Appendix containing the more relevant tables presented throughout the thesis.

1. M&A Outlook in Recent Years

1.1 Top trends of M&A and current outlook

M&A is one of the most active and productive fields of the whole financial sector, it involves a variety of players, the most important are: the acquirer, the target and the investment bank or boutique which provides many services for both parts of the deal. There may be several reasons behind corporate mergers, among the most significant there is the creation of synergies (mainly achieved with the exploitation of economies of scale and/or economies of scope, better described later in the next chapter), the so-called "tax considerations", the need of diversification and also the opportunity to purchase new strategic assets and capabilities below their replacement cost.

The M&A field is historically explained by "waves", trends which sometimes last for many years and are characterized by a particularly high activity and similar deals in terms of size, target sector, type of payment and frequency. The principal drivers of these waves are low interest rates and a bustling stock market environment; the former reduce the overall cost of capital for debt-financed acquisitions, the latter can make companies with a high share price more likely to undertake M&A operations to exploit their own increased P/E ratios[2]. The first wave was the one of "horizontal mergers" (1893-1904), followed by the one of "vertical mergers" (1919-1929), the third one is called "diversified conglomerate" (1955-1973) and the fourth was characterized by "hostile takeover, junk bonds" (1980-1990). The fifth wave was the one of "megadeals and cross-border mergers" (1993-200) followed by the wave of "shareholder activism, private equity and LBO" (2003-2008). As suggested, all the names of the waves explain the main features of the deals. Nowadays, the M&A sector is driven by the trends of sustainability and digitalization, the sustainability is devoted to the creation of a positive social impact through investment, the digitalization is the process through which a company is transforming the method to approach the market, the interactions with customers and the implementation of their operations[3]. About the last one, the digitalization, Werner Rehm, partner at McKinsey, states that within its famous consulting firm there's a particular attention on this trend for M&A deals, given that since 2016 about 4 or 5 percent of the overall M&A value is represented by "digital deals"[4]. According to him, there are two types of digital M&A: one is a company buying skills, analytics and software to enhance the production process and the product development; the second type is focused on the Internet of Things applications to improve the product, making it better, secure and connected. PricewaterhouseCoopers, one of the biggest consulting firms, in a study[5] on the 2020 deals outlook asserts that 2019 saw announcements for some of the largest deals of all time and many firms tried

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[2] Richard Schoenberg, *"Mergers and Acquisitions: Motives, Value Creation, and Implementation"*, The Oxford Handbook of Strategy, 2006

[3] Nadir Hirji, Gale Geddes, *"What's your digital ROI? Realizing the value of digital investments"*, PwC – Strategy&, 2016

[4] Werner Rehm, Robert Uhlaner, *"Reflections on digital M&A"*, McKinsey & Company, 2017

[5] Colin Wittmer, Curt Moldenhauer, *"Deals 2020 outlook: Making bold M&A deals during times of rapid change"*, PwC, 2020

to transform their businesses or acquire new capabilities through acquisitions in other industries, in particular technology, which remains a top cross-sector M&A target; supposing that 2020 will maintain a similar outlook, they expect that the near future of M&A will be driven by the desire to increase scale and the achievement of the latest improved technologies. Also Deloitte, with a survey report for the Wall Street Journal[6], looks at technology as a focusing point for many companies' M&A strategy: one of the main results of their survey is that, when asked about their company main acquisition strategy, deals aimed at gathering new technologies was among the top answers within corporate respondents; Deloitte concludes that, nowadays, to add new technological processes as IT (internet of things) and incorporate them inside a firm, is a clear signal for investors of the willingness to innovate and grow. According to Bain & Company[7], which conducted an analysis of 250 strategic deals, the nature of this kind of acquisitions has shifted from scale to scope, companies look for their acquisitions to contribute to the growth of the firms in many more ways than just with economies of scale. Scope deals are more elaborate and difficult than scale deals: revenue synergies are more uncertain because of different types of services provided, products developed and pricing models. One of the more interesting results of their analysis is that, basically, the scope deals can be traced by three main themes: connectivity, cloud and data. The connectivity between devices is growing sharply, the advent of 5G is creating demand for new products and services, including a better and stable security for data, more advanced automation and a more intelligent network infrastructure. The transition to the cloud, with regards to the storage of data and software for enterprise resource planning (ERP), is creating an intense M&A activity in the infrastructures on which the cloud is based. Data and the analytics based on it are gaining increasing important for firms that now look at proprietary data as a way to achieve a competitive advantage against competitors. The definition of "technology" comes from many studies and it is explained in many different ways, it is however a nebulous concept, shifting and changing every day. When applied to the M&A's world, probably the most suitable meaning of "acquiring new technologies" consists in exploring new ways to attract business organically, in order not to get left behind by the most forward-looking competitors. A wide variety of guides and books dealing with the ways to approach and conduct M&A is available, but basically nothing can be found about how to navigate technology integration between two firms, as stated in the "M&A Guidebook"[8]. According to the authors, it is important to constantly look from a strategic point of view at how technologies would help the acquiring firm to increase its success; many times, the right solution results to be something that is new to the whole organization. An important takeaway from their study is that the due diligence and assessment of technology integration should be considered as a structured process with the relative timeline and the attached cost and goals. A fundamental aspect that every financial advisor should take into consideration when dealing with M&A

[6] Andy Marks (Deloitte), *"2020 M&A Survey: Tech Core to U.S. Dealmaker Strategy"*, The Wall Street Journal, 2020

[7] Adam Haller and Chris Johnson, *"The New Realities of Tech M&A"*, Bain & Company, 2019

[8] G. Friedman, S. Kapusinski, *"The M&A Landscape and Technology's Role. In: The Financial Advisor M&A Guidebook"*, Palgrave Macmillan, Cham, 2018

strategies is sustainability, the so-called shareholder activism is a very important movement and its popularity is increasing year after year. Shareholder activism is referred to as the attempts of one or more shareholders to influence the board of directors of a company, its main goal is to implement a change in the management or in the strategies of a company[9]. The activism often involves persuading the board to change the operational plans of the company, to avoid a particular transaction or else adopting a specific corporate strategy. Groups of activist shareholders usually are putting pressure to the company to adopt a particular approach to universal human rights (not just the ones of the employees) and to pursue a certain environmental policy. However, large active shareholders realize just a small part of the benefits from influencing the firm through shareholder activism even if they bear the full cost, this is often referred to as a typical "free-rider problem". To overcome this issue, an exit from the firm could be seen as a valid (but sometimes opposite) alternative to activism: if a large shareholder sells a huge block of shares, the price of the company will be driven down and, if managers compensation is tied to the share price, this threat is very effective in disciplining management's behavior[10]. For all these reasons, a large public company should be aware of how its shareholder base is composed and, if there's a block of shareholder activists, it should pay attention to its sustainability goals in order to avoid negative consequences on the share price or in the board composition. According to Deloitte[11], companies are progressively recognizing that by addressing sustainability issues, they can realize their strategic and financial objectives easier, it is widely known that in most of the countries around the world, firms with concrete corporate social responsibility (CSR) programs are likely to be rewarded for their effort and to attract more investors. Furthermore, environmental regulations are becoming more stringent as many states are applying regulatory changes at state and local levels, with the aim to protect the environment, asking firms to increase and maximize disclosure about their environmental impact. For these reasons, when a firm is targeted for an acquisition, its sustainability parameters can affect both the value and the reliability of the deal.

In addition to digitalization and sustainability, the factor that will influence mostly the entire M&A sector and, more in general, the economy of the entire world in the next years, is the COVID-19 pandemic in progress. It is strikingly interesting an article written for Forbes by Harroch[12], in which the authors affirm that the consequences of the pandemic affect the financial system as a whole, as well as the valuation parameters and the timing of the deals. Moreover, it impacts the due diligence process and the way it is conducted as most of the companies have been in smart working for months, dealing with new creative methods to collaborate from remote. The pandemic also impacts the availability of deal financing and the

[9] J. Du Plessis, A. Hargovan, J. Harris, "*Principles of Contemporary Corporate Governance"*, Cambridge University Press, 2018

[10] Anat R. Admati, Paul Pfleiderer, *"The "Wall Street Walk" and Shareholder Activism: Exit as a Form of Voice"*, The Review of Financial Studies, 2009

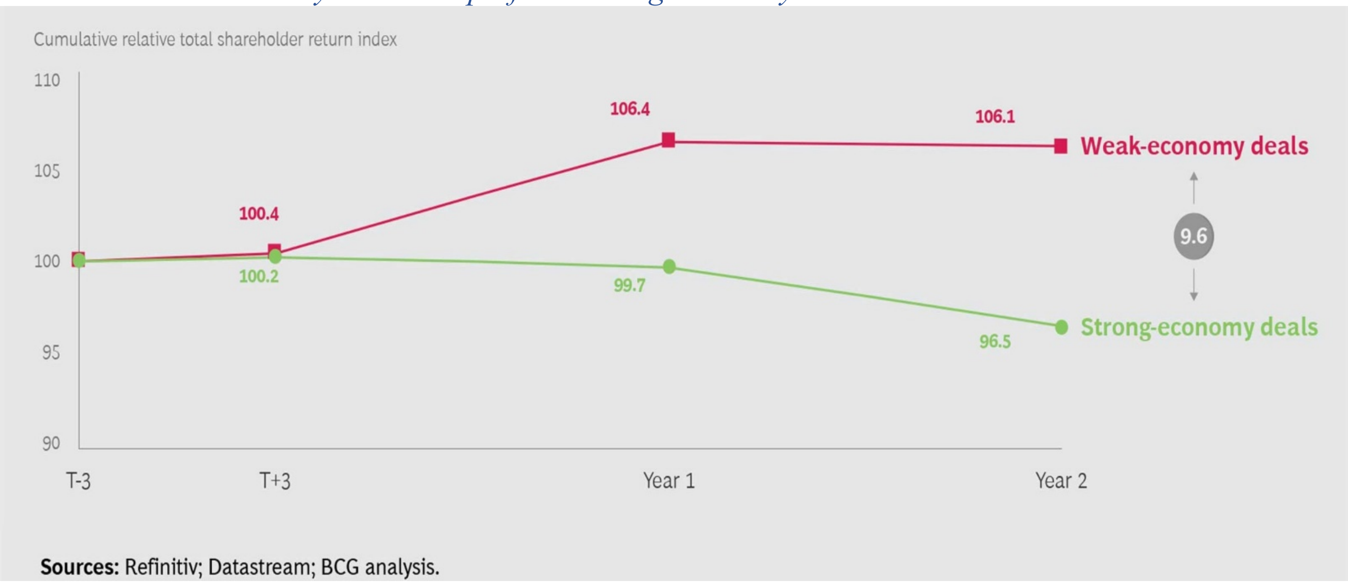
[11] K. Lynch, C. Park, R. Millot, K. Pavlovsky, *"How Green is the Deal? The Growing Role of Sustainability in M&A"*, Deloitte, 2008

[12] Richard Harroch, *"The Impact Of The Coronavirus Crisis On Mergers And Acquisitions"*, Forbes, 2020

time to obtain third-party approvals for transactions. As a result, M&A levels in the United States fell by more than 50% in the first quarter of the year compared to 2019; in many cases, top executives of companies that would have been strategic buyers, have been forced to redirect their efforts on the financial health (and sometimes survival) of their own companies. Also BGC (Boston Consulting Group) tried to analyze the possible implications of the pandemic with the article "COVID-19's Impact on Global M&A"[13], one of the most interesting information within the publication is that, according to BCG's point of view, companies that have risen healthy and strong balance sheets during the economic boom of recent years have the opportunity to pursue deals that can create long-term value, given the declining valuations connected to the crisis. Their research demonstrates that deals done during recessions are more likely to create value for dealmakers and shareholders, in these periods a company can focus on integrating the target more easily thanks to the fact that most competitors would be busy trying to survive.

To validate this statement, BCG conducted a research on the cumulative relative total shareholder return index over the years following the acquisition, comparing M&A deals during weak-economy periods against deals made during strong-economy periods; the sample period of the analysis is the one between 1980 and 2018, only deals with a value greater than $250 million and where the buyer is public were considered, for a total amount of 9987 deals. Strong-economy (weak-economy) periods are those in which the respective global real GDP growth rate is in the top (bottom) third of all growth rates in the considered observation period. The research confirms that effectively, weak-economy deals outperform strong-economy deals of about 9,6% over the long run, as showed in the following chart[14]:

Table 1 – Weak-Economy Deals Outperform Strong-Economy Deals



[13] J. Kengelbach, J. Gell, G. Keienburg, D. Degen, D. Kim, *"COVID-19's Impact on Global M&A"*, Boston Consulting Group, 2020

[14] Table 1: EXHIBIT 3, Weak-Economy Deals Outperform Strong-Economy Deals, J. Kengelbach, J. Gell, G. Keienburg, D. Degen, D. Kim, *"COVID-19's Impact on Global M&A"*, Boston Consulting Group, 2020

Many companies will not resist the crisis, creating the opportunity for healthy corporations to buy distressed firms. To properly understand this context, an article[15] from the Harvard Law School Forum on Corporate Governance is particularly relevant, it provides advice for a potential buyer willing to purchase a distressed company. As a main tip, it states that when the buyer is considering purchasing assets from an insolvent company it must pay attention, through the due diligence process, to avoid assuming undesired liabilities which could involve a "fraudulent transfer", considering that typically the buyer has relatively limited recourse for unwanted liabilities under the purchase agreement. Nowadays it is important to conduct a 360-degree due diligence process, including certain areas affected by the COVID-19 pandemic such as:

- Exposure of the business process to regulations highly affected by the pandemic.
- Supply chain risk and the eventually availability of alternative sources of supply.
- Potential employment law issues, if any, and compliance with government health guidelines to protect employees.
- Any eventual taxes or fees of the seller that could vary due to newly adopted laws in response to the pandemic.
- Regulatory, licensing and data privacy implications arising from both holding health data of employees or customers and the implications of remote working.
- The eventual opportunity of the business to perform, suspend or walk away from obligations under assignable material contracts.

To ensure that the due diligence process is effective and to take into account every possible issue arising from this peculiar context, a potential buyer is better to consider obtaining a third-party valuation of the assets being acquired, this appears to be particularly relevant for companies that use to rely primarily on their own due diligence process and best practices.
Moreover because of the objectively difficult environment, fraught with uncertainty, for dealmakers an M&A deal must be strategically meaningful for the firm, it therefore should have a good chance of creating value. In order to achieve this goal, it is fundamental to take a position on a sector that could experience a growth rather than a downturn, compatible with the characteristics of the current crisis. The pandemic is changing the habits of society, expressions like "social distancing" and "lockdown" are basically on most of the articles and newscast, even advertising is rapidly changing, showing how the products/services sold are proven to be essential if customers are forced to stay home and how advantageous it appears to be than these products can be easily delivered.

[15] J. Fitchen, S. Austin LLP, *"Strategic Acquisitions of Distressed Companies in the COVID-19 Environment"*, Harvard Law School Forum on Corporate Governance, 2020

One of the sectors that seemed to have consistently strengthen in this context is e-commerce, an article on Forbes[16] reports some numbers that validate this conclusion:

- U.S. online retailers reported a year-over-year (YoY) revenue growth of 68% as of mid-April 2020, compared to the 49% in early January.
- Online conversion rates increased 8,8% in February, thanks to a level of shopping urgency typically seen during Cyber Mondays.
- U.S. and Canadian e-commerce orders grew of 129% YoY as of April 21 and a 146% growth in the overall online retail orders.

It is clearly evident that social distancing is creating new online buying behaviors, it is supposed that for many families, online shopping for apparel, household goods, entertainment, etc., will replace store visits permanently until a vaccine is available. A research[17] conducted by PYMNTS shows that consumers are 30,6% more likely to purchase goods online in 2020 than they were in 2019. Even when the pandemic will be considered as concluded, the retailing sector and commerce overall will experience a change for years to come, obviously affecting many other sectors. It can be thought that major players in the e-commerce sector have experienced an impressive growth in this period, thanks to the quarantine and the relative general fear for superstores, but this is not exactly the case. Considering Amazon, the biggest competitor within the sector with Alibaba, this period has presented challenges never met before. If on the one hand, considering the first quarter of 2020, Amazon reported a sharply rise in revenues[18], which are $75,4 billion due to a rise in sales of 26% compared to the same time last year, on the other hand the profit fell 29% from the last year to $2,5 billion due to the incredible costs generated by the pandemic. Furthermore, the company is planning to spend $4 billion or even more in the period May-July 2020 on coronavirus-related expenses, including delivering safe and sterilized products to customers , keeping employees protected from the virus with investments in personal protective equipment, more frequent and deep cleaning of Amazon's facilities and higher wages for hourly teams. Financial markets are struggling to maintain stability and companies engaged in acquisitions face increased risk and uncertainties, the pandemic and the crisis that follows have effects also on the signed M&A deals, raising many legal issues both for the buy-side and for the seller. While for those deals still in negotiation, the parties have the chance to adjust terms to take into account the pandemic and the relative impacts on the market, for already signed deals there is the need to analyze their purchase agreement to assess potential liability, focusing on condition to closing, termination rights, indemnification provisions and the availability of any form of insurance.

[16] L. Columbus, *"How COVID-19 Is Transforming E-Commerce"*, Forbes, 2020

[17] PYMNTS, *"NEW DATA: Five Ways Social Distancing Is Transforming Retail"*, PYMNTS.com, 2020

[18] D. Rushe, M. Sainato, *"Amazon posts $75bn first-quarter revenues but expects to spend $4bn in Covid-19 costs"*, The Guardian, 2020

Some of the main issues are reported in an article of the Harvard Law School[19]: interim operating covenants are particularly remarkable, for the parties it is fundamental to comprehend whether they can comply with those covenants. It is not easy to maintain the "ordinary course of business", which is aimed to preserve the value of the business, in a context where government laws are continuously changing to face the crisis, often altering demand. In order to face the crisis, the target firm could, for example, rise additional debt without the buyer's consent, lay off key employees or even shut down facilities, all actions that could breach the covenant and give the buyer the right to cancel the purchase operation. Another important issue is represented by regulatory delays that parties should expect in the process of obtaining government approvals (e.g. Antitrust, SEC) and third parties' consents, it is therefore useful to plan for longer pre-losing lead time. Furthermore, many private acquisitions include purchase price adjustment clauses in order to take into account fluctuations in the target's debt, cash balance and net working capital between signing and closing, these clauses typically measure the fluctuation against a peg based on historical information; the problem is that historical data is not the best measure when the target's financial situation is materially impacted by a systemic crisis as the one caused by COVID-19, resulting in an adjustment quite aggressive unless the purchase agreement contains agreed floors or caps with regard to the purchase price adjustment mechanism. Whenever the deal includes a third-party financing the transaction can be influenced or even cancelled, if the financing documents contain conditions as financial measures of both target and buyer (e.g. BITDA-to-debt ratios, liquidity ratios, etc.), lenders of the financing could exploit those conditions, if met, to walk away from the financing contract. Banks, private equities and, more generally, all financial institutions are facing financing markets with great volatility and could therefore opt for a more "conservative" strategy, avoiding financing those deals that could present a certain degree of risk.
Considering the evidence provided up to this point, a conclusion can be drawn about the current environment for dealmakers: despite the difficulties that a crisis period carries, M&A deals are still possible and are happening. In order to carry out the most from this type of transaction, dealmakers considering acquisition in the current context should:

- Focus on what are the main trends of the period, speculate on why these have gained importance and how to exploit them in a proper way. Take into consideration mainly the development of new technologies and all the sustainability-relative issues.
- Pay attention to the real financial stability of the acquiring firm, if on the one hand the weak-economy can give to the acquirer the chance to pursue deals at a lower price, on the other hand an instable financial situation , when undertaking an acquisition, could lead to disruptive consequences for the entire firm.

[19] M. Rogers, A. Xu, G Jerath, Norton Rose Fulbright US LLP, *"COVID-19 Impact: Potential Risks and Problems in Signed M&A Deals"*, Harvard Law School Forum on Corporate Governance, 2020

- Rethink at due diligence processes in a more comprehensive way, in order to address all the specific issues that could arise in the peculiar context created by COVID-19 and the relative crisis. This, in turn, means that it is better to consider involving third-parties expertise in the due diligence process.

1.2 Main deals of 2019 – 2020

With the objective to better understand the market conditions in which dealmakers are operating, is worth mentioning and analyzing the main M&A deals that just occurred or that took place in the most recent past. To look at previous deals is useful for a number of reasons, among which the most significant are:

- The frequency and the type of the deals are central in the process of assessing the current deal wave and also for the attempt to predict market trends for deals in near future.
- Case studies can provide many teachings; on the one hand, best practices observed in successful deals can give inspiration to deal makers, on the other hand, mistakes made in failed transactions should be understood and analyzed so as to be prevented.
- Technical aspects of recent deals give many advises to dealmakers. Considering, for example, whether for the majority of deals, stock or cash was used as a payment, can help dealmakers to grasp the real advantages/disadvantages effectively provided by a certain payment system.

A report[20] published by J.P. Morgan's M&A team contains many useful information as the main numbers that characterized the 2019 market for acquisitions, in that year M&A activity slightly slowed if compared to 2018, the global M&A announced dollar volume in North America, Latin America, EMEA (Europe, Middle East and Africa) and Asia Pacific was $ 4.094 billion, while the previous year was $4.114 billion. Analyzing the activity from a regional perspective, volumes in Asia Pacific and EMEA were down (respectively, of 6% and 13%), compared with North America, in which announced transaction volumes increased by 10% compared to 2018. The increase in North America volume was mostly due to many announced megadeals (deals with announced dollar volume over $ 10 billion), in fact in that region the number of megadeals in 2019 was 36 (47 globally), the second highest megadeal count in North America so far. Looking at the perspective for the current year, according to the same report, M&A driven by shareholder activism will persist and continue to spread around the world, with an increasing importance of ESG (environmental, social and governance) issues and a strong call for corporate clarity.

In addition, the regulatory environment is still challenging; over the last twenty years M&A markets have seen an increase in the number of deals partially blocked or cancelled by Antitrust authorities, which have as main objectives to prevent industry consolidation and to guarantee a regular and proper competition among market players. In 2019 European Union Antitrust authority decided to block the Alstom's merger with Siemens Mobility Business, which could have been almost a megadeal, given that value agreed was of around $ 8,7 billion. Alstom is a French multinational company operating in the railway transport markets and its merger with Siemens has been considered by the European Commission[21] as "dangerous for

[20] J.P. Morgan's M&A team, *"2020 Global M&A Outlook"*, J.P. Morgan, 2020

[21] European Commission, *"Mergers: Commission prohibits Siemens' proposed acquisition of Alstom"*, European Commission press release, 2019

competition in markets for railway signaling systems and very-high-speed trains" given that the merger would have brought together the two largest suppliers of railway signaling systems in Europe. Whenever a deal of that volume is blocked, both parties incur in significant losses: the exertion made for due diligence processes is basically vanished, making ineffective the time spent by the firm's professionals to plan the deal, furthermore, the advice and services purchased from investment banks, consulting firms or boutiques turns out to be a partial (if not complete) waste of money.
About technical aspects of 2019 deals, it was observed an increasing preference for all-stock deals, rather than using cash; even if the opportunity to rise debt with a cost that is way lower than the cost of capital was still attractive, top management seemed to prefer M&A strategies that were more likely to strengthen balance sheets and avoiding the risk typical of cash-financed acquisitions. The need to contain risks as much as possible in the current context of uncertainty created by the COVID-19 pandemic, suggests that also in 2020 all-stock deals should be preferred.
As predictable, 2020 started with a slowdown in the entire global economy due to the pandemic in progress, and this was obviously reflected in M&A activity. Dealogic M&A Research group reports the most important insights about the first quarter of 2020[22]: The M&A transaction volume in Q1 was $690,1 billion, the lowest volume since 2013 and a decrease of 35,5% year on year compared to the first quarter of the previous year. The most impressive decrease was the one of Americas-targeted acquisitions which experienced the deepest year on rear decline, it was 50,2%, with just 2.761 deals for an overall value of $ 307,1 billion. After the fall in all-cash deals in 2019 (52,5% of total volume), 2020 started with a different trend, 63% of announced deals of the first quarter was entirely paid with cash; this trend has been generated by the crash of stock markets that on the one hand made the stock-payments less attractive and, on the other hand, could cause a decrease in interest rates, resulting in a cheaper average cost of debt.
What is surprising in this context, is that, according to Reuters[23], Europe experienced an increment in deal volume, which more than doubled, accounting for a total value of $ 232 billion thanks to some megadeals closed just a few weeks before the virus started spreading around the world. In a globalized world, economic activity is interlinked, and it is common for a distressed public company to generate a destabilizing impact on many other sectors, this suggests that M&A activity in the next quarters could be dominated by restructurings, rescue deals and nationalizations, principally prompted by governments and central banks with the goal to contain the disruptive effects on the economy caused by the crisis. Governments are triggered by the need to avoid takeovers on strategic companies and to strengthen those industries that are supposed to tow the entire production.
Considering United States of America, which is widely recognized as the strongest economy in the world and, at the same time, one of countries that has been more damaged by the pandemic, many policy responses

[22] *"Insights – M&A First Quarter 2020"*, Dealogic, 2020

[23] P. Barbaglia, G. Roumeliotis, *"Global M&A dwindles as coronavirus batters world's economy"*, Reuters, 2020

have been adopted to contrast the crisis and save tons of jobs. As reported by the International Monetary Fund[24], U.S. government decided to implement a fiscal policy based on three main interventions:

- $ 483 billion Paycheck Protection Program and Health Care Enhancement Act: the objective of the act is to provide additional forgivable Small Business Administration loans and to set the conditions to help small business to retain employees.
- (Estimated) $ 2,3 trillion Coronavirus Aid, Relief and Economy Security Act (CARES Act): the act provides one-time tax rebates to individuals, expanded unemployment benefits, funds for hospitals operative stability and, most importantly, $ 510 billion to prevent corporate bankruptcy through loans, guarantees and a backstopping Federal Reserve program.
- $ 8,3 billion Coronavirus Preparedness and Response Supplemental Appropriations Act and $ 192 billion Families First Coronavirus Response Act: the goal of both acts is to strengthen prevention against the virus and to provide therapeutics and diagnostics for people against the virus.

What is common to all three interventions is the number of measures taken to help small business and, more generally the entire American economy; these measures are driven by expanded unemployment insurance, more small business administration loans and guarantees and a huge amount of funds to try rescue corporations from bankruptcy. From a macro-financial perspective, the U.S. Federal Reserve introduced facilities to support the flow of credit and, in addition, the community bank leverage ratio was lowered to 8% and also Federal funds rate were lowered by several basis points.
Looking at the most interesting and significant deals of 2019-2020, the biggest megadeal that happened in 2019 was the Bristol-Myers Squibb's acquisition of the biopharmaceutical company Celgene for the amount of $74 billion. Bristol Myers Squibb (named BMY on New York Stock Exchange) is an American pharmaceutical company with headquarters in New York, while Celgene is another American pharmaceutical company highly specialized in therapies against cancer. The acquisition is coherent with the declared objective of BMY of being active in business development but probably the real goal of the acquisition is more subtle, in fact according to CNBC[25] the acquisition of Celgene gave Bristol Myers Squibb more cancer drugs in a period when its immuno-oncology portfolio was struggling to keep up with the huge competitor Merck's. In order to complain with the U.S. Federal Trade Commission (FTC) and therefore to obtain the regulatory approval, BMY announced it would divest Celgene's psoriasis-drug OTEZLA to Amgen for $13,4 billion in cash, after the closing of the acquisition.
The technical aspects of the deal were disclosed through the BMY's own Press Release[26]: Celgene became a subsidiary of Bristol Myers Squibb and, for each share, Celgene shareholders received 1 share of Bristol

[24] *"Policy Responses to COVID-19"*, International Monetary Fund, 2020

[25] B. Lovelace, *"Bristol-Myers to buy Celgene in a $74 billion deal; Celgene shares surge"*, CNBC, 2019

[26] *"Bristol-Myers Squibb Completes Acquisition of Celgene, Creating Leading Biopharma Company"*, Bristol Myers Squibb Press Release, 2019

Myers Squibb, $ 50,00 in cash (without interest) and one tradable Contingent Value Right, entitling the owner to receive additional $ 9,00 in cash if certain regulatory milestones are met in the future. Morgan Stanley & CO and J.P. Morgan Securities were the lead financial advisors to Bristol Myers Squibb.
As stated above, several megadeals were finalized in 2019 and, among the most notable acquisitions, the one conducted by Salesforce to gain the control of Tableau deserves to be mentioned. Salesforce is an American cloud-based software company founded in 1999 and it is considered as the first customer relationship management (CRM) services vendor around the world, Tableau Software is an American interactive data visualization software firm and it is very well positioned in the business-intelligence market segment. The acquisition was particularly strategic for both firms: CRM, the core business of Salesforce, consists in an approach to manage interactions generated with current and potential customers, by using data analytics it makes possible for a firm to build strongest and durable customer relationships and to make smarter decisions; in order to provide customers with a service as effective as possible, it is fundamental to incorporate in the CRM approach an appropriate visual analytics, intended as an information visualization system based on analytical reasoning and supported by smart and interactive visual interfaces, that is exactly the greater area of specialization of Tableau. The execution of the deal, even if it represents the most expensive acquisition of Salesforce's history (up to date), was surprisingly quick as it was announced during the first days of June 2019 and closed on August 1/2019, as reported on the Salesforce's own website[27]. According to Bloomberg[28] Tableau was valued at $15,7 billion only stock was used for the deal: each share of both Tableau Class A and Class B common stock was exchanged for 1,103 shares of Salesforce common stock, resulting in a premium of 42% relative to Tableau's closing price at that time; the two exclusive financial advisors for Salesforce and Tableau were, respectively, Bank of America Merrill Lynch and Goldman Sachs.
Despite the enthusiastic announcements made by Salesforce's CEO regarding the synergies created through the acquisition, not all Salesforce's shareholders were particularly happy for the deal[29]; the most experienced shareholders are aware that technology companies can innovate in two ways: organically, by pursuing internal innovation and investments in R&D, or inorganically, by acquiring innovative firms or assets, the former is perceived as an evidence of organizational and financial health for the company, the latter is often seen by investors as a signal of lack of ideas, especially when inorganic growth seems to be the main growth strategy. The inorganic growth strategy implemented by Salesforce, and the relative shareholders dissatisfaction, appears to be confirmed by a subsequent acquisition that took place in 2020; on February 25, 2020 Salesforce signed the definitive agreement to acquire Vlocity[30], a start-up specialized in six industry-

[27] G. Turner, Y. Yang, *"Salesforce to Buy Tableau for $15.3 Billion in Analytics Push"*, Bloomberg, 2019

[28] *"Salesforce Completes Acquisition of Tableau"*, Salesforce Press Release, 2019

[29] P. Moorhead, *"Salesforce.com's Tableau Acquisition: Admitting Organic Innovation Failure?"*, Forbes, 2019

[30] *"Salesforce Signs Definitive Agreement to Acquire Vlocity"*, Salesforce Press Release, 2020

specific CRM cloud and mobile software. Vlocity was valued $ 1,33 billion and has been acquired through an all-cash deal, the acquisition is under regulatory approval and will probably be closed during 2021[31].

A very similar strategy, based on inorganic growth, was adopted by Google in 2019 as they acquired Looker Data Sciences, a business intelligence software and big data analytics company. As stated in the Google Cloud blog[32], Looker was supposed to strengthen Google Cloud's analytics data warehouse capabilities, given that cloud is gaining increasingly importance for Google, which experienced a slowdown in the growth of its core search advertising business. The deal, accounting for a value of $ 2,6 billion[33], was Google's biggest acquisition since 2014, when it acquired the smart-home company Nets Labs for $3,2 billion. The process of regulatory approval has been particularly accurate, due to the fact that Google was facing Antitrust investigation by the U.S. Justice Department. For the deal, Lazard has been the financial adviser of Google.

Considering M&A deals involving technologies, the acquisition of Plaid announced by Visa in early 2020 is very interesting for its strategic implications and the synergies it creates. Visa is an American multinational financial services corporation with a market value of $ 420 billion, it provides financial institutions with Visa payment products that can be offered as credit, debit and prepaid cards to the customers, facilitating electronic funds transfers around the world and helping banks and merchants to be connected. Plaid is a fintech firm, based in San Francisco and founded in 2012, it now has more than 200 million accounts linked on its platform worldwide, as a main service it develops financial services APIs (application programming interfaces), which in turn is a method to generate programmatic interaction between different software. Rather than facilitating payments like Visa, Plaid helps banking and other financial information, to be shared more easily, enabling applications to be connected with users' bank accounts. Examples of the most common information shared with Plaid services are account balance, transaction history, personal loans and credit cards, investment holdings, account and routing number[34].

It is clear that the acquisition is strategical for Visa that is trying to expand its service offering, moving beyond card payments and breaking into the APIs segment, thus showing the long-term objective of Visa to be part of the financial services industry's evolution, driven by new technologies. Furthermore, Plaid works with most of the largest fintech apps in the U.S., like Venmo, Square Cash, Chime, Coinbase and many others, therefore its acquisition gives Visa access to an important and already established base of customers, who are gaining increasingly importance for the effective technological transition of the financial sector[35].

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[31] R. Miller, *"Salesforce grabs Vlocity for $1.33B, a startup with $1B valuation"*, Tech Crunch, 2020

[32] T. Kurian, *"Google completes Looker acquisition"*, Inside Google Cloud, 2020

[33] G. De Vynck, *"Google to Buy Looker for $2.6 Billion to Expand Cloud Offer"*, Bloomberg, 2019

[34] *"What is Plaid?"*, Plaid website

[35] J. Kauflin, *"Why Visa Is Buying Fintech Startup Plaid For $5.3 Billion"*, Forbes, 2020

The price of the acquisition is $5,3 billion[36], nearly two time the valuation of Plaid in 2018, which was of $2,65 billion. As stated by the acquirer, Plaid is about to be purchased using available cash on hand as well as debt and the acquisition would not be in contrast with already announced stock buybacks and dividend plans[37]. Visa expects the deal to close during the next six months following the announcement, with 80 up to 100 basis points adding to revenue growth in fiscal year 2021 as a direct consequence of the acquisition. Basically, the same strategy has been followed by Mastercard that, just a few months later than its competitor Visa, exactly on June 23, 2020, announced it is about to acquire Finicity[38] which, just as Plaid, is another fintech firm that provides the same line of services. The acquisition is pa rt of the process which sees Mastercard trying to diversify from its core business, that is traditional card payment services. The deal has a volume of $825 million and it is expected to be closed in 2020. As stated by Mastercard, it is likely to be "incrementally dilutive" for as long as two years and, in addition, existing shareholders of Finicity have the possibility to get an additional "earn-out" of $160 million if specific performance targets will be met. Mastercard has been supported for the acquisition by Bank of America, Rocket Mortgage and other companies.

2020 has already saw many acquisitions to be cancelled, mostly due to the COVID-19 pandemic. Among the failed deals, probably the most resounding one is the hostile takeover attempted by Xerox on Hewlett-Packard (HP) that has been stopped. Xerox is an American corporation selling printers and digital document products around the world, Hewlett-Packard is the popular American multinational that provides a wide variety of hardware components as well as software and services to a variety of different customers. The Wall Street Journal[39] reports many information about the failed deal which saw Xerox trying to take control over a three times larger company, Xerox announced that it is ending both its tender offer and the proxy fight to replace HP's board, stating that it is no longer judicious to pursue a deal of that huge value in a context characterized by a public health crisis and the relative market slowdown, as they said, Xerox is now mostly committed to preserve both financial health and stability of the company and its employees. The takeover attempt lasted five months and Xerox's offer became public in early November 2019; HP continuously rejected all offers received, even the last one which was a cash-and-stock offer of $24 per share, valuing HP at around $34 billion[40], this last offer was considered too risky given the huge amount of debt involved and also as undervaluing the company; HP's board also said that it will return $16 billion to its shareholders, showing that HP is perfectly able to go on its own[41]. Due to the pandemic, both companies' value is decreased, HP value has fallen to around $25 billion and Xerox's value felt to around $4 billion also

[36] J. Verhage, J. Surane, *"Visa to Buy Plaid for $5.3 Billion in Bid to Reach Startups"*, Bloomberg, 2020

[37] David French & Krystal Hu, "*Visa to pay $ 5.3 billion to buy fintech startup Plaid"*, Reuters, 2020

[38] Jennifer Surane, "*Mastercard Takes Step Away from Cards With $ 825 Million Deal*", Bloomberg, 2020

[39] Cara Lombardo, *"Xerox Is Ending Hostile Takeover Bid for HP"*, The Wall Street Journal, 2020

[40] Kif Leswing, *"Xerox ends its hostile takeover bid for HP"*, CNBC, 2020

[41] Nico Grand and Scott Deveau, *"Xerox to Drop Its Hostile Bide of HP",* Bloomberg, 2020

due to the failed takeover. The deal failed even if the huge activist investor Carl Icahn[42] (owning around 11% of Xerox and around 4% of HP) pushed for the union of the two companies, stating that the acquisition would have created important synergies for both companies.

As stated above, 2019 saw many huge deals to be signed and, even in a context characterized by a great degree of uncertainty and a general slowdown of all the economics around the world, still some important deals were closed during 2020. The majority of the successful deals have as main players technological company or, more generally, technologies to be exploited at various levels by firms, exception made for the Bristol Myers Squibb acquisition of Celgene which, according to Statista[43], has been the tenth largest acquisition worldwide of history as of January 2020.

Some conclusions can be therefore derived by the evidence provided by the deals analyzed so far:

- Google, Visa, Mastercard, etc. are valid examples of how some of the largest technology companies are struggling to pursue organic growth and, to overcome that issue and meet the needs to continue growing and gaining market shares, are following inorganic growth strategies by acquiring smaller and innovative firms. This is of particular interest, given that some of those companies, as Google (founded in 1998) were perceived as the most innovative ones of the beginning of the millennium, mostly relaying on their organic growth.
- Given the amount of acquisitions involving technologies, the new micro-wave for the considered period can be best described as the one of tech-deals.
- Deals are increasingly likely to fail or to be slowed due to the regulatory approval of antitrust agencies. Furthermore, the case of Hewlett-Packard shows that probably huge and established corporation are unhappy with the idea of being acquired, unless for a sensitive premium over their real value.
- Both stock and cash are used as a payment for the deals, but debt is perceived as particularly risky, given the economic crisis. For companies willing to acquire other businesses, it is so advisable to use the resources available within the firm and eventually to rise a sustainable amount of debt, rather than opt for a leveraged buyout strategy.

[42] Cara Lombardo, *"Carl Icahn Makes Case for Xerox-HP Union",* The Wall Street Journal, 2019

[43] M. Szmigiera, *"Largest global M&A transactions 2020"*, Statista, 2020

1.3 Share price considerations before and after deal

For almost all of mergers and acquisitions a premium is paid by the buyer over the real market value of the target, which is usually an average of the estimated values obtained through the implementation of various evaluation models. The premium is calculated primarily on the potential synergistic benefits to be gained by the acquirer and then it is adjusted depending on several other factors, among which the most impactful are: the payment method proposed by the buy-side (cash, securities or a combination of the two), how experienced managers are at negotiating, whether and in what measure the target firm has key employees or a strong human capital to be retained and, most importantly, the bargaining power of the two companies as determined by the financial health, market position and economic conditions characterizing both parties. The ability of the target to get the most out of the deal and therefore to maximize the premium for shareholders depends on the potential synergies that could arise with the deal and on the technologies it already has; considering the potential synergies, if those are about to be created just for a specific acquirer and not for its relative competitors, then the premium is unlikely to be maximized because there are no other potential bidders putting pressure on the price, in this case the target may have to settle for less than expected in order just to earn a return over the real value of the company. Regarding technologies, whether the target has got unique or innovative technologies plays a significant role in the determining of the premium, a good example supporting this statement is the acquisition of Plaid by Visa reported in the previous paragraph; what made Plaid, a start-up, being valued more than twice its real value has been its recognized capacity to create brand new technologies and to continuously innovate, being among the first to develop and exploit the potential of application program interfaces (APIs)[44]. Another important factor impacting deals premium that deserves a thorough explanation is the financial situation of both firms: an healthy target having a strong balance sheet with an optimal capital structure and stable cash flows is more likely to see its value maximized with respect to a firm in financial difficulty that is characterized, for example, by an unsustainable amount of leverage or even being under Antitrust inspection.

How the acquisition premium has been determined is fundamental to understand the share price adjustments eventually occurring once the deal is closed, especially over the long run; whether the synergies have effectively been realized affect the equity value of the acquiring firm: the post-merger value of the combined corporation is composed by the sum of the fair values of both firms plus the realized synergies[45], so if the target has been overvalued, or the synergies have been overestimated, the post-merger value would decrease in order to reflect the real value of the target's equity and, all else being equal, lowering the share price of the combined firm. A first conclusion can be derived and is that considering the buy-side in an M&A deal, one of the key issues that should always been taken into account in order to do not overpay a company and

[44] Tom Taulli, *"Startup Lessons: Why Visa Paid $ 5.3 Billion for Plaid"*, Forbes, 2020

[45] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 26

maximize the value created is to get sure that the acquisition effectively brings synergies and positive effects for the acquiring firm and, most importantly, to estimate these effects with accurate and reliable approaches. Whenever cash is used to purchase the stock of a target firm, the acquirer agrees to pay a designated amount of money for every share of the acquired company, this mechanic usually causes the target company's share price to rise so as to reflect the offer and the relative premium proposed, while the acquirer stock price is likely to decrease initially especially if its shareholders are not particularly confident with the effective value created by the deal[46]. When stock is offered as a payment method to acquire a target firm, share price adjustments are way more complex and many studies seem to confirm that some differences arise between the short-term and the long-term. According to a publication of the Oxford Review of Finance[47], empirical evidence shows that often, stock-financed public firm acquisition generates negative effects for shareholder wealth at the announcements, the standard interpretation of that outcome is based on the adverse selection theory[48] associated with public issues of shares, stating that a corporation's management is more likely to sell stock when it is overvalued, in the context of an acquisition this is translated in buying the target's assets at a discount, expert investors are aware of this behavior and cause the stock price to adjust downwards upon the announcement of the issuance of new shares to finance a deal. Over the long run, significant findings have been provided by a study[49] on 12,578 merger offers for public companies between 1962 and 2000, the analysis seems to confirm the adverse selection theory but with very different implications with respect to the short run; over the long run, in fact, stock-financed deals create value for the acquirer's shareholders through market timing, since overvalued equity is used to purchase hard assets at an effective discount. The outcome of that study implies that, sometimes, the acquiring firm's management may be incentivized to artificially boost the stock price of their firm before the acquisition effectively takes place; in addition, managers might also pursue acquisition where the joint fundamental value of acquirer's and target's assets combined in a single entity is reduced, as long as market-timing gains outweigh the costs of this inefficiency. Many attempts to explain the exact mechanism causing a negative reaction of stock prices during announcement period of mergers and acquisitions involving stock as a payment have been tried by several practitioners and academic researchers; among the most interesting papers and studies, the one conducted by M. Mitchell, T. Pulvino and E. Stafford[50] deserves to be mentioned for the important empirical evidence it provides. Their analysis has been conducted on the trading behavior of professional investors in a sample of around 2,130 deals announced between 1994 and 2000, the paper shows that the main part of the negative

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[46] Ace Chapman, *"What Happens to Stocks When Companies Merge?"*, Ace Chapman Business Acquisitions Consultants, 2019

[47] A. Golubov, D. Petmezas, N. Travlos, *"Do Stock-Financed Acquisitions Destroy Value? New Methods and Evidence"*, Oxford Review of Finance, 2015

[48] S. Myers, N. Majluf, *"Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have"*, Journal of Financial Economics, 1984

[49] P.G. Savor, Q. Lu, *"Do Stock Mergers Create Value for Acquirers?"*, The Journal of Finance, 2009

[50] M. Mitchell, T. Pulvino, E. Stafford, *"Price Pressure around Mergers"*, The Journal of Finance, 2004

reaction to stock M&A deals announcements can be explained by the downward share price pressure caused by arbitrage short selling of the acquirer's stock during merger announcement days. Considering the excess demand curves for stocks as downward sloping in the short-term, any increases in the supply of the firm's stock causes the equilibrium price to decrease. The authors of that paper are convinced that even if the common assumption that stocks' supply curves are vertical and fixed may hold in many situation, it is unlikely to hold during mergers and acquisitions announcement periods, because arbitrageurs exploiting short selling directly cause a dramatical increase of the effective supply of shares. Considering a perfect capital market environment, excess demand curves for shares should be perfectly elastic because the market price reflects all relevant information about the considered company, in this context shifts in excess demand, due to uninformed trading, will not impact share price. Anyway, in the real world the perfect capital market condition is very unlikely to hold and, as a result, market frictions (like arbitrage) limit market forces from keeping excess demand curves perfectly elastic. The exact mechanisms followed by merger arbitrageurs in a stock deal, that causes the downward pressure on acquirer's share price can be explained as follows: as the target firm's stock trades at a small discount with respect to the premium offered by the acquirer, therefore above its true market value, merger arbitrageurs buy shares in the target company, the link between these shares and the promised consideration involves trading stock of the acquiring firm in order to isolate transaction risk. The volume of trade in the acquirer's stock depends on whether the stock offer for the M&A transaction is based on a fixed-exchange-ratio or a floating-exchange-ratio mechanism. Considering the first case, the appropriate strategy for the arbitrageur is to short sell the fixed amount of acquirer shares, the same as reported in the deal's agreement, for each target share purchased, in this way they provide liquidity to the target company, eroding the liquidity of the acquirer. Once the deal is closed, the arbitrageurs cancel the short position in the acquirer stock when the target's shares they hold are exchanged for the ones of the acquirer. Considering the floating-exchange-ratio mechanism, the exact ratio of acquirer-for-target shares involved in the deal is determined by dividing the offer value by the acquirer's average stock price which, in turn, is based on the observations made in a pre-specified pricing period typically occurring just before deal closing. Therefore, arbitrageurs follow the same strategy of fixed-exchange-ratio deals but waiting for pricing period to short sell the acquirer's stock in order to isolate transaction risk as much as possible. However, these strategies are not bullet-proof, given that merger closing dates are not always known before they actually occur, arbitrageurs should estimate on their own the exact pricing period starts and end dates. The study concludes that at least half of the of the negative (announcement period) stock price reactions can be explained by the arbitrageurs' behavior, which put a downward pressure on the acquirer's share price by short selling its shares. This evidence explains, at least in part, why usually M&A deals involving stock as a payment method generally causes the acquirer's stock price to decrease during announcement period, implying that this phenomenon is not just due to the adverse selection theory.

Nevertheless, stock as a payment method has more concrete and tangible positive effects for both the acquirer and the seller, regarding the former, paying with cash is a way to preserve cash balances and to

avoid to rise additional debt, for the latter, it is an opportunity for target shareholders to share in the future of the acquirer and its relative expected growth generated through the acquisition. In addition, another advantage of stock is that stock offerings are affected by a more favorable taxation than cash offerings.
As a rule of thumb, it can be assumed that generally the uncertainty surrounding M&A deals causes the stock price of the acquirer to decrease when the acquisition is announced, this drop is particularly significant if the purchase fails and the deal is abandoned. What brings even more uncertainty in a merger or acquisition is whether the acquirer decides for a hostile takeovers, in this case the acquirer share price volatility increases due to the high degree of uncertainty characterizing these strategies, potentially resulting in a drop of the stock price even higher than in a common M&A deal if the acquisition does not happen[51].
Management's behavior and skills are of primary importance for the success of a deal; managers are chosen by the ownership of the firm in order to manage it and to maximize the value/return it creates for shareholders, by definition, they bear many responsibilities towards the company that pays their salary.
From a logical perspective, this would mean that all top management teams around the world should think to enter into an M&A transaction, no matter if as buy-side or sell-side, if and only if the deal is about to generate concrete and tangible positive effects for the corporation they work for, resulting for example in higher revenues, higher share price, more sales and so on. Unfortunately this is not always the case, as some managers are mostly concerned on their personal returns and interests rather than in doing the best for the firm they work for, and this is valid not just for merger and acquisition operations but more generally for all the strategic decisions that must be made to run a business at 100 percent of its potential.
This phenomenon has been deeply studied by economic literature and takes the name of "principal-agency-theory", many evidence and examples of this behavior makes agency theory being recognized worldwide as a potential cause of inefficiencies for those corporations which separate control from ownership. By definition[52], the agency problem arises when the ownership of the firm (principal) makes a contract with another party (agents), which is in charge of taking decisions and running the company on behalf of shareholders. That separation generates information asymmetries between the two parties, allowing managers of taking actions to pursue their own interests. To avoid this problem, ownership concentration seems to be a valid governance solution; it is based on the "interest-alignment" theory which states that the more a shareholder is large, the stronger are both its incentives to discipline and monitor management's behavior[53] and its power to influence management's decisions.
A variation of the principal-agency-theory is often applied to the M&A context[54]: when an acquiring company (the principal) is about to purchase a target company (the agent) and the deal has been negotiated

[51] J.Jagerson, *"How Mergers and Acquisitions Affect Stock Prices"*, Learning Markets

[52] M. Jensen, W. Meckling, *"Theory of the firm: Managerial behavior, agency costs and ownership structure"*, Journal of Financial Economics, 1976

[53] D. Peljhan, K. Kejzar, N. Ponikvar, *"Ownership Structure and Firm Exit Routes"*, Applied Economics, 2020

[54] T. Marsch, *"Principal-Agency-Theory in Mergers and Acquisitions"*, GRIN Verlag, 2015

in a contract, information asymmetry can be still exploited by the agent, potentially eroding the value created for the acquirer. The three main asymmetries categories are:

- *Hidden characteristics*: those are some features that one side of the transaction knows about its firm but are not known by the other party. The acquirer looks forward to generating synergies with the deal and it bears the risk of possible hidden characteristics of the acquirer, potentially damaging the acquirer. Whenever this happens, the acquirer experiences a decrease in the value of the purchased company/assets in its financials, generally resulting in a lower share price.
- *Hidden intention*: if there aren't appropriate clauses on the contract, agents can act in their own interests, for example whenever management of the target firm has also some stock of the corporation, they can sell assets of the target company to distribute a dividend prior to the effective closing of the deal.
- *Hidden actions and information*: the principal cannot have full control over the agent's effort and actions to guarantee that the acquisition is effectively conducted properly. In addition, the agents could have private information about the firm, and they can exploit them at their advantage. This behavior could lead to moral hazard.

Managers could have several reasons to undertake a merger or an acquisition that depart from the purpose of just increase shareholder's value[55]; considering the buy-side, to run a bigger company gives the managers more prestige and visibility over the financial and political stage. It has then been observed that management's salary is highly correlated with the firm size, the bigger the company, the higher the salaries of its executives. With respect to the sell-side, usually after a takeover the managers of the acquired company may lose the majority of their autonomy or, even worse, they can lose their jobs, therefore managers who does not own the majority of the target firm's shares may try to avoid the acquisition to happen. A sample of 1,086 M&A deals involving U.S. publicly traded companies between 1985 and 2002[56] provides some important findings about stock returns in mergers and acquisitions. In the model developed for the study both timing and terms of deals have been considered as endogenous, resulting from value-maximizing decisions. Furthermore, the abnormal returns were calculated as the unexpected component of the surplus to shareholders divided by shareholder value at the time of the acquisition/merger, those abnormal returns generally are generated for two reasons. First, market investors do not have complete information about what effectively is the takeover surplus, second, whenever there are multiple bidders, investors are often unable to identify the winning bidder before the acquisition announcement. This study developed a real option framework to analyze the dynamics of firm betas and stock returns in mergers and acquisitions; regarding the betas, the model predicts a run-up in the beta of the bidder before the announcement of the acquisition and a drop (rise) in the beta during the announcement when the acquirer has

[55] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 26

[56] D. Hackbarth, E. Morellec, *"Stock Returns in Mergers and Acquisitions"*, The Journal of Finance, 2008

a higher (lower) pre-announcement beta compared to the one of the target firm. This implies that when the beta of the acquiring firm increases, the priced risk of its stock does the same. According to the authors of an article of the Oxford University Press[57] about profitability of mergers and acquisitions, the empirical literature came at two conclusions about M&A deals and their effective positive effects. The first conclusion is that, while generally causing a decrease on acquirer's share price during announcement days, mergers have positive effects for the shareholders of the target firms which benefit from the premium over the real market value of their company. The second one is that empirical evidence shows that M&A deals lead, on average, to an overall reduction in the merging firms' profitability compared to a sample of companies from various industries. Anyway, unprofitable mergers still occur because in many cases they represent the best alternative, even if sometimes mergers can lower profits compared to the initial situation, they may increase profits for both firms with respect to the relevant alternative of the merger. A good example of that case is when a firm has two alternatives: merge (be acquired) by another (larger) company, or let the considered (larger) company to merge (acquire) with one of its competitors; the first case could result in lower profits but at the same time it implies that the target company shares in the growth/profits of the acquirer, in the second case shareholder of the target company keep holding control over the firm but, at the same time, they bear the risk to compete with a far larger corporation. In light of the evidence provided throughout this paragraph, some cautious recommendations can be provided regarding the way to interpret the share price adjustments occurring in M&A deals. At first, even if stock as a payment for acquisitions causes the price of the acquirer to decrease during announcement, whenever the takeover is conducted for strategical and concrete objectives, generally over the long run the acquirer's shareholder value rises. Second, provided the initial negative effect of stock as a payment method, it still provides many advantages for the acquirer, in particular it could prevent the risk of liquidity, which is particularly relevant in the current period characterized by the COVID-19 pandemic and the relative market slowdown. Last, but not for importance, one of the main drivers of success for a company, not just in M&A deals, is to have an adequate and reliable corporate governance system. On the one hand, managers should never forget that they must pursue the value creation for the shareholders they work for, on the other hand, shareholders are strongly recommended to do their best to select the appropriate management team and to exert the more transparent control over the board, therefore avoiding one of the main causes of inefficiency, the agency problem.

[57] S. Fridolfsson, J. Stennek, *"Why Mergers Reduce Profits and Raise Share Prices – A Theory of Preemptive Mergers"*, Journal of the European Economic Association – Oxford University Press, 2005

2. The Theory Behind M&A

2.1 M&A deals: Rationale, types and integration

Usually, corporations grow through internal expansion by doing investments for both the improvement of its existing divisions and for the R&D department, these investments are decided through capital budgeting activities. Despite of what is "usual", the most dramatic examples of growth for a company are represented by the mergers and acquisitions it eventually undertakes; an M&A deal is the process of acquiring another firm's assets, divisions or entire operations by gaining control over the target's ownership. The term '*merger*' refers to the case in which the two firms are combined to form a new single legal entity, in an '*acquisition*' one company purchases the other outright and usually the target does not change its legal name even if it is controlled by the acquirer. Economic literature has widely discussed about which are the exact strategic reasons that should motive an acquisition able to create value, many researchers and academics tried to explain those reasons in very different ways. What could probably be considered as the most comprehensive list of strategic rationales for successful M&A deals have been firstly written down by Joseph L. Bower[58] and then enriched by Michael Fleuriet[59]. Based on both authors the reasons driving the decision to undertake senseful mergers and acquisitions are:

- *Overcapacity*: many acquisitions occur in old, capital-intensive sectors characterized by a substantial overcapacity, in this context it is fundamental for a company to reduce capacity and duplication through consolidation, by doing, cost synergies can be obtained. In these industries the majority of firms look forward to continuously gain market shares and it is common for managers to be in the position to decide between acquire another company or being acquired.
- *Product/market extension, creating market access for products/services*: often taking place as roll-ups, the goal is to extend a firm's existing product/service line or to increment its potential market. The companies that are more likely to create value when pursuing this strategy are those considered as serial buyers, in fact they should be confident with the complex process of integrating a different culture within the acquiring company.
- *Financial deals*: those deals are mostly done by private equities and have as a main objective to increase the profitability of the acquired firm. Underperforming, bad-managed firms are perfect targets according to this rationale. Often, these deals take the form of leveraged buyouts.
- *Economies of scale*: usually enabling the acquirer to increment its sales/production and/or to lower the unit costs, they represent a tangible and measurable source of value generated with an M&A deal. Economies of scale are considered also as one of the main drivers of synergies.

[58] J.L. Bower, "Not All M&As Are Alike – and That Matters", Harvard Business Review, 2001

[59] M. Fleuriet, "Investment Banking Explained", McGraw Hill, 2018, chapter 15

- *Pick winners early*: this rationale consists in understanding which businesses are more likely to experience a significant growth over the next periods and then acquiring them to improve their performance. This is an intelligent strategy to share in the growth of a sector; often pursued by both financial firms and large corporations, the latter often acquire small and successful start-ups, giving them access to the amount of resources that just a large corporation can have.
- *Acquiring skills or technologies*: mergers and acquisitions become, in this way, a substitute of R&D. This strategy is often followed by large firms that are no more able to pursue organic growth and therefore decide to directly acquire new technologies. Deals with this rationale are often surrounded by uncertainty, it is never easy to integrate new technologies developed by another corporation within the procedures of an already mature and established firm.
- *Geographic roll-ups and industry convergence*: roll-ups are aimed at achieving economies of scale and of scope by "rolling up" companies in geographically fragmented sectors; large accounting and consulting firms were formed in this way. Bower intend the industry convergence as deals aimed at exploiting "eroding industry boundaries by inventing an industry".

In addition to these reasons, there are a few others that deserve to be mentioned[60], as the tax considerations that may arise, for example, for a firm having a large amount of taxable income. That firm may be willing to acquire another one having low or negative income but, at the same time, a huge amount of accumulated tax losses, by doing so the acquirer firm is able to immediately reduce the taxes it should pay. Another important rationale is the opportunity to purchase assets below their replacement cost: for some firms (i.e. within the natural resources industry) the cost of replacing assets is way higher than their relative market value and, therefore, a firm that needs to replace its assets may think to acquire another one already owning the desired assets if the deal turns out to be convenient. As a last rationale, the top management's personal incentive should never be forgotten; as widely discussed during the previous chapter, managers may decide to opt for an M&A deal for personal motivations like power and prestige, as well as a higher salary, which is commonly associated with running a larger corporation.

Merger may happen in various types[61], each of them having a specific nomenclature. The term horizontal merger refers to a transaction that involves an acquirer buying a target firm, both operating in the same industry; a roll-up merger is a sub-category of the horizontal merger and it consists in a company purchasing many small firms belonging to the same industry of the acquirer, those firms are then rolled up to create a consolidated corporation. A vertical merger is the takeover process in which the target's industry buys or sells to the acquirer's industry; by pursuing the deal, the acquirer implements a vertical integration. When the acquirer and the target operate in unrelated industries, the deal is called a conglomerate merger, this type

[60] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 26

[61] J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 28

of deal is no more as popular as it was during the 1960s for a number of reasons, in fact it has been recognized and proved that combining two unrelated business is very unlikely to create value.
In most of the cases M&A deals happen as "friendly" transactions[62]. This type of process involves the acquiring company, after an appropriate due diligence process, to start negotiations with the target's CEO. Then, Both CEOs of the acquirer and the target work together to establish suitable terms that can be considered as favorable for both firms. Once an agreement is reached, target's management provide recommendations to its shareholders to accept the offer they will receive. In general, target's shareholders are asked to tender the stock they own to a designated financial institution in order to receive the specified payment, either cash or stock of the acquiring company. Whenever the target firm's management resists to the acquisition offer and refuse to collaborate to set the deal, the acquirer company has, as a last option, to attempt for a hostile takeover. This acquisition strategy involves bypassing the board of directors of the target company and directly making the tender offer to target's shareholders, asking them to exchange their shares for the offered price. To avoid a hostile takeover, the target firm has some countermeasures to pursue as the decision to opt for staggered terms in directors' contracts, in this way just little part of directors is elected at one time, making impossible for the acquirer to elect a majority of its selected directors. The target can also change the bylaws to make sure to approve mergers just with a super majority (75% of the votes). Another way to contrast hostile takeovers is, for the target board, to ask another (more friendly) company to acquire their firm in a defensive merger; if that company agrees to try, the new acquirer is referred to as a '*white knight*'. Otherwise it can be asked to a third "friendly" company to buy a block of the target shares (but not the majority) to make impossible for the acquirer to obtain the majority of the target's stock, in this case the new bidder is named as a '*white squire*'. The '*greenmail*', also known as targeted share repurchases, consists in an offer, made by the target firm, to repurchase the stock bought by the hostile bidders for a premium. Furthermore, golden parachutes for directors can be set as large payments for executives if there are forcibly replaced. A more drastic method to contrast a takeover is the poison pill, it consists in providing target shareholders with the right to purchase additional stock at a favorable price, making it more expensive for the acquirer to gain control of the target firm because it should pay for a larger block of shares. Hostile takeover attempts often fail, especially when the target company already has in its bylaws the appropriate countermeasures, causing for the acquirer important losses. The effective value created through a merger or an acquisition is not just due to the rationales behind the deal and the synergies it creates, what is also of fundamental importance is how the acquirer integrates the target within its company's culture and organization. The presence of synergies is not a stand-alone guarantee of success, a structured plan must be put in place in order to effectively implement the benefits of the acquisition. The level of integration is the first decision to be made, on the one hand under-integration could hinder the transfer of strategic know-hows and capabilities on which the value creation is based, on the other hand over-integration may cause conflicts

[62] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 26

or have negative effects for the already established organization of the target company. The framework set up by Haspeslagh and Jemison[63] implies that the appropriate integration process depends on the balance between two key requirements: at first, the value creation mechanism on which the deal is based determines the degree of strategic interdependence to be established by the two firms, secondly, the autonomy needed by the acquired firm to preserve its distinctive expertise determines its organizational autonomy. Taking these two requirements as a starting point, four approaches for an efficient integration have been drafted by an academic study[64]:

- *Absorption integration*: a complete consolidation of all the features of both firms, as operations, structure, culture and strategy. This integration approach makes the companies the more equal and integrated as possible. It is best fit for those situations in which a high strategic interdependence is required for the value creation and the organizational autonomy of the acquired firm is not necessary.
- *Preservation integration*: the acquired firm maintain its own organization and has a high degree of autonomy. Most suitable for scenarios with a very low need for strategic interdependence between the firms, this approach usually consists in positioning the acquired company as a stand-alone subsidiary of the acquirer. The objective of this approach is to guarantee the target firm to preserve the organizational environment on which its success has been based. Preservation integration is more appropriate for firms that generated financial benefits with the acquisition and/or for firms able to share know-hows and best practices without operational interaction.
- *Symbiosis integration:* considered as in the middle between the previous two approaches, it is aimed at transferring strategic capabilities between the two companies and also at preserving the target's organizational autonomy. This approach is more suitable when the value creation needs a certain amount of strategic interdependence between the firms but, at the same time, the acquired one needs autonomy to full exploit its capabilities.
- *Holding integration:* this approach lies in low strategic interdependence and a low level of autonomy for the acquired firm. It is mostly fit for those acquisition having as a rationale the one of 'Financial deals' mentioned two pages before, that is, for acquired firm having a different business from the one of the acquirers and, at the same time, underperforming with respect of their potential. In these cases, even if the businesses are unrelated, it can be very helpful for the acquired to be controlled by a company with a well-established and successful culture.

[63] P. Haspeslagh, D. Jemison, *"Managing Acquisitions: Creating Value through Corporate Renewal"*, New York: Free Press, 1991

[64] R. Schoenberg, *"Mergers and Acquisitions: Motives, Value Creation, and Implementation"*, The Oxford Handbook of Strategy: A Strategy Overview and Competitive Strategy, 2006

2.2 The role of investment banks and boutiques

A fundamental part in the process of an M&A deal is played by the investment banks or boutiques, providing a wide range of services to both the buy-side and the sell-side of the deal, both parties are obviously doomed at maximizing the benefits resulting from the acquisition. If the acquirer is looking forward to paying the lowest price as possible and, at the same time, to acquire assets or businesses with a high change to increment its value, on the other side the seller, or target, is committed to get the most out of the deal and therefore, to avoid selling its business at a discount and to prevent any disruptive effects for its organization and employees, resulting from the acquisition. These are the reasons driving the importance of financial intermediaries for the adequate execution of an acquisition, they make their best effort to ensure that the party who hired them takes the most favorable decision, preventing suboptimal outcomes. The main differences between an investment bank and a boutique is represented by the range of services they provide and their relative size. Investment banks, as J.P. Morgan Chase, Citi Bank, Goldman Sachs, etc., are characterized by a larger size than boutiques and by a greater variety of services they provide for their customers, the most important are: underwriting, consisting in raising capital through IPO or secondary offerings, advising on M&A operations, perform wealth and asset management by managing customers' portfolios, acting as intermediaries matching the needs of sellers and buyers of securities. By contrast, a boutique has a smaller size and less employees than an investment bank and provides less services. By doing so, boutiques are able to reach a very high level of specialization in the services they offer, as for example Lazard or Rothchild, recognized worldwide as leaders for the advice in M&A transaction and in portfolio management activities. Financial intermediaries are specialized in the process of producing and processing information, as advisors they investigate all relevant information available to establish the reservation price of the counterparty of the deal, that is the least favorable price at which the counterparty will consider accepting to enter in the transaction, by doing so the party they work for knows in advance how much the offered price can be altered. In addition, these professionals calculate the exact potential for synergistic gains and also the overall risk of the transaction. It is particularly interesting the opinion of the authors of a paper about the role of banks in M&A deals[65], according to them, commercial banks could be well positioned than investment banks in offering advisory for this kind of transactions if they have already established customer relationships with the party they work for, especially if this relationship consists in lending money to the company. In the presence of a long-term relationship between the commercial bank and the company, the former is able to collect many private information about firm's effective cash flows, financial conditions and main types of risks. Despite this opinion, as a matter of fact, investment banks and boutiques have a higher degree of specialization in this type of services with respect to common commercial banks, therefore,

[65] L. Allen, J. Jagtiani, S. Peristiani, A. Saunders, *"The Role of Bank Advisors in Mergers and Acquisitions"*, Journal of Money, Credit and Banking, 2004

especially for start-ups with very few relationships with commercial banks it is more convenient to hire an investment bank when entering into a transaction.

From a legal point of view, M&A deals happen through four different types of legal procedures: first, by simply acquiring only the assets of the target company, second, through an acquisition of the target shares to get control over the assets (the approval of target shareholder is mandatory). Third, with a merger, which implies that the acquirer takes over both assets and liabilities of the target, this last one ceases to exist when merged to the acquirer. Lastly, by implementing a consolidation, this process is basically the same as a merger, having as a main difference that both companies cease to exist after the deal, forming a new corporation with a new legal name. Regarding the activities effectively performed by these financial institutions when working as advisor for one of the parties in a deal, a very comprehensive explanation has been given by Fleuriet in its guide on investment banks[66]; as a preliminary step the investment bank provides potential customers with a pitchbook, that is a document presenting the services offered by the bank showing the relative areas of expertise. The author then distinguish between two possible cases: the first one, called pull transaction, involves a client-initiated deal in which it is the client who directly hires the investment bank to implement the transaction, the second case, named push transaction, consists in the investment bank which tries to persuade the client that there is a very favorable M&A transaction to be done. Formally, the role of the bank starts when it is hired and finishes when the transaction is officially closed. Considering the buy-side of a transaction, the financial intermediary supporting the acquirer performs the following activities: it starts with an acquisition search identifying potential targets, organizes the M&A team for the project (composed by bankers, accountants and lawyers), does extensive valuation, organizes due diligence activities, formulates an appropriate offer, it then assists its client during negotiations and, if the parties reach an agreement, the intermediary prepares the contracts. However, when the acquirer already has an M&A division, the services required to an investment bank are limited to just professional valuation and support in negotiations. When preparing the list of potential targets, the investment bank analyzes which ones can effectively create value for the acquirer, which synergies are the most valuable for its company, how its lines of business could benefit from an acquisition, and so on. Once the most suitable target is identified, if the first contacts with its managers or with its board have been successful, the two parties sign a 'memorandum of understanding' or a 'letter of intent', the former is binding for the parties whereas the latter is not binding. After this step, the parties will meet to discuss the strategic rationale of the potential deal and, in order to share sensitive information about the companies without being potentially harmed, the parties usually sign a 'non-disclosure agreement'. If, after having collected all relevant information about the other party, both companies are willing to continue with negotiations, they start discussing the potential organizational outcomes of the deal as the new structure, the type of deal (merger, acquisition or other) and the future role of target's management once the deal will be closed. During this period, the investment bank, together with

[66] M. Fleuriet, "Investment Banking Explained", McGraw Hill, 2018, chapter 14

selected acquirer’s professionals, starts the due-diligence process, investigating and extrapolating key insights about the target’s operations, its financial condition, the main sources of risk for its business and the potential business combinations to be adopted. After this process, the parties enter into the final phase of the transaction, supported by financial intermediaries they start the fundamental negotiations to establish the final price of the transaction, whether it is a cash offer or an exchange ratio if the deal involves stock as a payment. When the final price is agreed by both companies, the remaining terms of the deal are discussed, as the strategy to be followed to properly integrate the target company and eventual warranties to be provided to the acquirer for the period between these meetings and the final effective closing. At the end of the process, with special board meetings, the CEOs and executives of the acquirer and the target effectively approve the transaction, this is called as the effective closing of the deal.

Representing the sell-side in an M&A transaction involves a different effort, in this case the likelihood of the deal increases because the company is almost sure of its willingness to sell, thus the investment bank must do its utmost to obtain as much as possible for the seller through the deal, in other words it must maximize the price offered to the seller. The commitment of the financial intermediary starts with the collection of information from the company’s executives about what they want to sell, whether it is the entire firm or just some assets. After having gathered all relevant information about the seller’s operations, strategy and structure, the investment bank prepares a ‘selling memorandum’ containing sensitive information about what the company produces or what services it provides, what is its current market share and position, how its management team is composed, the possible scenarios for near future and the disclosable financial information. Usually the bank starts two processes in parallel, a team establish the exact value of the company or the assets to be sold, another team sets a list of relevant potential buyers. After having contacted all potential buyers, if some of them is interested in deepening the deal, it will sign a ‘confidentiality agreement’ in order to receive the selling memorandum, then if a certain buyer is still interested may submit an ‘indication of interest’ to the seller. Following this step, the process is basically the same as the one for the buy-side after the signing of a memorandum of understanding or letter of interest. A fundamental contribution provided by the investment bank is the extensive valuation they perform, at first on both firms separately, then on the created synergies; if the right synergies are identified and then valued in the appropriate way, they will drive a considerable part of the proposed price and, therefore, of the premium. The overall most important value added by financial intermediaries, no matter if working for the buy-side or the sell-side, is to sensitively diminish information asymmetries so as to set the deal as fair as possible for the party they work for. Indeed, if a company usually experiences an M&A transaction once or few times (for conglomerates) during its financial life, investment banks and boutiques are experienced with dozens of transactions, an experience that is particularly evident when considering negotiation processes; when entering this type of bargaining, a company that has not a financial intermediary by its side, effectively starts in a weaker position. Given that the final price, as reported above, is established during negotiations, the presence of a bank or a boutique definitively ensures the party who hired it to obtain fair terms for the

contract. Focusing on boutiques, a study[67] based on an empirical research, conducted on 1254 takeovers of Australian public companies announced between 1997 and 2013, draws interesting conclusions on the role and added value of boutiques as advisors in M&A transactions with respect to other financial institutions.
The study firstly states that the great part of boutique advisors has industry-specific expertise, developed through an experience formed with many transactions involving particular industries, implying that boutiques can provide better quality advices because they have a deep knowledge of their client's sector. In addition, as also stated before, being highly specialized in the provision of advice for M&A deals, rather than having many lines of services, supports the idea that boutiques are among the best candidates for takeover advice. As reported on the paper, evidence shows that boutiques are preferred by acquirer firms when the deal is considered as particularly complex and when information asymmetry is great. The results of the empirical analysis also show that, when boutiques are hired as advisors for takeovers, the acquirer experiences a long-term higher ROA (return on assets) and an overall lower likelihood of goodwill impairment. The benefits provided by boutiques are also for the sell-side, provided that these financial intermediaries are able to identify and then pursue value-enhancing deals for the target; this evidence is further supported by the finding that the average abnormal cumulative return for target companies are higher when boutiques are hired as financial advisors.
To conclude, academic literature and studies conducted on the role and outcomes of investment banks and boutiques in mergers and acquisitions show that effectively these financial institutions are able to enlarge the value obtained by the parties with the deal. If, on the one hand, financial institutions require high fees for their services, on the other hand those are compensated by the guarantee of an higher degree of fairness for the deal; the high-level of expertise of financial institutions' professionals is translated in the most accurate valuations of companies and also in their ability in negotiations, thanks to their large experience and track records. As a matter of fact, the deals reported in the previous chapter involved the engagement of the most important financial intermediaries, hired from both parties. Whenever an important deal is being considered by a company, it is always recommended to ask the support of an investment bank or a boutique.

[67] A. Loyeung," The *role of boutique financial advisors in mergers and acquisitions"*, Australian Journal of Management, 2019

2.3 Valuation Techniques

The starting point of basically all valuation techniques, employed to evaluate companies, is financial statement analysis. Financial statements are the first source of information that firms provide about themselves, in practice all jurisdictions around the world state that information contained in financial statements must be accurate and truthful, in order to give shareholders and investors the right instruments to comprehend the exact financial conditions of the firm and whether that firm could add value to their investments. Academic literature defines financial statement analysis as the method by which investors extract information to answer their questions about the firm[68], the most important that can be answered by analyzing financial statements is what the real value of that company's shares is. Financial statements are so important because they summarize the economic consequences and results of the business activities on which the company is based; on a periodical basis firms typically produce five financial reports[69]:

- *Income statement*: it describes the operating performance during the financial year, presenting both sources of revenues and expenses for the firm. The realization principle is fundamental when reporting revenues, it states that any revenue is recognized during the period in which the relative transaction takes place and not when the cash from the transaction is received[70]. The last line of the income statement is the net income, also called earning after tax (EAT), and, if positive, it can be distributed to shareholders through dividends or added to retained earnings.
- *Balance sheet*: it reports all the firm's assets and their relative sources of financing. On the balance sheet the owner's equity is reported, it can be seen as the cumulative investment made by shareholders and is calculated as the difference between firm's assets and liabilities. Assets, divided in current and fixed, must be equal to the sum of equity and liabilities, these last ones are in turn divided in short-term and long-term liabilities. Items on the balance sheet are usually recorded following the conservatism principle which states that assets must not be overestimated, and liabilities must not be underestimated.
- *Cash flow statement*: it contains the record of cash flows of the firm; it basically explains the variation in the company's cash balances. The cash flow statement distinguishes three types of cash flows: from financing activities, from investing activities and from operating activities.
- *Statement of other comprehensive income* describes the changes in equity that are not due to transactions involving the ownership of the company and those that are not included in the income statement.

[68] S. Penman, *"Financial Statement Analysis and Security Valuation"*, McGraw Hill, 2012, Chapter 1

[69] K.G. Palepu, P. Healey, E. Peek, "*Business Analysis and Valuation: IFRS Edition"*, Cengage, 2015, Chapter 1

[70] G. Hawawini, C. Viallet, *"Finance for Executives"*, Cengage, 2015, Chapter 4

- *Statement of changes in equity* summarizes all changes in firm's equity in the period between two consecutive balance sheets. It consists in total comprehensive income, and the financial effects arising from transaction involving company's ownership.

Executives and managers often use another instrument to assess the effective performance of their firm, this is the managerial balance sheet and it distinguishes between the company's invested capital and capital employed. The invested capital is composed by three items: the cash and cash-equivalent holdings, the net fixed assets and the working capital requirement, in turn calculated as the difference between operating assets and operating liabilities. The capital employed is the sum of shareholder's equity, short-term debt and long-term debt. This tool is important for management's decision because is a clear and rapid way to understand how it is composed the total capital used by the firm and how this capital have been effectively invested. When dealing with mergers and acquisitions evaluation techniques are used to get the value of the target firm so as to have a range for the offer price. The evaluation techniques employed in M&A are usually three: comparable method, the method based on discounted cash flows (DCF) and the precedent transaction analysis. The method of comparable firms, also called comparable multiple analysis, does not involve a considerable effort to be carried out. It is one of the oldest valuation methods and it is structured as follows[71]: as a first step the analyst has to identify the comparable firms related to the one to be valued, companies can be considered as comparable if they have similar business operations, a similar size and if they operate in a similar geopolitical context. The second step is to identify the key measures of comparable firms by investigating their financial statements, in order to calculate the required multiples. A multiple is defined as the ratio of the company's stock price, or enterprise value, to a particular measure in the financial statements, the most common multiples are: price to earnings ratio (P/E), price to book ratio (P/B), price to sales ratio (P/S), enterprise value on EBITDA or EBIT (EV/EBITDA, EV/EBIT), and enterprise value on sales (EV/Sales), but many other multiples involving other measures are calculated to reflect some special feature of the analyzed firm. The final step is to apply an average and/or median of the multiples obtained from the previous step to the corresponding measures of the target firm, contained in its financial statements, in this way is possible to obtain the target firm's share price and/or enterprise value. If, on the one hand, the method of comparable is less time consuming than the discounted cash flows approach, on the other hand, it is affected by some considerable biases, the first and most important is that it generally (not for private company) relies on market values, thus assuming that stock markets are efficient when setting the price for the comparables, this usually is not the case given that also trading behaviors are affected by a great number of biases. In addition, three conceptual issues arise when exploiting this valuation method: at first, it is not always easy and straightforward to identify companies having similar operations and size of the target firm, secondly, all the different multiples employed may give different outputs (as, for example, P/E and P/B ratios) and lastly, negative denominators can occur in the analysis as, for example, when a comparable firm

[71] S. Penman, *"Financial Statement Analysis and Security Valuation"*, McGraw Hill, 2012, Chapter 3

incurred in a loss the earnings used for the P/E ratio cause this multiple to have little meaning. The method of comparable is also very dependent on the analyst's choices, the number of comparable firms and the selected multiples are up to the analyst's discretional judgement that, in this way, has room to "manipulate" the output of the valuation to satisfy its client expectations and willingness. Academic literature and financial newspapers have long debated on the effective reliability of this valuation method; among the most interesting papers, a study[72] conducted on the valuation performance of multiple approach, provides some interesting findings on this valuation technique, the authors have found that multiples based on forward earnings reflect stock prices approximatively well for the majority of the sample used. In terms of similarity of the price obtained with this approach to the effective stock price, historical earnings are ranked as second, cash flow measures as third, book value as fourth, and the multiples involving sales performed badly. The ranking provided by the study is coherent with the different statistical methods employed for the analysis and similar results have been found across different industries and periods. To sum up, the multiple approach is affected by some biases that undermine the effective reliability of that valuation technique, but nevertheless it is still used by a great number of professional primarily as a double check on the results already obtained through a more technical analysis, but is also useful when a valuation is required in a very short period of time. The precedent transaction analysis is a valuation method similar to the comparable multiple approach, like this last method it involves a multiple-based analysis but departs from it because it focuses on precedent M&A transactions entailing comparable companies. This valuation approach consists of the following steps[73]: the analysis starts with the selection of the acquisitions that can be considered as comparable, this process requires a screening of precedent transactions in terms of industries/sectors, size of acquired companies, key financial metrics, geographical context, type of buyer and deal size. After the initial screening has been completed, an ulterior selection of transactions is performed in order to include just the most fit deals, it should also be kept in mind that many transactions are likely to not be considered for the analysis since there may be missing information available, especially in those cases in which deal terms were not disclosed to the public. Once the list of precedent transaction is definitive and approved, the decided multiples and the relative averages (medians) are calculated; for this type of analysis, multiples involving the enterprise value are often preferred. Like the multiple approach, the precedent transaction analysis ends with the application of the multiples obtained to the selected measures of the target firm so as to get the required valuation metrics (share price, enterprise value, etc.). Being a method based on multiples, precedent transaction analysis basically bears all the biases affecting the comparable multiple approach and, in addition, it is affected by time lag, since precedent transaction by definition happened in the past and any forecast makes little sense, and also by a possible lack of comparable acquisitions, given that within some industries is particularly difficult to select a coherent list of similar transactions.

[72] J. Liu, D. Nissim, J. Thomas, *"Equity Valuation Using Multiples"*, Journal of Accounting Research, 2002

[73] Corporate Finance Institute, *"Precedent Transaction Analysis"*

A more complete valuation model is the one based on the valuation of cash flows and it takes the name of discounted cash flow (DCF) model[74]; this method is more complex than the previous ones and involves both a greater number of calculation and a mental effort to set all the assumptions in the most appropriate and realistic way. Valuation techniques based on discounting cash flows can be used to obtain different outputs, if discounting the free cash flows to equity and using the cost of equity as a discount factor, the output of the model is the equity value of the company, if discounting the free cash flows to the entire enterprise and using its weighted average cost of capital as a discount factor, the model provides the enterprise value of the firm. The enterprise value is one of the most comprehensive financial measures and it represents the value available to all stakeholders, not just shareholders but also debtholders, as it comprehends the firm's leverage; it can basically be interpreted as the cost of acquiring a company's equity, taking its cash and paying off all debt, thus owning the unlevered business[75]. Focusing on the DCF approach that lead to the enterprise value, before entering the explanation of the technical process, all the component of the model must be mentioned; basically, the most of them can be extracted by the firm's financial statements. The first element underlying this valuation model is represented by the free cash flows, forming the stream of cash, generated through operations, that all the firm's investors expect to receive now and in the future. The free cash flow formula[76] is the following: $FCF = EBIT \times (1 - T) + Depreciation - Capital\ Expenditures - Increases\ in\ Net\ Working\ Capital.$ Analyzing its components, the earnings before interest and taxes, multiplied to the inverse of the taxation lead to the net operating profit after taxes (NOPAT); given that free cash flows accounts for effective cash movements, the depreciation is added back since it is not a cash expense, contrary to capital expenditures, but it has been already accounted in the NOPAT. The net working capital is the difference between current assets and current liabilities and it represents the cash that is required by the company to run the day-to-day operations, a positive variation in the net working capital (year over year) means that the operations need more cash to be continued, thus when the YoY net working capital is positive it takes a negative sign on the FCF formula. Free cash flows represent the cash earned by the firm before any payments to shareholders and debtholders are made, for this reason free cash flows are discounted using the firm's weighted average cost of capital[77] (WACC), this ratio represents the average of the returns required by different classes of investors providing capital to the company, averaged using as weights the relative capital structure of the company. The most common WACC formula is the following:

$$WACC = (1 - T) \times \frac{Debt}{Enterprise\ Value} \times r_D + \frac{Equity}{Enterprise\ Value} \times r_E + \frac{Preferred\ Stock}{Enterprise\ Value} \times r_{PS}.$$

[74] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 8

[75] J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 9

[76] J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 9

[77] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 11

The weights composing the capital structure of the company are calculated as the proportion of a specific source of capital (whether equity, debt, preferred stock or others) on the total capital the company employs to finance the assets it owns. Through capital budgeting decisions, companies define their optimal capital structure in order to decrease the average cost of rising capital; each company and, more broadly, each industry, has its own optimal capital structure that is best fit for the particular characteristics of the considered business and economic environment. Regarding the interest rates composing the WACC, the cost of equity (r_E) represents the return required by the firm's shareholders as a premium for bearing the risk of holding the firm's equity. Many models have been developed with the objective to calculate the cost of equity in the most accurate way as possible, two models in particular are the most common among the practitioners. The first model is the capital asset pricing model (CAPM)[78], it is based on two set of assumptions, the first set is concerned on the investor behavior and assumes that investors are alike in many important ways, the second set is about market structure, asserting that markets are mostly efficient with just few impediments to trading. The CAPM model states that the required return of a security is equal to the risk-free rate (r_f) observable on the market plus a measure of the asset's systematic risk (beta, β), which is a measure of the security's exposure and sensibility to the market movements and shocks, in turn multiplied to the risk premium of the selected market portfolio $(r_M - r_f)$. The formula underlying the capital asset pricing model is: $r_E = r_f + \beta_M \times (r_M - r_f)$ and, by definition does not depend on the total volatility of the stock. The second model to calculate the cost of equity is the Fama-French Three-Factor model; as all the multifactor models, it tries to overcome some of the biases affecting CAPM. The Fama-French links the required asset return not just to the market portfolio and the sensitivity of the firm with respect to the market, but also on two additional factors that, motivated by the empirical observation, are considered as not explained by the CAPM. Fama and French stated that, on average, both small firms and companies with high book-to-market value have higher returns than the ones predicted by the capital asset pricing model. Companies with a high book-to-market ratio (usually called value stocks) are often mature firms with large investments in fixed assets, making them more likely to have a higher systematic risk than what is historically estimated by the CAPM's beta. In addition, also the size of a company is important for determining the risk connected to the firm, all else being equal, a small company is riskier than a bigger one since usually there is less information available and has been valued by less analysts. Fama and French propose to account for these anomalies by adding two portfolios to the basic CAPM equation, the first portfolio, called small minus big, is composed by a long position in small firms stocks financed with a short position in large firms stock, the second portfolio, called high minus low, is structured in a long position in companies with high book-to-market ratios and a short position in companies with low book-to-market ratios; both portfolios does not involve a net investment. Each portfolio has its own beta, explaining the

[78] Z. Bodie, A. Kane, A. Marcus, *"Essential of Investments"*, Mc Graw Hill Education, 2019, Chapter 7

respective specific systematic risk. The Fama-French equation can be so expressed as: $r_E = r_f + \beta_M \times (r_M - r_f) + \beta_{HML} \times r_{HML} + \beta_{SMB} \times r_{SMB}$.

To calculate the cost of debt composing the weighted average cost of capital equation, the faster solution is to take risk-free rate observable on the same market of the considered company, but the common proxy is to measures directly belonging to the enterprise characteristics. Usually, if the company's probability of default is reasonably low, the cost of debt is calculated[79] as the corporate bond's yield to maturity minus the probability of default times the expected loss rate: $r_D = Yield\ to\ Maturity - Prob\ (default) \times Expected\ Loss\ Rate$. Alternatively, the cost of debt can be derived also by setting an appropriate CAPM equation[80], this method is directly aimed at overcoming the assumption of risk-free rate as cost of debt, assumption that appears to be unrealistic given that there is no company that does not bear any bankruptcy risk. The CAPM equation for the cost of debt is the same as for the cost of equity, excepting for the beta, in this case the beta of company's risky debt is used (β_D).

The term (1 – T) that multiplies the weighted cost of debt into the WACC equation, reflects the interest tax shield. Each year companies having debt outstanding, pay interests on their debt, the interests paid are tax deductible, giving room for the company to lower the total taxes to be paid in the reference year. The interest tax shield effectively rises the cash flows available for investors, for this reason it represents an effective gain. The famous Modigliani-Miller[81] theory of corporate value with taxation explains that, considering two identical firms, the first being unlevered and the second using leverage as part of its sources of capital, the value of the levered firm is higher than the one of the unlevered firm and this difference is exactly the interest tax shield exploited by the levered company.

Cash flows can be forecasted with a reasonable certainty for just a short period, usually from five up to ten years, depending on the standardization of the company's operation and on the state of maturity of the market in which it operates. Generally, the longer the selected time horizon for the forecast, the more uncertain will be the reliability of what have been forecasted. When the company to be valued is supposed, with justifiable certainty, to do not have any "expiration date", its value is calculated by adding to the forecasted discounted cash flows, another component reflecting the continuation of the firm's operation after the forecasting period; that is measured with the terminal value[82]. The model for the calculation of the terminal value requires as a fundamental input, the definition of a reasonable growth rate (g) in order to account for the supposed growth of the firm; this rate is generally estimated as an average of the firm's observable growth rates of cash flows, considering the years immediately before the valuation process, or by

[79] J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 12

[80] S. Armitage, *"Corporation tax, leverage and the weighted average cost of capital"*, The Cost of Capital: Intermediate Theory, Cambridge University Press, 2005

[81] F. Modigliani, M. Miller, *"Corporate Income Taxes and the Cost of Capital: A Correction"*, American Economic Review, 1963

[82] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Chapter 8, Cengage Learning, 2019

taking the average expected growth rate characterizing the analyzed company's industry. The year corresponding to the last forecast of the firm's cash flows represents the period in which the terminal value is located within the timeline of the valuation, it thus defines which forecasted cash flow should be taken as numerator for the terminal value model; such a period takes the name of horizon date or terminal date. The terminal value (TV_t) can be therefore derived with the following equation: $TV_t = \frac{FCF_t \times (1+g)}{WACC-g}$.

Having defined all the fundamental inputs of the discounted cash flow approach, the equation to get the enterprise value can be expressed as: $EV = \sum_{t=1}^{T} \frac{FCF}{(1+WACC)^t} + \frac{FCF_T \times (1+g)}{WACC-g}$.

Despite the concrete basis of the DCF model, lying in the balance sheet voices composing the current free cash flow, the number of assumptions required to implement this valuation approach could potentially undermine the accuracy of the estimation. The output of the model is more sensitive in particular to: the returns selected for the estimation of the weighted average cost of capital (in some cases, a variation of 1% in the WACC may drastically change the firm's estimated value), the growth rate used for the terminal value, as it is very difficult to assert with certainty what will be the average future growth rate of a company, the number of periods in which free cash flows are forecasted, as stated above the longer the forecast's horizon, the higher the uncertainty. When using this model, the precision of the output is also dependent on the biases affecting the analyst performing the valuation; in particular two common behaviors should be avoided when performing a DCF analysis[83]:

- *Underestimating uncertainty*: usually people tend to underestimate the effective amount of uncertainty surrounding facts and possible future outcomes related to a considered case. This bias is always associated and linked to the "illusion of overconfidence".
- *Overestimating the near-term*: analysts have a tendency to overestimate the influence that dramatic but highly improbable events will have on the considered company's long-term forecasted earnings.

Rather than analyzing the free cash flows available to all the firm's investors and separating the equity value from the enterprise value to obtain the company's price per share, a different (and faster) approach can be employed, the dividend discount model (DDM)[84]. The basic assumption underlying this model is that dividends per share issued by a company can be considered as the cash flows that go directly to equity-holders, it follows that discounting these dividends at the appropriate rate of return required by shareholders will provide the intrinsic stock price. The rate of return required by shareholders (r) is basically the same as the cost of equity employed in the weighted average cost of capital calculation; therefore, the same estimation models (CAPM, Fama-French, etc.) can be used to get the DDM 's discount rate. Assuming that the future dividends of the firm are known in advance, the formula to obtain the price of a share in the firm's

[83] C. Lütolf-Carroll, A. Pirnes, Withers LLP, *"From Innovation to Cash Flows: Value Creation by Structuring High Technology Alliances",* C. Lütolf-Carroll, 2009

[84] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Chapter 8, Cengage Learning, 2019

stock would be: $P = \sum_{t=1}^{\infty} \frac{Dividend_t}{(1+r)^t}$. If the dividends are supposed to grow at a constant rate in the future, the Gordon growth model is applied to obtain the company's share price, this model consists in the following equation: $P = \frac{Dividend_0 \times (1+g)}{r-g}$; note that this approach is basically the same as the one used for the terminal value in the discounted cash flow method. The case closest to reality involves valuing a company which has a stock that follows a nonconstant growth, in other words, dividends can be reasonably forecasted (or have been already disclosed) for the following few years and then they will experience a constant growth. The most common equation for the dividend discount model is therefore: $P = \sum_{t=1}^{T} \frac{Dividend_t}{(1+r)^t} + \frac{[Dividend_{T+1} / (r+g)]}{(1+r)^T}$. However, both the assumptions of dividend's constant growth or forecastable dividends are unlikely to hold in real life; each company has its own dividend policy, and, in most cases, this is characterized by a non-constant issuance of dividends of different amounts. The dividend policy of a company is affected by[85]:

- *Tax and clientele effect*: in many countries dividends are taxed at a higher rate than capital gains, therefore firms have an incentive to not pay dividends in order to maximize shareholders value.
- *Shareholder base*: some investors (like pension funds) prefer stocks that regularly issue dividends, other investor may prefer firms issuing dividends at very low frequency; the shareholder composition therefore influences a firm's payout policy.
- *Asymmetric information*: a company can try to get confidence from investors by issuing dividends. Also known as signaling theory, the issuance of dividends is often perceived as a signal of financial health from a company.

No matter which model has been chosen as a starting point for the valuation process, to ensure making the more accurate and independent valuation as possible three best practices are advisable for the professionals implementing the analysis. The first is to perform both sensitivity and scenario analysis after having developed the model, changing key inputs makes it possible to observe what effectively is the higher source of uncertainty for the process. Secondly, it is advisable to adopt a conservative approach, this is translated in, for example, choosing as weighted average cost of capital (or rate of return required by shareholders) one of the highest among the proposed ones, and/or also in avoiding overestimation for future growth, by taking an approximately low growth rate for the estimation of future cash flows and terminal value (or dividends). Lastly, when valuing a company, it is always more straightforward to consider a range of values for the analyzed firm's share price; undoubtedly if the value obtained with the first valuation model used is "confirmed" by similar values obtained with other valuation models, the output will be robust and can be considered as more likely to reflect the real value of the valued assets with accuracy.

[85] J. Laws, *"The Time Value of Money, The Dividend Discount Model and Dividend Policy – Essential of Financial Management"*, Liverpool University Press, 2018

2.4 How to evaluate synergies

As anticipated earlier in this chapter, synergies are one of the main reasons motivating companies to undertake mergers and acquisitions transactions and play a fundamental role in the determination of the premium to be paid over the intrinsic value of the target firm, which should be calculated using the methods reported in the previous paragraph. This section convers both the main types of synergies that can arise from an M&A deal and the principal valuation techniques aimed at their relative valuation.
The first distinction that can be made is between economic synergies and financial synergies[86], the former are generated through increases in revenues, costs reductions or even cost avoidance; the latter consist in improving the balance sheet of the acquirer or of the new merged firm, by decreasing the working capital requirements, fixed assets, and borrowing/funding costs but also on the tax benefits that may arise from an acquisition. Deepening on the single sources of economic synergies, the easiest to explain are the revenue synergies; these can result from an eventual cross-sell of the products and services of one company to the customers of the other one, and/or vice-versa. Revenue synergies may also occur from the sale of more products jointly or by creating new products as a combination of already existing products of the two companies. Cost synergies consist in an overall reduction of operating costs and expenses thanks to the combination of the two companies; this type of synergies generally comes from two main sources, that are economies of scale and economies of scope, but can be often achieved by the share of capabilities and best practices. Economies of scale are often simple to be measured and are said to happen whenever the unit cost of production, for the combined company, decreases as the volume of produced output increases. The more straightforward example of economies of scale is represented by the purchase of raw materials or commodities from a supplier: if the goods produced by the two firms share some raw materials needs (to be developed), the joint purchase of these materials usually comes at a discount thanks to the increase of quantity required, paying less for raw materials directly lowers the unit cost of production. On the other hand, by definition, economies of scope occur when the joint production of the products/services of the two companies is cheaper than the previous, separate, production. In this case, the unit cost of production decreases not due to an increase of production, but thanks to an increase in the variety of goods produced. The simplest example of costs that may be reduced by implementing a joint production is represented by a plant projected with the objective of being shared by the two companies for the production of their respective products; in this case the cost of the plant, that represents a fixed asset, is sprawled over the two companies; following this strategy, the combined firm will encounter just a single capital expenditure (CAPEX), rather than two different CAPEXs for the construction of two different plants for the separate production of two different products. Another example of economies of scope, even if less straightforward to be calculated, is the reduction of manufacturing and engineering costs; to have a single team of engineers for the development of more products is usually cheaper than having a single team for each product. With

[86] M. Fleuriet, “Investment Banking Explained”, McGraw Hill, 2018, chapter 16

respect to the financial synergies, in particular for those concerning the balance sheet, the combination of two companies could be very helpful in lowering the working capital requirements; given that these requirements, based on current assets and liabilities, are directly dependent on the credit terms and inventory level of a firm, a combination of two businesses should be able to negotiate better terms and also to implement a better inventory management. Another important financial synergy achieved with an M&A deal is the opportunity to obtain more favorable borrowing costs, usually the cost of debt is inversely proportional to the borrowing company's size: the larger is the corporation, the lower the bankruptcy risk and therefore the cost of debt. As a result, an acquisition generally allows the combined firm (or the acquirer) to increase its financial leverage without increasing the average cost of debt too.

In addition, other synergies that can't be easily included into the categories of economic and financial synergies may arise[87]. The differential efficiency is a type of synergy that results from the management improvement; if the management of one firm is objectively more efficient that the other firm's management, there is room for an important improvement in terms of efficiency, this is realized by sharing established and successful best practices and, more concretely, by exploiting the assets of the combined firm in a more efficient and more productive way. Another synergy that is not attributable to the two previous cited categories is the increased market power that can arise from the deal: the combination of two large firms could erode the market shares available to the relative competitors, thus reducing the competition over the considered operation field. However, the attempt to increase market power is a dangerous objective for an acquisition; as a matter of fact, many deals have been blocked or even cancelled by Antitrust Authorities because of the possible generation of monopolies or oligopolies; as also reported in the first chapter, the failed merger between Alstom and Siemens Mobility Business, blocked by the SEC, is a valid example of how deals considered as "dangerous" are canceled.

There are many methods employed for the valuation of synergies; according to M. Fleuriet[88], the simplest way to run this valuation is to think at the value of synergies arising from a merger or an acquisition as being equal to the fair value of the combined firms, after deal, minus the fair value of both firms valued as separate entities, before the deal effectively occurred. The fair value is the true value of a firm, only relying on the output of valuation techniques, without being influenced by any element arising from the expectation of an M&A deal. According to the discounted cash flow approach, the value of the combined corporation is the present value of the cash flows expected by the combination of the firm, in this context the synergy represents the present value of the incremental cash flow generated, or expected, thanks to the deal. Following this approach, it is important to define the effective drivers that, for each year in the analysis, concretely create the synergy. The variations in balance sheet voices associated with the sources of synergies previously cited are:

[87] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Chapter 26, Cengage Learning, 2019

[88] M. Fleuriet, "Investment Banking Explained", McGraw Hill, 2018, chapter 16

- Increase in revenues
- Decrease in operating cost
- Decrease in taxes
- Decrease in working capital requirements
- Decrease in capital expenditures

These elements are usually linked to each other among the productive process of the combined corporation. The synergies should be forecasted (with a conservative approach) and valued over the next years after the acquisition; the discount rate necessary for the DCF analysis of synergies should be a weighted average cost of capital having as weights the ones composing the capital structure of the new merged firm. In order to avoid the common mistake to overestimate synergies, it is helpful to implement both a scenario analysis and a sensitivity analysis on the main sources of value generating synergies. In addition, to be more conservative as possible, the weighted average cost of capital employed in the analysis should take into account the risk that synergies will not materialize, or that they will be less than expected.

An important issue, when valuing synergies, is how the value created through synergies should be split between the two companies; if considering a stock-financed deal, the case is easy: the value added by synergies is owned by the shareholders of the new merged entity, the target shareholder have already received the shares of the new corporation and can therefore directly share in that firm's growth. The case is not that simple when considering deals in which cash is used a payment method. As stated in the previous sections, in an M&A deal, an acquisition premium is paid to the seller and this premium represents a proportion of the expected realized synergies. For cash-financed deals, the potential value generated thanks to the synergies is split between the buyer and the seller, given that the latter's shareholders require a premium because they won't share in the after-acquisition growth of the company. In light of this evidence, the acquirer gain is equal to the realized synergies minus the acquisition premium paid to the seller; this obviously implies that no acquirer should offer an acquisition premium that is greater than the value of the expected realized synergies. However, as a matter of fact, if on the one hand the seller is certain about what it gets from the deal, as both the price and the premium are already known, on the other hand the buyer is uncertain about how much the synergies will effectively add to its firm's value, given that synergies materialize over time. A study conducted by the Boston Consulting Group and the Technische Universität München (TUM)[89] on how the synergies are split in M&A transactions showed that, on average, 31 percent of the average estimated value of expected synergies is collected by the sellers, in successful deals. According to the authors of that study, not all acquisitions have the same potential for synergies, in industries highly regulated by the State, like utilities, energies, transportations and telecommunications, there are often few synergies available because national regulators influence firms by setting many constraints. By

[89] J. Kengelbach, D. Utzerath, C. Kaserer, S. Schatt, *"How Successful M&A Deals Split the Synergies"*, Boston Consulting Group, 2013

contrast, industries internationally consolidated are able to generate valuable synergies, in a range from 2 to 10 percent of the target firm's latest annual sales and 1 to 3 percent of the combination of the target and acquirer's sales; examples of such sectors are mining, pharmaceutical and chemicals.
One of the main reasons why deals turns out to be more convenient for the seller than for the bidders is that managers and professionals often tend to overestimate synergies, by doing so, they pay a disproportionate premium over what effectively is the value added by the realized synergies. In addition, many times the synergies are not fully exploited by the acquirer. Following this reasoning, McKinsey & Company conducted a study[90] over 160 mergers with the objective to define a framework to help executives to maximize the chance of successfully achieve the expected synergies. As a result, six measures have been defined and are highly recommended when approaching synergies:

- *Reduce top-line synergy estimates*: the greatest errors in the estimation of synergies involve revenue synergies. Around the 70 percent of the deals in the database used for the analysis failed in achieving revenue synergies. It therefore of fundamental importance to be the more conservative as possible when valuing this synergy category.
- *Acknowledge revenue dis-synergies*: sometimes the combination of two businesses could have disruptive effects on the cost-reduction or on the sales. It is thus important to infer the probability of this dis-synergies creation, and account for it.
- *Increase estimates of onetime costs*: avoiding underestimating the impact of onetime costs may help prevent dangerous effects on the company's balance sheet.
- Compare projections with realities: when making assumptions on the possible market share to be gained with the deal, on the future growth rate to be experienced by the combined firm and so on, is advisable to take into account what effectively is the reality over the market in which the firm operates. For example, the growth rate expected for the firm may be way higher than the average one of a mature market.
- *Apply outside-in benchmarks to cost synergies*: the available benchmarks should be used as a sanity-check for the estimates of cost reductions, so as to avoid overestimation.
- *Be realistic about timing*: most of the times synergies take more time than what has been assumed to be realized, it takes time for an organization to absorb a different firm's culture, also customers may react slowly than expected to new products offered on the market.

[90] S. Christofferson, R. McNish, D. Sias, *"Where mergers go wrong"*, McKinsey & Company, 2004.

3. Amazon and TopCashback: Valuation and Deal Considerations

3.1 Amazon and TopCashback: characteristics and potential opportunities

The current chapter describes a possible acquisition involving Amazon playing the role of the acquirer and TopCashback as the target; the rationale of the deal is based on the evidence provided on the previous chapters and, more specifically, it lies on the arguments regarding the current state of play of mergers and acquisitions activities and markets, already reported earlier. Anyway, the reasons behind the deal proposal will be better explained throughout the valuation process of both companies and on the fourth (and last) chapter.

Amazon is headquartered in Seattle, Washington, and it has been founded on July 1994 by Jeff Bezos, nowadays is considered as one of the biggest and more successful enterprises ever created. Originally incorporated as Cadabra[91], its name changed to Amazon for the website launch in 1995; according to Bezos, who is still the CEO of the company, the new iconic name has been chosen for the value of alphabetic placement. Before obtaining an incredible success, Amazon started as a simply online bookseller and, even if it was not the first company offering a similar service, the promise to deliver books to any reader anywhere contributed in increasing Amazon popularity. Amazon is now principally known as the world's largest online retailer, but its businesses portfolio can boast a variety of services as well as its own products. About the services, through a paid subscription to Amazon Prime (the Amazon's premium account) the company guarantees its customer shorter delivery times for all orders and, in addition, provides many additional benefits, among which the most popular are a music streaming service (similar to Spotify or Apple Music) named Prime Music and a streaming platform with dozen of TV series and movies named Prime Video (similar to Netflix). Furthermore, under the name Amazon Web Services[92] (AWS), the company offers a broad set of cloud-based products and services as data storage, analytics, databases, management tools, internet of things (IoT), enterprise applications and many others; AWS' offer is addressed to enterprises and startups, helping them with web and mobile applications, game development, and all the various steps of data management.

Amazon, since 2009, is also the leading producer of e-book readers under the famous trademark Kindle. Tons of e-books can be easily purchased and downloaded on the Amazon website. In addition, Amazon is also producing a wide set of goods, ranging from the various smart personal assistants, like Amazon Alexa and Echo, to many everyday items like electronic goods, stationary, batteries, sports articles and much more, under the brand AmzonBasics.

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[91] M. Hall, "*Amazon.com*", Britannica, 2017

[92] Amazon Web Services official website

Amazon has an impressive track record of successful mergers and acquisitions transactions; during its life it has already bought more than one hundred companies with the objective of continuously expanding its lines of business and gaining strategic capabilities for the production of its own-branded products, also by absorbing and integrating companies characterized by a high expertise in the development of technologies and IoT. The largest deal undertook by Amazon is the acquisition of Whole Foods Market[93] in 2017, the transaction generated a great media reaction, getting the attention of almost every financial newspaper around the world. The price paid by Amazon was $13.4 billion, transforming the company that basically concentrated its core business in online shopping into a more diversified corporation having also physical markets in hundreds of neighborhoods all around the United States; at the time of the deal, Whole Foods had 460 stores in the U.S., Britain and Canada, and closed the fiscal year before the transaction with sales of $16 billion. The purchase of Whole Foods Market has been considered also as a strategic step of the long-running commercial competition with the largest grocery retailer in the United States, Walmart.

Despite the amount of issues generated with the COVID-19 pandemic, Amazon's Financial Statement[94] for the financial year 2019 presents a growth in net sales, growing from the $232.887,00 millions of 2018 to the $280.552,00 million of the current fiscal year. The growth is also observable in the Free cash flow reported, FCF of 2018 has been of $19.400,00 million compared to the $25.825,00 millions of 2019. Another point of interest is the declared intent to continuously increase the investments in technology and contents, supporting the variety of products and services implemented for the geographic expansion strategies and the relative cross-functionalities. This objective is perfectly in line with the Amazon's strategy of expanding the AWS and technology infrastructures.

Regarding the sell-side of the proposed acquisition discussed in the current chapter, TopCashback is a cash-back website based in Stafford, England, and launched in the summer of 2005[95] by O. Ragg and M. Tompkins as a private limited company. Since the beginning, the mission of the company has been to help UK residents to save as much money as possible when purchasing on internet, being the first website that pass 100% of cash-back to customers. The functioning of the website is simple: when using TopCashback's website to shop from one of the 4.000 retailers partnering with the company, the retailer pays a commission to TopCashback for referring the customer to their website; that commission is entirely charged to customers as cash-back. Once the cash-back is charged on the user account, it is ready to be withdrawn. TopCashback gives its users the possibility to subscribe for a premium account (named Plus account), providing additional cash-back charges and promotions.

The company is continuously growing, the 17 employees of 2011 became 179 as of ending 2018; furthermore, also net income constantly grew since 2010 till 2018, year characterized by a huge amount of

[93] N. Wingfield, M.J. de la Merced, *"Amazon to Buy Whole Foods for $ 13.4 Billion"*, The New York Times, 2017

[94] Amazon Annual Report 2019, J. P. Bezos

[95] TopCashback official website

different management charges and financial charges[96]. Among the most popular partners of TopCashback there is also Amazon, that is slowly getting in touch with cash-back mechanisms, as a partner of some cash-back companies.
Among the most interesting cash-back providers, considerable as competitors of TopCashback, Ibotta deserves to be mentioned; it is an American private company based in Denver, Colorado, and founded on late 2011 by the current CEO Bryan Leach with the declared mission to "make every purchase rewarding" for the customers of its firm. The core business of the company is a mobile app that provides cash-back services for its users. According with its own website[97], over the last seven years the company has paid back more than $600,00 million to users; the app has been downloaded by more than 35 million people around the world. Dun and Bradstreet[98] estimated the company's annual revenue as of $37,64 million for 2019. Ibotta is a private company with few shareholders (it has just 13 investors), and unfortunately the financial information available for the company is difficult to get for the general public. A great number of financial analysts and media, as the Denver Business Journal[99], use to define Ibotta as a unicorn, that is, a privately held company being potentially valued more than $1 billion.
Another large and well-known cash-back provider is Lyoness, controlling Cashback World and founded on 2003 in Switzerland. It has a huge members base all around the world, and it operates in many countries. However, the company has been investigated by various Antitrust authorities of different countries for an alleged exploitation of a pyramid scheme; this has been the case, for example, in Italy, in which during 2019 the Italian Antitrust authority "AGCM" punished the Italian branch of Lyoness with a € 3,2 million sanction for "deceptive promotion modes and pyramid scheme"[100].
Cash-back systems are continuously gaining popularity among customers and the number of companies offering cash-back opportunities is growing sharply, cash-back can be considered as a financial incentive for buyers and, therefore, as a method to potentially increase the volume of sales for the seller adopting this strategy. About the main features of cash-back systems[101], at first it can be stated that, from a strategical perspective, cash-back can be seen as an alternative method to offer a discount to consumers, without undervaluing the price of the offered merchandise with a direct discount on goods price. In general, cash-back services are provided with the objective of incentivizing the usage of the credit card or of the website of the company providing the service, this strategy is implemented by both large credit card issuers (i.e. Mastercard, etc.) and by startups and firms that concentrate the most of their core business on the cash-back

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[96] Bureau van Dijk, *"TopCashback company profile"*, Orbis, 2019

[97] Ibotta official website

[98] Dun and Bradstreet, *"Ibotta Inc., Company Profile"*

[99] J. Rose, *"Fast 50 Extra-large No.1: Ibotta is a different breed of unicorn"*, Denver Business Journal, 2019

[100] *"PS11086 – Vendita piramidale e promozione ingannevole, sanzione da oltre 3 milioni a Lyoness"* AGCM (Agente Garante della Concorrenza e del Mercato) Press Release, 2019

[101] *"What cashback mean and how cashback works"*, Gotoclient, 2020

world, as TopCashback or Ibotta, earning percentages on goods sold. Cash-back can happen in different ways but usually it comes as a percentage of what has been bought by the customer; providing an example of such a system, assuming a cash-back percentage of 5% for the purchases done with an hypothetic cash back app (or by using a specific credit card), for each $1000 spent, the customer earns back 50$. In addition, there is often a minimum cash requirement for cash-back request. Many articles have reported how and in what measure do cash-back systems increment sales, it is generally recognized that cash-back carries positive effects for the service issuer. Among the most important benefits attributable to the adoption of cash-back systems[102] there is the encouragement to the repeated purchase using the website offering the service, making it possible to increase the order frequency and to retain a greater number of customers, the ones who are interested in obtaining a continuous stream of cash back from their purchases and that otherwise would have done shopping using many other websites or apps. The direct consequence of this outcome is the retention of users, that in turn potentially generates a sensitive increase in the volume of transactions. As a matter of fact, order volumes have been proved to increase when implementing cash back strategies.

The link between Amazon and TopCashback appears now clearer, the former is the biggest online retailer of the world, characterized by impressive volumes of transactions, the latter is one of the most brilliant companies providing cash-back services with a high expertise in the retention of customers. Considering the size of Amazon, organic growth strategies are not easily pursuable, by contrast, as also demonstrated by the track record of closed acquisitions, inorganic growth can be seen as a faster way to continuously boost the growth of the colossus based in Seattle. Therefore, the already huge volume of Amazon' sales could be increased by implementing cash-back strategies, encouraging customers to make an important portion of their everyday purchases using the Amazon website. In addition to the web platforms, this system has also many interesting potential applications as for Whole Foods physics markets, stimulating an increase in attendance in stores, and/or even for the creation of an Amazon credit card. The adoption of a cash-back system may be for Amazon a good opportunity to increase the customers retention, an objective that seems to be central for the Amazon business strategy, already characterized by many attempts to building customer loyalty, as the offering of the Prime subscription.

As stated previously, cash-back is growing in popularity (and volumes) year after year and is here to stay; the benefits provided to both users and issuers of the service are very concrete and therefore unlikely to be considered as the characteristics of a bubble. Many media and professionals seem to confirm the increasing importance of cash-back systems, a study conducted by CreditCards.com and reported by Bloomberg[103] reports impressive numbers: it has been found that about 49% of American adults hold a cash-back credit card as of 2019 and half of the millennials (ranging from 23 to 38 years old) received cash back from their credit cards at least monthly. According to the study, the most popular rewards categories for cash back are

[102] M. Swan, *"Do cash-back sites really drive incremental sales?"*, Digital Commerce 360, 2014

[103] L. McGrath, *"Cash Is King When It Comes to Credit Card Rewards"*, Bloomberg, 2019

dining (14%), gas (23%), travel (27%) and groceries (35%); furthermore, on average, a cash back card returns 1,25% to its user.
Having already participated in some cash-back programs made by companies like TopCashback and others, it seems that Amazon is interested in entering the cash-back business. Indeed, for Amazon, implementing a certain type of cash-back system may be a valid opportunity for a further growth, and to acquire and properly integrate a successful company having as core business the cash-back itself could be the best way to gather and implement this new technology; if Amazon would prefer to create and operate a new division dealing with cash-back, probably the time to properly manage cash-back will be way longer than the one needed if relying on an already established organization, characterized by an important experience and having many insights on the most efficient cash-back strategies. The integration of such service may also set Amazon in an advantageous position with respect to the other large online and physics retailer, allowing Amazon to make another step in the process of continuously innovating and keeping up with the times and the changing technologies.
Given the linkage with Amazon, with whom it has already had relations, TopCashback is an optimal candidate for an acquisition, it is probably recommendable to prioritize the deal for the current or next fiscal year, in order to prevent the eventuality of an auction with potential competitive bidders. The fact that the two companies already have relationships may suggest that a potential acquisition is likely to be "friendly" rather than "hostile". The dimension of Amazon and the relative important stream of cash that is able to generate each year, potentially makes it an optimal acquirer for a company having the size of TopCashback. Then, the track record of M&A deals of Amazon is explanatory of the experience of the company in dealing with acquisitions. The following paragraphs will present a valuation of the two companies, based on the financial literature reported in the second chapter; the objective of the valuation is to assess an appropriate value for TopCashback, to investigate whether the deal is convenient, strategically and economically, for Amazon, and to further deepen the potential synergies to be generated through the acquisition.

3.2 TopCashback, financial statements review and DCF valuation

The financial information available for companies doing cashback is extremely scarce, given that basically all of these companies are private. Even the biggest players of the sector, like Ibotta (widely considered as a potential unicorn), do not provide any public financial statements. This is not exactly the case for TopCashback, for which financial statements have been published and are available on the major financial data platforms as Thomson Reuters Eikon and Orbis of Bureau Van Dijk. The financial statements currently available for TopCashback cover the period between 2010 and the end of the fiscal year 2018, unfortunately no data is available for the last fiscal year 2019; in addition, being private, explanatory notes and the cash flow statement are not available. The company is part of a bucket of five interconnected companies completely owned and controlled by Top Online Partners Group Limited[104]; the other companies are: Trusted Loyalty Partners Limited, Medianet Systems Limited, Top Media Limited, Top Benefit Schemes Limited. The Top Online Partners Group Limited has just three shareholders: Oliver Ragg as principal shareholder (with 50% of shares), Michael Emile Tomkins and Irene Tomkins, owning the remaining stake of shares. The enterprise value for TopCashback has been calculated using the discounted cash flow (DCF) method and then the method of comparables has been performed. This decision is due to the fact that the considered company is private, therefore the application of the dividend discount model was not possible, because no market values are available and there isn't an effective stock price for the firm. The equity value of TopCashback, that should be the basis of the acquisition price, was therefore obtained starting from the enterprise value obtained with the two methodologies carried out. The valuation of TopCashback starts on 2019 and the forecasts end on 2025, the choice to avoid predicting beyond this year follows the objective to comply with the conservative approach, which is a constant throughout the whole valuation process.
In order to take account for the potential future growth of the company, a terminal value has been calculated following the methodology reported in the second chapter and then it has been discounted to the year 2019, the starting point of the valuation. There are few differences between the financial statements of TopCashback provided by the two platforms previously cited; the numbers reported are basically equal but, while Thomson Reuters Eikon performed an approximation of the balance sheet's voices, Orbis reported each voice as it has been recorded. In light of this consideration, Orbis has been chosen as principal data provider for the valuation process. Being a British company, the financial information of TopCashback has been initially recorded in pounds; however, the data analyzed has been converted (by both Thomson Reuters Eikon and the Orbis websites) in U.S. dollars using the end-of-the-year prevailing exchange rate between pounds and dollars, observable each year on the markets. The rationale of this choice lies in the fact that Amazon is an American company and its reference currency is the U.S. dollar. Indeed, the deal is principally

[104] Bureau Van Dijk, *"TopCashback Limited – Corporate Ownership"*, Orbis

observed from the buy-side point of view and, with the perspective of a cash payment for the acquisition, to get a dollar value for TopCashback has been considered as more straightforward.

The financials available until 2018 clearly show the growth of TopCashback. Regarding the balance sheet, the total assets have grown each year, from the $8.737.669,00 of 2010 to the $87.746.014,00 of ending 2018. While the fixed assets are characterized by a non-linear growth, especially in the period between 2013 and 2018, alternating growth phases with decreasing phases, the current assets have grown steadily and represent the greatest component of total assets. The higher growth among the various voices composing the asset side is the one observable for Cash and cash equivalents, which grew from the $6.714.381,00 of 2014 to the $41.729.041,00 of 2018. With respect to the right side of the balance sheet, the one corresponding to liabilities and sources of funding, the voice 'shareholders' funds', corresponding to the equity of TopCashback, experienced an important growth: on 2010 this voice accounted for just $642.622,00 and it constantly grew till the $11.527.182,00 of 2018. The current liabilities basically followed the same path as of the current assets, continually growing during the reference period. What is particularly interesting is the voice relative to the long-term debt, it has been zero for each year of the reference period, exception made for 2014, year in which TopCashback contracted a debt of $1.260.754,00. Also, the short-term loans under the current liabilities are characterized by an irregular pattern, having an average of around $55.000 between 2010 and 2017, however on 2018 the company incurred in a short-term loan of $7.823.688,00, the highest amount of debt that the company had in the reference period. The difference between current assets and current liabilities, representing the net working capital necessary to run the business year over year, grew each year until 2018, year in which it has decreased from $18.350.745,00 to $11.408.316,00; this difference is slightly lower than the short-term loan taken on 2018, suggesting that the decrease in net working capital has been probably generated by the effects of this loan. A first consideration that can be drawn observing the balance sheet of TopCashback is that the net debt of the company is always negative during the reference period, meaning that each year the cash and cash equivalent balances exceeded the total debt (both long-term and short-term); furthermore, it must be mentioned that the company has always had more cash and cash equivalents than the sum of shareholders' equity and total debt. In light of this evidence, the capital structure of TopCashback has always been entirely composed by equity during the period 2010-2018, giving the firm the status of "all equity financed"; for this reason the discount factor employed in the valuation is the unlevered cost of capital of the firm, calculated as its cost of equity.

The growth of TopCashback is evident also when observing the Profit & loss account (Income statement), the most impressive progression is the one followed by the operating revenue, that on 2018 accounted for $117.577.085,00 while on 2011 it was $24.661.028,00. The cost of goods sold (COGS) grew constantly during the reference period, at a similar (but slightly lower) rate as the one of operating revenue; this explains the constant growth of the gross profit. By contrast, the EBIT has evolved irregularly, after having reached its higher peak of $7.176.399 on 2017, it decreased during the following year, to $3.047.155,00. Regarding the taxation, during 2018 the company experienced what can be interpreted as a tax credit, given

that it gained $125.213 from taxation. The average tax rate observed during the reference period, used for the valuation, is 17,15%.
The voice relative to the depreciation has grown from 2010 to 2015 and, after this year, it has started to slightly decrease. Anyway, for the valuation purpose it has been assumed that the depreciation is constantly growing during the forecast period, in order to reflect the assumption of a hypothetic constant growth of the firm, implying a continuous investment activity pursued by TopCashback. Another confirmation of the constant growth experienced by the analyzed company comes from the data relative to the employees: TopCashback had just 17 employees during 2011, this number sharply rose to the 179 employees working for the company, as of 2018. In fact, also the voice relative to the cost of employees grew exponentially, from $492.095,00 of 2011 to $4.690.342,00 of 2018.
Among the data available on Orbis, there are also the "global ratios" and the more interesting are reported in the following table[105]. Each ratio has been re-calculated to confirm its truthfulness, and indeed they were all accurate. The first ratio to be discussed is the return on equity (ROE) using Net income; this ratio is considered as the most comprehensive measure of profitability since it represents the final outcome of the entire firm's activities and decisions made during the year[106]. It measures the profitability from the perspective of shareholders, those who invested equity in the company, and measures what the company has earned from previous investments. A high ROE may indicate that the firm is able to pursue valuable investments. The ROE (using net income) is expressed as the ratio of net income on the book value of shareholders equity. As it can been observed on the table below, TopCashback reported very high ROEs, especially for 2011 and 2013, meaning that the company is able to grow each year. Even if all the observable ROEs are high, the trend appears to be decreasing for the last years (from 2016), probably meaning that the company is stabilizing after the first years of impressive growth.
The profit margin shows the portion of each dollar in revenues, available to shareholders after having paid both interests and taxes[107]. This ratio is calculated as net income divided by revenues (sales); for TopCashback it followed a non-linear pattern but is always been higher than 2% for the entire reference period. The gross margin of a company is the ratio of its gross profit, defined as the difference between revenues and cost of goods sold (COGS), divided by the revenues; for TopCashback this ratio constantly grew from 2011 to 2018. For the considered company, both EBITDA margin and EBIT margin (respectively defined as EBITDA and EBIT on net income) follow the same irregular path followed by the profit margin; all these three ratios have as a lower point the fiscal year 2018, this is mostly due to the high amount of 'other operating expenses', lower than COGS of just around $3 million during the considered year. The 'other operating expenses' is probably the factor that has the higher impact on EBIT, as this voice grew more than COGS if considering their average growths both for the last 4 years and for the entire observation

[105] Table 2 - *"TopCashback Limited – Financial Ratios"*, Orbis, 2020
[106] G. Hawawini, C. Viallet, *"Finance for Executives"*, Cengage, 2015, Chapter 6
[107] 4J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 2

period. Over the last 4 years COGS registered an average growth of 13,70% against the 38,95% of other operating expenses; in addition, considering all the reference period, the comparison is 25,2% versus 64,6%. The current ratio is a type of liquidity ratio and it is obtained by dividing the total current assets by the total current liabilities, it shows the ability of the company to repay its current liabilities by using the cash raised from the sale of its short-term assets; the current ratio should be at least equal to 1, for TopCashback it is always higher than 1 but never close to 2 (the optimal case), meaning that the company is not very liquid but, at the same time, it is still able to repay its current liabilities. An adjustment of the current ratio is the acid test, defined as the sum of cash and account receivable divided by the current liabilities; the rational of the acid test is to assess the liquidity of the considered company taking into account just those current assets that are the most liquid by definition. This ratio should be closer to 1 in order to reasonably consider the company as safely liquid. The acid test for TopCashback shows that, from 2014, the company is increasing its most liquid assets more than its current liabilities, having on 2018 a ratio of 1,09%. The last ratio reported is the costs of employees on operating revenue and it can be observed that after 2012, this ratio is always close to 4%, showing that, in this period, the company reached a balance between hiring new employees (the increment is shown on the bottom line) and generating additional revenues.

Table 2 - TopCashback Limited - Financial Ratios

Ratios	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**
∟ ROE using Net income (%)	24,283	42,744	53,022	37,258	57,413	97,813	48,425	92,444	n.a.
∟ Profit margin (%)	2,274	8,168	7,714	3,142	3,728	3,015	2,782	6,719	n.a.
∟ Gross margin (%)	22,605	20,048	14,877	14,257	14,2	12,426	13,456	10,808	n.a.
∟ EBITDA margin (%)	2,646	6,645	4,745	3,71	3,74	3,014	7,587	6,454	n.a.
∟ EBIT margin (%)	2,592	6,582	4,664	3,601	3,625	2,888	7,545	6,395	n.a.
∟ Current ratio (x)	1,15	1,285	1,202	1,118	1,117	1,041	1,098	1,112	1,079
∟ Acid test (%)	1,09	0,95	0,89	0,85	0,81	0,97	1,08	1,10	0,52
∟ Costs of employees / Operating revenue (%)	3,989	4,192	4,057	3,972	4,291	4,205	3,04	1,995	n.a.
∟ Number of employees	179	158	144	139	118	77	30	17	n.a.

From the reported ratios and financials, some initial key considerations about TopCashback can be drawn:

- It is a growing company. On the one hand the majority of the voices presented on financial statements are characterized by a constant growth, on the other hand each year the firm hired many new employees.

- The growth of TopCashback has fallen slightly in recent years, meaning that the company is more mature and that the profitability of the business is about to grow at a more stable rate, as shown by the reduction of the return on equity experienced in the last three years.
- The greater area of uncertainty is represented by EBITDA and its linked voices as EBIT and net income. This suggest that the company cannot be considered as already mature and that it will be reasonably continuing to grow over the next years.

In light of these considerations, the growth rate of revenues employed in the valuation process was calculated as the average of the growth rates of the last three years of observations, in order to avoid the bias of affecting the valuation with the high growth rates registered when the company was experiencing its period of highest growth. The average growth rate of revenues of the period 2016-2018 is therefore 11,25%.
Being a private company, no market values are available for TopCashback, for this reason only book values have been used for the valuation, exception made for the component of the unlevered cost of capital.
The discount rate (cost of capital) is a fundamental component of the DCF method, given that a little variation of that rate potentially implies significant changes on the output of the model, so on the price of the valued company. For this reason, the assumptions behind the calculation of the discount rate play a very important role for the accuracy of the valuation.
As stated above, for TopCashback the unlevered cost of capital corresponds to its cost of equity and this has been calculated using the capital asset pricing model, as presented on the previous chapter. It is necessary to calculate the cost of equity coherently, both by using as risk free rate and equity risk premium, rates that belong to the same context and period, and by choosing the most appropriate beta.
The data used for the calculation of the TopCashback's cost of equity refer to the first days of 2019. Given that the company is based in Stafford, England, the U.K. ten years nominal-par-yield of treasury bonds[108] has been used as risk-free rate, that is 1,33%. For the equity risk premium observable over the U.K. equity market, the choice has been to use the one available on Damodaran's website[109] and it is 6,65%. The beta has been chosen considering the reference sector of TopCashback, that is "business support services", as defined by Thomson Reuters Eikon[110]. The beta used for the calculation of the cost of equity has been taken from the historical tables of industry betas computed on Damodaran's website; by studying the companies composing the various industries, the sector nearest to "business support services" is "business and consumer services" and the unlevered beta corrected for cash observed on this sector as of 1/1/2019 is 0.92[111]. The choice of using the version of the unlevered beta corrected for cash lies in the need of obtaining the beta for a business. The unlevered beta of an industry, without any cash corrections, takes into account

[108] *"End year level of yield from British Government Stock, 10 Year Nominal Par Yield"*, Bank of England, 2020

[109] Aswath Damodaran, *"Risk Premium for Other Markets"*, Damodaran Online – Data: Archives, 2019

[110] Thomson Reuters Eikon, *"TopCashback Limited",* 2020

[111] Aswath Damodaran, *"Levered and Unlevered Beta by Industry"*, Damodaran Online – Data: Archives, 2019

the amount of cash balances of the companies composing such a sector, but when a fundamental valuation is conducted, excess cash is considered as a non-operating asset and then is subtracted to the value resulting from the DCF analysis; therefore, the discount rate employed in the DCF analysis should reflect just the risk linked to the operations of the companies being part of the considered industry and not the cash balances of those companies[112]. In addition, having huge cash balances generally decrease the risk of the company and so it does with its cost of capital, consequently if an unlevered beta without cash corrections is used for the valuation, there is the concrete risk of underestimating the cost of capital, that is translated into an overestimation of the analyzed company.

The unlevered beta corrected for cash has not been "re-levered" using the capital structure of TopCashback because it is entirely composed by equity. Therefore, by plugging these components on the CAPM equation described in the previous chapter, the cost of equity for TopCashback for 2019 has been 7,45%.

The starting point of the DCF analysis aimed at assessing the intrinsic value of TopCashback begins with the voices reported on financial statements by the company, referred to the fiscal year 2018. As stated above, these values have been forecasted until 2025 and then discounted to reflect the price that the company should had in 2019. The table[113] containing the DCF analysis, the relative assumptions and results, follows the explanation of the analysis and the comment of the results obtained.

The first line of the analysis (and of the table), starting in 2019, is the EBITDA of 2018, which has been forecasted using the average growth rate of revenues calculated with the revenues recorded by the company in the period 2016-2018. The revenue growth rate has been used also for the projection of capital expenditures, net working capital and depreciation; the rationale of this decision lies in the fact that the assumed growth in revenues should be generated by further investments in fixed and short-term assets, undertaken by TopCashback. Therefore, both Capex and net working capital grow at the same rate of revenues and, being the depreciation referred to the Capex, also this last item follows the same path. After having projected the EBITDA, the depreciation is subtracted to it in order to get the EBIT. The average tax rate of 17,15% (calculated over the sample period available) is then applied to the EBIT so as to get the net operating profit after taxes (NOPAT). Being a non-cash expense, the depreciation is added back to NOPAT to get the cash flow of TopCashback. Given that the net working capital grows at a constant rate, the variation in net working capital is always negative for the forecast period. The capital expenditures, for the first year of the analysis, have been calculated as the difference between the fixed assets (considered as property, plant and equipment) of 2018 and 2017, plus the depreciation expense of 2018; the output has then been forecasted using the revenue growth rate, as anticipated above. Once calculated both net working capital variations and capital expenditures, those have been subtracted to the cash flows in order to obtain the free cash flows, coherently with the formula reported on the previous chapter, that is: $FCF =$

112 S. Ang Clifford, *"Why You May Want to Consider Cash-Adjusting CAPM Betas"*, Bloomberg Exam Prep – CFA Program, 2018

113 Table 3 - *"TopCashback Limited – DCF Analysis"*

$EBIT \times (1 - T) + Depreciation - Capital\ Expenditures - Increases\ in\ Net\ Working\ Capital.$ All the free cash flows have been discounted using the cost of equity of 7,45%.

The sum of the discounted cash flows obtained so far in the analysis is $10.884.636,32. For the calculation of the terminal value, a long-term growth rate of 1% has been used; this choice was made in order to be the more conservative as possible when trying to consider growth scenarios beyond 2025 and also to do not overestimate the terminal value itself, by assuming excessive long-term growth rate. Even if the growth rate employed is low, the terminal value of TopCashback's operations, that is $26.952.016,90, represents the largest component of the enterprise value. The sum of the cumulative value of the discounted free cash flows and of the terminal value, lead to an enterprise value of $37.836.653,22.

Another fundamental step in the process of estimating the value to be paid for the equity of TopCashback is the calculation of net debt. This item has been forecasted starting from the relative book value of 2018, using the average revenue growth rate and assuming that, if on the one hand the debt should follow the same path of capital expenditures in order to reflect the continuous stream of investments, on the other hand the company will probably continue to rise its cash balances as it has done during the reference period observed on financial statements. The Net debt calculated for 2019 is "in red" of $37.720.658,95, meaning that the company has this amount of cash and cash equivalents "in excess" to the loans it contracted.

The impact of the net debt on TopCashback's equity value is very disruptive; given that the enterprise value represents the sum of the firm's equity and the net debt, the equity value is calculated by subtracting the net debt to the enterprise value. In this case the net debt is negative and therefore added back to the enterprise value, resulting in an estimated equity value of $75.557.312,17.

Table 3 – TopCashback Limited – DCF Analysis

Voice	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA ($)	3.111.532,49	3.461.667,43	3.851.202,40	4.284.571,02	4.766.705,79	5.303.094,29	5.899.841,58	6.563.739,74
(Depreciation) ($)	64.377,59	71.621,87	79.681,35	88.647,74	98.623,11	109.720,98	122.067,68	135.803,73
EBIT ($)	3.047.154,91	3.390.045,56	3.771.521,05	4.195.923,27	4.668.082,68	5.193.373,31	5.777.773,90	6.427.936,01
(Taxes) ($)	- 125.213,13	581.426,51	646.853,35	719.642,55	800.622,58	890.715,14	990.945,65	1.102.454,92
NOPAT ($)	3.172.368,04	2.808.619,05	3.124.667,71	3.476.280,73	3.867.460,10	4.302.658,16	4.786.828,25	5.325.481,09
Depreciation ($)	64.377,59	71.621,87	79.681,35	88.647,74	98.623,11	109.720,98	122.067,68	135.803,73
Cash Flow ($)	3.236.745,62	2.880.240,93	3.204.349,06	3.564.928,47	3.966.083,21	4.412.379,15	4.908.895,93	5.461.284,82
Net Working capital ($)	11.408.316,44	12.692.072,98	14.120.288,24	15.709.217,90	17.476.946,84	19.443.595,03	21.631.546,46	24.065.703,97
Net Working Capital Variation ($)	6.942.428,83	- 1.283.756,54	- 1.428.215,26	- 1.588.929,66	- 1.767.728,95	- 1.966.648,18	- 2.187.951,43	- 2.434.157,52
Capex ($)	85.175,45	94.760,08	105.423,26	117.286,34	130.484,36	145.167,52	161.502,95	179.676,57
FCF ($)	10.093.999,00	1.501.724,30	1.670.710,53	1.858.712,47	2.067.869,91	2.300.563,45	2.559.441,56	2.847.450,73
Discount period		1,00	2,00	3,00	4,00	5,00	6,00	7,00
Discounted FCF		**1.397.578,17**	**1.447.014,93**	**1.498.200,42**	**1.551.196,50**	**1.606.067,22**	**1.662.878,90**	**1.721.700,18**

Discounted cumulative FCF	$10.884.636,32
Terminal value	$26.952.016,90
Net Debt	$ -37.720.658,95
Enterprise value	**$37.836.653,23**
Equity Value	**$75.557.312,18**

The equity value obtained through the DCF analysis has been subjected to two sensitivity analyses run with Microsoft Excel, both reported at the end of the chapter. The objective of such analysis is to inspect in what measure, a change in two selected inputs would cause a change in the equity value of TopCashback. The inputs employed in the first analysis, reported in the first[114] of the two tables, are the cost of equity and the average revenue growth rate; while the former has been subject to variations of 1%, the latter has been inspected with variations of 2%. As anticipated before, the factor mostly impacting the equity value of TopCashback is the cost of equity; if considering the revenue growth rate as fixed at 11,25%, the equity value lies between $111.397.596,23 and $62.619.660,45. The biggest impact is obtained when the discount rate is at its lowest values: while a positive change of 2% in the cost of equity implies a decrease of around 15% in the equity value, the same change with negative sign in the cost of equity leads to an increase of 25% in the equity value. However, given the strength of the assumptions behind the cost of equity, variations greater than 3% are unlikely to occur, while is important to consider the impact that a change of 1% may have on the cost of equity, in this case that value should lie in the range between $83 million and $70 million. The impact of changes in revenue growth rate is not particularly significant, mostly because the greatest part of the items composing the DCF analysis have been linked with such a rate for their respective forecasts. Regarding the average revenue growth rate, the clear trend is that the equity value of TopCashback is maximized for the rates around 10% (9,25% - 11,25%), while it decreases with the highest variation for the revenue growth rate. This is mostly due to the net working capital, that represents the highest expense for the company.

The second analysis, reported in the second table[115], involves as inputs the long-term growth rate and, as for the first analysis, the cost of equity. For this sensitivity analysis, the equity value still experienced changes of 1% while the long-term growth rate was subjected to changes of 0,5%; this last choice was taken with the objective of being the more conservative as possible, given that a long-term growth rate higher than 2% seems to be very optimistic for the considered time horizon. The second analysis shows that, on the one hand the cost of equity is still the input impacting the most the equity value, on the other hand the long term growth impacts the equity value significantly: holding the cost of equity at 7,45%, the long term growth rate ranging between 0% and 2% cause the equity value of the company to lie between, approximately $ 70 and % 80 million. Obviously, this growth rate is reflected by the terminal value, which represents the biggest part of the enterprise value, as calculated with the DCF analysis.

[114] Table 4 - *"Robustness Check – Cost of Equity and Average Revenue Growth Rate"*

[115] Table 5 - *"Robustness Check – Cost of Equity and Long-Term Growth Rate"*

Table 4 – Robustness Check – Cost of Equity and Average Revenue Growth Rate

							Cost of Equity
$75.557.312,18	**4,45%**	**5,45%**	**6,45%**	**7,45%**	**8,45%**	**9,45%**	**10,45%**
5,25%	$109.356.257,12	$92.433.867,95	$81.734.433,79	$74.363.624,59	$68.980.765,90	$64.879.719,16	$61.653.212,99
7,25%	$110.862.427,32	$93.593.305,71	$82.680.968,21	$75.168.506,47	$69.686.280,41	$65.512.912,22	$62.232.355,17
9,25%	$111.594.709,09	$94.168.535,60	$83.162.835,56	$75.590.762,22	$70.068.827,94	$65.868.377,58	$62.569.180,50
11,25%	$111.397.596,23	$94.044.146,77	$83.089.780,72	$75.557.312,18	$70.067.746,88	$65.894.811,25	$62.619.660,45
13,25%	$110.097.824,45	$93.091.631,32	$82.361.370,35	$74.986.887,02	$69.615.620,29	$65.535.231,93	$62.334.924,98
15,25%	$107.503.053,68	$91.168.415,71	$80.866.242,72	$73.789.426,24	$68.637.781,44	$64.726.566,92	$61.660.910,65
17,25%	$103.400.490,50	$88.116.848,37	$78.481.323,68	$71.865.449,52	$67.051.797,10	$63.399.219,34	$60.537.992,85
Revenue growth							

Table 5 – Robustness Check – Cost of Equity and Long-Term Growth Rate

					Cost of Equity
$ 75.557.312,18	**5,45%**	**6,45%**	**7,45%**	**8,45%**	**9,45%**
0,00%	$85.512.428,97	$77.526.894,13	$71.709.472,42	$67.289.237,54	$63.821.603,03
0,50%	$89.347.558,36	$80.074.677,31	$73.495.018,63	$68.591.138,58	$64.800.308,59
1,00%	$94.044.146,77	$83.089.780,72	$75.557.312,18	$70.067.746,88	$65.894.811,25
1,50%	$99.929.173,25	$86.713.762,22	$77.966.099,04	$71.756.758,74	$67.126.954,30
2,00%	$107.519.065,59	$91.151.774,02	$80.816.711,12	$73.707.555,78	$68.524.443,52
Long-term growth					

3.3 TopCashback, multiple analysis

The multiple analysis based on comparables firms of TopCashback has been particularly challenging; the number of companies around the world doing cash-back services is very limited and basically all of these companies are private. For the vast majority of this kind of firms, there are no financial statements available on the most important databases available, previously cited. Anyway, two companies offering services similar to cash-back, providing public financial statements, have been found. The first of these companies is RetailMeNot, Inc. and it is an American multinational company founded in 2006 and headquartered in Austin[116]. The firm provides coupons to be used by its customers on other websites; the coupon provided are available for a wide range of retail categories as electronics, automotive, beauty products and many others. For the multiple analysis, the British segment of the company, RetailMeNot U.K. Limited, has been taken, being more similar to TopCashback in terms of dimension, shareholders' funds, EBITDA and number of employees; furthermore, they operate over the same country. Even if RetailMeNot does not provide cash-back services, its core business is near to the one of TopCashback since it allows its customers to save some money from their purchases; not in the form of cash-back but in the form of discounts on the purchased products, obtained through the coupons. The second company that run a business similar to the one of TopCashback is OpenTable[117]; the company was created by Chuck Templeton in San Francisco in 1998 and it is now part of the popular multinational Booking Holdings. OpenTable owns both a mobile app and a website, these two platforms are used to make reservation on the restaurants that have joined the OpenTable initiative; by doing so, the customers earn a certain amount of "Dining Points" for each reservation they made, these points can then be used for a variety of rewards, like discounts on hotels, meals, other restaurants and even on Amazon. Following the same rational of RetailMeNot U.K. Limited, the British subsidiary of OpenTable, named OpenTable International Limited and based in London, has been chosen for the multiple analysis. The subsidiary of OpenTable is similar to TopCashback in terms of Profit/Loss before taxes, net income, EBITDA, shareholder funds and also number of employees.

In addition to these two companies, the multiple analysis has been performed using some of the comparables suggested by Orbis among the closest 20 national (U.K.) and international companies according to operating revenue of 2018 (the last available year) within the standard peer group, which is based on 'NACE Rev. 2 industry classification: 6312 – web portals'. Many companies being part of this basket of comparables were not taken into account due to their respective negative enterprise value, calculated coherently with the standard financial theory, as also previously done with the DCF analysis. The presence of companies with negative enterprise value is due to the fact that many of these firms hold huge amounts of cash and cash equivalents, sometimes far higher than their amount of debt and of shareholders' funds. The choice to hold

[116] *"RetailMeNot, Inc – About"*, RetailMeNot Website, 2020

[117] *"About Us – OpenTable"*, *OpenTable* Website, 2020

large cash balances seems to be a characteristic of the companies dealing with web portals, media and software. The companies selected from the basket of comparables are:

- Cision Group Limited[118], a communication company providing services for firms that need to target, reach and engage new potential customers. In addition, the company also measures the impact of customer's performances with specific analytics.
- CV-Library LTD[119], a firm that offers career services like job researches, alerts, career advices and also courses. The company, based and operating in the U.K., is featured with many recruiters and employers.
- Deliveroo France SAS[120], it is the French subsidiary of the well-known company that delivers meals in many countries.
- Google Italy SRL[121], it is the Italian subsidiary of Google, one of the biggest companies around the world.

Unfortunately, the data available for the comparable companies are referred to 2018, as for TopCashback; therefore, all the values have been taken from Orbis. The only multiples that can be constructed for TopCashback are those involving the enterprise value as key metric; being the company private it makes little sense to use equity and market values of the comparables to calculate the multiples. Therefore, the multiples considered for TopCashback are: Enterprise value / Operating revenue and Enterprise value / EBITDA. The enterprise value, representing the value available to all shareholders, is divided by measures of earnings and cash flows available before interest payment are made. The Enterprise value on Operating revenue is among the most accurate multiples for a number of reasons:

- It may be the only reliable multiple based on performance, whenever the EBITDA is negative.
- The operating revenue is the first line of the income statement and it simply represents the revenues obtained through sales; because of this reason, it presents limited exposure to the accounting differences that may arise among countries.
- It is particularly useful when the discrepancy between operating revenue and EBITDA is very significant.

The valuation multiples present some limitations[122]: if comparable firms were identical, the multiples should match with accuracy, however firms are not identical, and the usefulness of this valuation depends on the nature of the differences between the companies. As a consequence, a significant amount of dispersion often

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118 *"About Cision"*, Cision Website, 2020

119 *"About CV–Library"*, CV-Library Website, 2020

120 *"Deliveroo France SAS, Company Profile"*, Dun&Bradstreet, 2020

121 *"Google Italy SRL, Company Profile"*, Dun&Bradstreet, 2020

122 J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 9

occurs across the industry even for the EBITDA multiple, that is the one that shows the smallest variations. In addition, both the Operating revenue and the EBITDA multiples present specific limitations: the former does not consider the "quality" of revenues and the rules followed for their recognition, the latter ignores tax profits and depreciation; in addition, both multiples does not take into account the varying growth rates of revenues and are therefore sensitively impacted by the reference year (as also shown for TopCashback, revenues growth rates are very different year over year). Another important limitation is that multiple analysis provides information on the company's value just relative to the other firms composing the comparison set. In order to prevent part of the limitations of this valuation technique, the comparable firms have been chosen according with the objective to reflect as much as possible the characteristics of TopCashback. In light of these considerations, the outputs of the multiple analysis performed should not been taken as the true value of TopCashback, but rather as a countercheck for the robustness of the value obtained with the DCF analysis.

The starting point of the multiple analysis performed was the calculation of the enterprise value for the comparables companies, based on the book values available on their respective financial statements. The choice to use the book values, also for the companies publicly traded, lies in the fact that the only values available for TopCashback are the ones on its financial statements, therefore it was more coherent to use book values for the comparable companies. The enterprise value has been calculated by simply adding the net debt to the equity value of the companies, as reported; having huge amounts of cash balances, for many of the comparable companies the enterprise value is lower than the equity value, as for TopCashback. At the end of the paragraph the table[123] showing the multiple analysis is reported and, for each of the estimated values the median, average and standard deviation have been computed.

While the Enterprise value on EBITDA multiples obtained is of little importance, given that provides an average enterprise value excessively low for TopCashback, the enterprise value obtained with the EV/Operating revenue multiple is incredibly robust with value obtained with the DCF analysis: the average value obtained with this multiple is $37.618.595,00 and it is surprisingly similar to the enterprise value for 2019 of $37.836.653,23 obtained with DCF. The standard deviation of such a value is around 45 million, meaning that, when adding back the net debt to get the equity value, the range of price is very similar to the one obtained through the sensitivity analysis performed in the previous paragraph. As a result, the countercheck done for the value obtained with the DCF analysis has been successful, implying that the range of price for TopCashback is about to be calculated with reasonable certainty thanks to the results provided by these analyses.

[123] Table 6 - *"TopCashback Limited – Multiple Analysis"*

Table 6 – TopCashback Limited – Multiple Analysis

Accounting year: Peer group year	**Year**	**Operating revenue (Turnover) USD**	**P/L before tax USD**	**P/L for period [=Net income] USD**	**EBITDA**	**Total assets USD**	**Shareholders' funds USD**	**Number of employees**	**net debt**	**EV USD**	**EV/Operating revenue**	**EV of TopCashback USD – EV/Revenue**
Median	2018	63.531.499	3.579.458	3.594.656	5.421.668	56.109.546	17.511.290	182	-11.552.940	9.375.598	0,163	19.214.934
Standard deviation	2018	44.474.417	8.461.135	5.965.571	8.369.264	31.057.877	16.015.008	99	11.605.069	23.594.424	0,381	44.797.338
Average	2018	77.236.460	8.975.989	7.467.921	10.937.737	57.912.948	24.367.463	220	-9.450.042	17.057.469	0,320	**37.618.595**
TOPCASHBACK LIMITED (*)	2018	117.577.085	2.673.984	2.799.197	3.111.532	87.746.014	11.527.182	179				
DELIVEROO FRANCE SAS	2018	63.531.499	15.228.335	14.412.384	17.187.604	102.921.627	56.045.704	411	8.421.761	64.467.465	1,015	119.309.269
CV-LIBRARY LTD	2018	45.237.366	20.508.714	14.664.931	21.380.085	45.049.313	25.571.747	184	-14.968.625	10.603.121	0,234	27.558.724
DELIVEROO FRANCE SAS	2018	129.250.805	3.417.097	3.101.115	4.053.216	56.109.546	17.511.290	n.a.	-14.970.798	2.540.492	0,020	2.311.039
GOOGLE ITALY S.R.L.	2018	122.583.899	17.588.285	12.184.395	20.668.827	69.325.473	33.032.020	241	-24.883.946	8.148.074	0,066	7.815.274
OPENTABLE	2018	35.419.234	3.579.458	3.594.656	5.421.668	19.836.718	11.412.107	167	-8.137.255	3.274.852	0,092	10.871.144
RETAILMENOT	2018	27.055.331	-163.951	1.518.770	4.741.224	24.401.947	15.472.194	139	-2.161.386	13.310.807	0,492	57.846.120

(*) subject company

3.4 Potential synergies and rationale of the deal

As declared, the Amazon's principal objective is "to be Earth's most customer-centric company"; objective to be achieved through long-term thinking and the obsession for customers' satisfaction that the company has always had. This goal can be interpreted as the strategic desire to reach a higher degree of customer retention, thus making the purchase of daily consumer goods and durable goods on the Amazon's platform, an established routine for users. Undoubtedly, the use of Amazon already presents various advantages for the great majority of "traditional" customers: a very wide range of products is available on the website, with the Prime subscription the delivery times are incredibly shorter and the user has access to various streaming platforms, the long list of e-books available for Kindles is almost a valid alternative to libraries, and much more. However, in many cases the advantages are too little to make sure that Amazon is actually preferred to other sellers for the daily purchases. The internet is literally full of online retailers, websites doing cash-back services, websites providing coupons, and many others; it is undeniable that, if on the one hand Amazon is a reliable and "comfortable" online retailer, on the other hand there is often another specific website (or physic shop) that may be more convenient for a specific purchase or need.

Indeed, the success of Amazon is undisputed, as it is its popularity all over the world, and the numbers that the firm records each year are the perfect confirm of this statement. Anyway, every business, whether it is a small family business or a market colossus with net sales of $280.552,00 million, has room to further improve and grow over time; Amazon is an example of this successful mindset, it started as an online book seller and became one of the biggest companies of the world by continuously improving itself and by learning from difficult periods and mistakes, an improvement process that has been continuously done by acquiring and integrating other companies and by expanding its existing lines of business.

The strategic potential of this acquisition is much more shattering if contextualized to the actual socio-economic environment characterizing our society. The pandemic caused by the COVID-19 had a very significant impact on most elements characterizing the life of people and, more broadly, of nations. Among the more tangible effects of the pandemic, what concerns customers behavior is undoubtedly one of the most evident and meaningful for the proposed acquisition: the pandemic created new habits among customers, the working life has changed as a lot of companies experienced the smart-working, people now use to spend more time at home and this, in turn, also changed the preferred entertainment channel, causing a boom in the subscription for video streaming platform and for digital entertainment, as videogames. Because of the pandemic and of the experience of lock-down, customers all over the world changed the way, the timing and the source of their purchases. A report,[124] made in July 2020 by McKinsey, states that the e-commerce industry experienced, in just eight weeks during the lock-down, a growth that would have been experienced

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[124] S. Kohli, J. Timelin, V. Fabius, S. Moulvad Vernanen, *"How COVID-19 is changing consumer behavior – now and forever"*, McKinsey & Company, 2020

in ten years without a pandemic. The same report provides interesting insights about such a change; as confirmed by the numbers, the online retail industry experienced a surge, the customers showed and continue to show a preference for trusted and reliable brands (Amazon is undoubtedly part of this category), especially during the lock-down people started to opt for the purchase of larger bucket of goods, in order to reduce the purchase frequency. The changes caused by the pandemic had and will continue to have these and many more effects on the markets. Being a period of conjuncture, it is of fundamental importance trying to ride the wave of change. Within this context, Amazon is in a position of advantage, as it is the biggest player of the industry that probably has benefited the most from the situation. But, in order to carry out the most from this change, various strategic decisions should be undertaken to keep up with the times and, if possible, to anticipate them. What probably will be more relevant for the immediate future is the importance of customer experience, especially of the digital one; when purchasing from web online retailers, customers pay an increasing attention both to the style of the website and to the advantages provided by a certain retailer. People's attention for the "customer journey" on websites is increasing sharply, they seek for comfortable and user-friendly services, the more a company is able to connect services within a single brand (or app), the better it is for customers.

It is clear that the consumers behavior has changed and will continue to change, this process follows a non-linear path, and therefore some innovations may dramatically change the market. For these reasons, the decision to undertake a certain strategy, rather than another one, may have a very significant implication for the expected growth or for the decline of a company. Amazon has all the required characteristics to ride this wave in the best way, as it partially already did boost the sales done through its platform. For the company, adding cash-back features to its lines of business may represent an additional and important step in the process of expanding and improving the customer experience it offers and, therefore, to increase the retention of customers.

Currently, the cash-back is something that Amazon is missing, but that many other companies are exploiting, indirectly increasing the competition among other online retailers and Amazon, but also rising customers' loyalty to the companies providing cash-back. The decision to implement some cash-back features on some of the Amazon's lines of business could be a further, important, step in the growth pattern of the company, perfectly aligned with the company's objective to continue investing in new technologies. Having many lines of business, the potential for an eventual implementation of cash-back within Amazon could be very disruptive. By integrating TopCashback, Amazon could efficiently establish a cash-back policy for its customers, to be applied, for example, on Amazon Basic products, e-books for Kindle and even on the goods sold in the Whole Food Markets store! Following this strategy, the customers have the opportunity to benefit from purchasing books, daily goods and food from the same retailer, Amazon. If, hypothetically, the cash-back performed by Amazon would take the form of "coins" earned as a percentage of the purchased goods, and these coins would be projected for being used to obtain discounts on further purchases within a selected bucket of goods, Amazon customers should reasonably increment the volume of purchases done with the

Amazon’s platforms because the possibility to save money on daily purchases is a tangible and significant advantage for them. This represents also an important advantage for Amazon since, if this strategy turns out to be successful, it could boost the company’s sales just by applying a discount on a predefined set of goods and therefore increasing the customers’ loyalty; this last one, is an achievement even more attractive than just increasing sales, potentially making Amazon the first choice for the purchase of many different types of goods. The millennials and the subsequent generations are the segments of population that use to purchase from online retailers with highest frequency, these client segments are particularly aware of the possible advantages of buying from a certain retailer rather than from another one, and providing them with tangible discounts and rewards is a good strategy to drive part of their purchases on the considered company’s website. The proposed scheme can be rearranged and modified in many different ways; another possible application is to offer the cash-back services previously proposed just for the Prime members, or for a new version of the Prime subscription, including cash-back services for a little extra charge. By doing so, the number of customers subscribing to the Prime account should sensitively increase, ensuring Amazon to boost the earnings coming from the monthly fees of Prime subscriptions, in addition to the previously cited advantages of increasing sales and loyalty.

The integration of TopCashback is reasonably likely to produce significant synergies for Amazon. The potential synergies are obviously not the financial ones, given that the size of Amazon is not comparable with the size of TopCashback and, therefore, Amazon would not benefit from potential lower borrowing costs or by lowering the taxable income, neither by adding significant fixed assets to its balance sheet.

The potential synergies to be created with the deal lie in the group of the economic synergies. As it can be figured out by the potential combination of cash-back features within Amazon’s lines of business and the relative benefits, the acquiring company could obtain revenue synergies by undertaking the acquisition. In addition, there is also the possibility for Amazon to obtain synergies in terms of market share: following the rationale of the potential application of cash-back within the company, it can be reasonably assumed that, with an increase in the retention of the customers, Amazon could improve its market share by raising the frequency with which the customers use to purchase from Amazon’s platforms rather than from other online retailers.

Considering the suggested acquisition, the revenue synergies are not easy to be predicted and forecasted; the only way to account for potential revenue synergies is to project different growth rates to be applied to a selected Amazon’s metric. It is important to consider that the possible increase in revenues is not going to be a “stand-alone” change in the Amazon’s financials, this increase will undoubtedly have an impact on other metrics: if a cash-back policy is adopted, the company will be responsible for applying the service and thus for providing the customers with rewards and discounts, this, in turn, represents a cost for Amazon. This shows what probably is the most important reason for the acquisition of TopCashback, rather than just implementing a cash-back service by itself: it lies in the need to ensure that the revenues will grow more than the costs related to providing cash-back services; here, the experience and strategy of TopCashback may result in a competitive advantage for Amazon, as the target firm has an high level of expertise on cash-back services, being its core business. The constant growth experienced by TopCashback is representative of the ability of the company to profit from cash-back; even if it does not sell its own products, it has more than 4000 online retailers partnering with its website, thus it already has the know-how of the best practices to be followed by companies in order to profit from doing cash-back. In light of the double effect that cash-back policies has on the financials of the firm offering the service, it is more straightforward to project the growth rate concerning revenue synergies as applied to some metrics that takes into account both the growth in revenue and the possible growth in costs, the best solution should be to apply the estimated growth rate on the EBITDA of Amazon, since it takes into account both the operating profits without considering the tax expenses, and the interest expenses and the depreciation, that are not related with the revenue synergies discussed.

The assumptions just made, concerning the potential synergies that may arise form the deal, are to be considered in coherence with the suggested approach to synergies, reported at the end of chapter 2.

The first hint was to "*reduce top-line synergy estimates*" and it is particularly relevant when applied to this potential deal: being the revenue synergies the first source of advantage for Amazon, it is important to do not overestimate the growth rate, according with the conservative approach. The hint to "*acknowledge revenue dis-synergies*" is also very fit for this case: as already discussed just above, the cash-back advantages come at a cost for Amazon, and this cost should not be underestimated neither ignored, rather it should be reflected into the estimated growth rate. The other hint that can be applied to the discussed deal is to "*be realistic about timing"*; if Amazon is about to offer a cash-back service for its customers, it is logically assumable that the synergies and advantages would not be the same over time: the most reasonable scenario is that, at first, the impact on revenues should be relatively small because it would take some time to spread the use of cash-back among Amazon's consumers, then the impact should grow over time, as more and more customers will benefit from the cash-back and will start to purchase from Amazon with higher frequency.

Regarding the optimal integration of TopCashback within the Amazon's organization, probably the best choice would be the one to implement a "*Symbiosis integration*", as defined in the first paragraph of the second chapter. This is probably the best integration approach since:

- Amazon should "absorb" TopCashback in order to efficiently develop cash-back features for its businesses. Acquiring this type of company and, at the same time, leaving it as a separate entity from Amazon, partially undermine and calls into question the overall rationale of the deal. The acquisition should be driven by the desire to implement cash-back services within Amazon's existing lines of business, rather than just having a controlled company operating by itself: while the first rationale has the potential for very disruptive effects for the acquiring company, opening doors to many possible applications for the future, the second one is a rationale more fit for conglomerates or even private equities, as it just seek to boost earnings by exploiting a profitable enterprise. In addition, this last rationale makes little sense for Amazon given that the difference between the two companies in terms of size and turnover is too large, as also showed by the absence of financial synergies.

- At the same time, as stated before, TopCashback has a clear expertise with this type of services. This experience has been generated by many years of challenges and innovations, an effort that allowed Oliver Ragg (CEO and principal owner of TopCashback) to see its company growing from being a simple startup to a company with a cash balance of more than $40 million and millions of users, in just 15 years. The success of TopCashback, supported by high specialization, seems to suggest that probably the best choice would be to provide the target company with a reasonable degree of organizational autonomy, in order to bring out its strengths to project the more appropriate and profitable applications of cash-back services within Amazon.

In light of these reasons, it is advisable for Amazon to acquire the company and to reshape the scope of TopCashback, moving from managing cash-back services offered by its partners, to managing and projecting the cash-back that should be undertaken by Amazon.

The choice of acquiring TopCashback, rather than one of its famous competitors as Ibotta and Lyoness, is firstly motivated by the fact that the purchase price for TopCashback should be way lower than the one of the other two firms (recall that Ibotta has been defined as a unicorn), thus allowing Amazon to undertake the takeover potentially just by relying on its consistent cash balances of $36.092,00 million. The purchase price of TopCashback should not impact the financial stability of Amazon, being a little part of the cash that already holds.

The reason to acquire TopCashback rather than the other ones lies in the fact that the principal objective of the acquisition is the one to integrate cash-back services under the Amazon's brand, therefore to acquire a bigger company, for an higher price, makes little sense if a similar objective could be achieved with a relatively cheap company.

4. The Deal: Price, Premium and Conclusions

4.1 The range of price for TopCashback's Equity

Once the analysis has been carried out, one of the conclusive parts of the valuation process takes place: the definition of a price range for TopCashback's equity value. The definition of the price for a private company as TopCashback is not as easy as it would be for a public company: the information available is little compared to the one available for public companies, there are no market values for the equity, for the debt and for the cost of capital, furthermore, a number of assumptions must be carefully projected in order to ensure that the analysis is as accurate as possible. For these reasons, a range of price, rather than an exact price, has been established for TopCashback, in order to account for the possible biases affecting the assumptions underlying the analysis of the company.

The financial analysis reported on the previous chapter, based on the discounted cash flow (DCF) approach and relying on the comparable multiple method as a countercheck, provides a range of price referred to the fiscal year 2019. The principal output of such analysis is the equity value obtained with the DCF approach, implemented with the original assumptions; this value is \$75.557.312,17 and it is the central equity value lying in the possible price range. The multiple analysis conducted over the six selected comparable companies, confirms the robustness of the output obtained with the DCF analysis. Indeed, the enterprise value of TopCashback, calculated using the Enterprise value/Operating revenue multiple and referred to the fiscal year 2018, is basically the same as the one obtained with the DCF approach for 2019, therefore adding the net debt of 2018 to the enterprise value obtained with the multiple approach, results in an equity value that is very near to the one provided by the DCF analysis for 2019. The countercheck for the equity value obtained with DCF ensures the accuracy such a value, around which the appropriate boundaries must be set. One of the principal reasons explaining the need of boundaries is that the equity value of TopCashback, as estimated by the model, is affected by the biases reported so far; being the discount factor employed in the DCF analysis based on arbitrary assumptions, it would be incoherent with the conservative approach to consider just the value discounted with the 7,45% cost of equity.

To this aim, the sensitivity analysis conducted on the equity value obtained with the DCF analysis is the source that provides a lower and an upper bound for the price of the equity attributable to TopCashback. If the cost of equity used for the analysis turns out to be the true cost of capital of TopCashback, the first range of price can be defined by observing the changes in the equity value generated by variations of both the long-term growth rate and the revenue growth rate. If considering this scenario, the range of price for the company's equity is between \$71.709.472,42 and \$80.816.711,12. These first boundaries are obviously not complete, since they do not take into account the possibility that the estimated cost of equity is not the most accurate for the company. More accurate boundaries are therefore obtainable by combining the possible variation of the long-term growth rate and of the revenue growth rate, with the possible changes in the cost of equity. As anticipated in the paragraph relative to the discounted cash flow of TopCashback and its relative sensitivity analysis, the suggested cost of equity of 7,45% may suffer variations of +1% or -1%. Variations having a higher magnitude are unlikely to occur, since the hypothesis underlining that rate have been chosen according with the recognized financial literature and, in addition, are consistent with each other. Of course, a higher cost of equity is traduced in a lower value for the equity of the company while, by contrast, a lower cost of equity implies a higher value for the equity. By observing the sensitivity tables on the previous chapters, the two boundaries can be set. Considering the acquirer's point of view, the worst case is the one which sees the value of TopCashback maximised and, therefore, the higher price to be paid; this case involves the lower cost of equity of 6,45% and the higher long-term growth rate of 2%, resulting in an equity value of $91.151.774,02, that is the upper bound for the range of price of the company (without any premium). On the other hand, the best case is the one which involves the highest cost of equity of 8,45% and the higher revenue growth rate of 17,25%; in this case the lower bound is $67.051.797,10. The suggested range of price for TopCashback, arising from the considerations just explained, lies between $67.051.797,10 and $91.151.774,02; with an optimal price of $75.557.312,17, according with the principal assumptions made.

Both the range of price and the optimal price of the target firm's equity value suffer the biases that the valuation of a private company brings; the price of TopCashback just relies on the book values available on the data platforms previously cited, without having any form of countercheck from the market, given the absence of every type of market value. In the case Amazon is effectively interested in undertaking the acquisition of TopCashback, it is strongly advisable to directly ask the company to provide the latest financial statements and the integrative documents as the cash flow statement, in order to produce a more accurate DCF analysis and assessing if and how much the value of the company is far from the one provided by the current analysis. Given that the companies already have relationships with each other, the eventual Amazon's request should be seen as the first step of a friendly takeover.

An important consideration that should be done on the dollar value of TopCashback's equity is that, in the case a hypothetical bidder will successfully undertake the acquisition, it will acquire also the huge amount of cash balances that the target company holds. Being the net debt of TopCashback one of the key components of its equity value, part of the price paid to purchase this company is basically returning to the acquiring firm that, once the deal is closed, can dispose of the huge cash balances that TopCashback already holds.

If Amazon will decide to acquire TopCashback and then absorbing it within its existing lines of business, therefore integrating the company as part of Amazon itself, the cash balances of the target company would become part of the cash balances of Amazon and this represents a concrete advantage.

This last consideration provides Amazon with the certainty that part of the price that it would pay for TopCashback is indirectly returning to Amazon itself, that has the right to dispose of the target's assets as it prefers, once the deal is closed. Acquiring a company like TopCashback, having a significant amount of 'negative' net debt and being considerable as an all-equity financed firm, is undoubtedly advantageous for a hypothetical acquirer. Indeed, the company that is going to acquire TopCashback has the certainty to avoid carrying the additional leverage of the target, that sometimes may dramatically change the capital structure of the acquirer (this is particularly relevant for companies of similar size, but not for the reference case) but, rather, it can take advantage of the implicit discount of TopCashback's price, represented by the arguments just explained on the target's cash balances.

Of course, the range of price for TopCashback's equity just provided, still does not represent the actual price that Amazon is going to pay, if it will decide to proceed with the acquisition; as also stated in the first chapter, for every M&A deal, a premium is about to be paid over the true value of the target company.

4.2 Appropriate premium to be paid

Most of the considerations made for the acquisition premium to be paid in M&A deals, reported in the third paragraph of the first chapter, are applicable to the considered case involving the possible acquisition of TopCashback, undertaken by Amazon.

As a first consideration, the principal issue for the measurement of the acquisition premium for the proposed deal is the uncertainty surrounding the possible synergies that should be created thanks to the integration of TopCashback within Amazon. As explained before, the considered deal has the potential for the creation of very disruptive synergies for Amazon, but these synergies are not easily calculable and, in addition, they strongly depend on a number of arbitrary assumptions. Given that it is not possible to define the pattern of growth for the Amazon's EBITDA, in the case in which the acquisition will take place, measuring the impact that the implementation of cash-back services would have on Amazon is not straightforward in quantitative terms. If, on the one hand, it is clear that this deal has the potential to make Amazon improve the retention rate of its customers (as well as the amount of sales), on the other hand, the possibility to overestimate the synergies may have significant negative effects for Amazon, principally represented by the eventuality to pay a price way higher than the fair one for the acquisition of TopCashback.

A second important consideration regarding the acquisition premium for the reference case, is the recognition of the bargaining power of Amazon: the company's financial strength is impressive, as also shown by the data it reports each year, and the huge cash balances it holds makes it possible for the company to undertake the suggested acquisition without taking any additional leverage or eroding significantly the cash it holds; furthermore, the capital structure of Amazon would not be changed by acquiring a firm like TopCashback, that is much smaller than the acquirer. Another aspect of the deal that should be considered is that, even if both the expertise of TopCashback and its relative successful strategy are evident and represent a competitive advantage in the company's reference industry, there are still many other companies doing cash-back or similar services. Indeed, whether Amazon will recognize that the strategy of implementing some cash-back features is a valuable strategy, in the case in which TopCashback's ownership is not willing to sell, the acquiring company may still identify some relevant competitors performing the same type of services and then opt for acquiring one of those. This suggests that Amazon should not overpay for TopCashback, therefore the premium to be paid should not be too far from the fair price calculated with the discounted cash flow approach, and its relative boundaries.

Regarding the sell side of the deal, TopCashback also has a certain degree of bargaining power: the company can be considered as an all-equity financed firm, it is not subjected to a significant liquidity risk (considering the pattern followed by the company's net debt) and it always had positive net incomes in the years between 2011 and 2018 (no data is available prior to 2011). Furthermore, as showed before it is a growing company and it has room to increase its value over the following years. This clearly shows that TopCashback is not in the position of a distressed company, which sometimes could be almost obliged to sell, but rather the company's management may have reasons to avoid a deal, mainly thanks to the optimistic growth scenarios

for the firm. It is therefore more likely that TopCashback's ownership will demand for a premium to let the takeover of the company happen, given that it does not have the need to sell or to be restructured. Another important consideration about TopCashback is that, being a private company, for an hypothetic bidder there is no room for an "aggressive strategy": it is not possible to attempt an hostile takeover if the stock of the company is not publicly traded, especially if the ownership is composed by just three shareholders and one of them is also the CEO of the company! The considerations just made for TopCashback show that if Amazon intends to purchase the target company, it must correspond a premium over the estimated value of the target itself, and this premium should be high enough for TopCashback shareholders to decide to sell. Contextualizing the acquisition to the present, as done throughout all the chapters of this study, some of its features would be undoubtedly influenced by the recession caused by COVID-19 pandemic, which has significantly slowed the M&A deals' frequency. As reported by PricewaterhouseCoopers[125], the year 2020 experienced the single largest decline in deal activity since the dotcom bubble of 2001, being characterized by a number of trends: great part of the deals occurred involved the purchase of distressed companies (mainly by private equities) at a discount, deals size declined considerably as bidders now prefer to opt for the acquisition of smaller companies. From a strategical perspective, dealmakers are now mostly committed to the creation and implementation of new technologies so as to keep up with the changes in society caused by the pandemic and, in parallel, on taking advantages from the broad industry of pharmaceutical that is sharply growing. Considering Amazon as part of the Consumer market sector, some meaningful insights about 2020 have been provided by another report of PwC[126]: strategic acquirers are focusing on strengthening e-commerce and increasing supply chain flexibility, investing in emerging technologies to keep up with the evolving consumer behaviors and demand. Among the subcategories of such industry, the retail sector experienced an important growth in M&A investments during 2020 first half, it grew 71% compared to the 2019. Within this context, the opportunities for shareholders to cash-out from a company are not as much as before, especially for those companies that aren't part of the sector with highest M&A activity. There are less bidders willing to acquire companies and therefore a lower competition among the M&A markets. It is reasonably assumable that, if Amazon will start negotiations with TopCashback for the takeover, it is unlikely that an auction that put pressure to the price will be generated.
Another barrier that must be mentioned with respect to the calculation of the premium to be paid for TopCashback is the complete absence of market values for that company, it is not possible to make considerations on the target share price with respect to the possible effects of the acquisition, in this case there is no room for computing the premium of the acquisition by observing the estimated premium implicitly experienced by the target's price.

[125] C. Wittmer, J. Potter, *"Deals Industry Insights"*, PwC, 2020

[126] J. Potter, L. Kuschel, C. LaPorta, A. Giordano, R. Monco, M. Nowicki, *"Consumer markets deals insights: Midyear 2020"*, PwC, 2020

To sum up, the proposed acquisition is unlikely to happen if Amazon would just offer the estimated price of TopCashback's equity and the following points should be kept in mind when projecting an appropriate offer for a takeover:

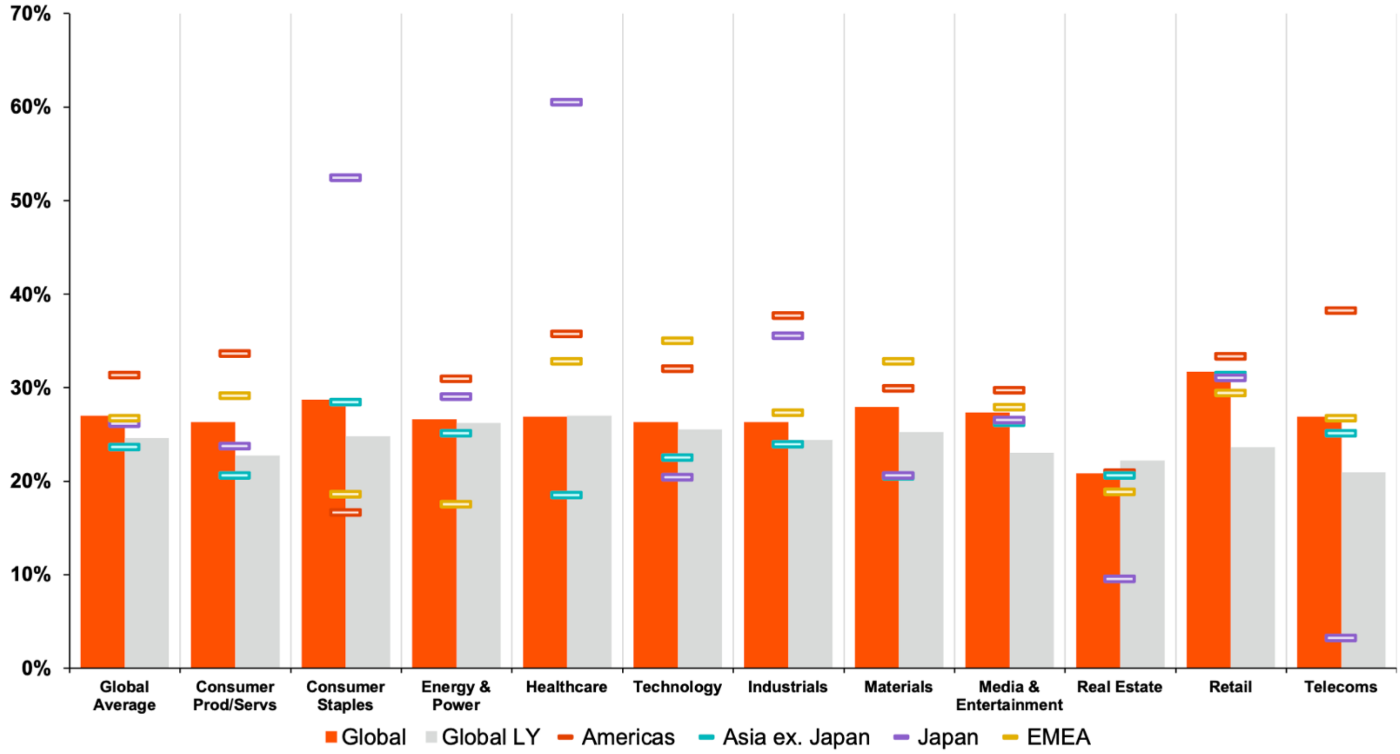
- Amazon's financial strength and great experience with M&A deals, gives the company a significant bargaining power.
- M&A markets are experiencing a significant slowdown, the chances for a target company to cash-out are fewer than some years before.
- There are other companies doing cash-back services, therefore TopCashback is not unique and Amazon may consider opting for another target.
- TopCashback is a growing company and it is healthy in financial terms; the company does not need a restructuring as well as managers does not need to sell.

In light of these considerations and the subsequent impossibility to calculate a premium just relying on estimated synergies or market values, a possible solution would be to rely on the average premiums paid for M&A deals within the target's industry or, if not possible, considering the most similar industry. Given that the valuation refers to the fiscal year 2019 and that TopCashback is based in the United Kingdom, the best choice would be to consider the average acquisition premium prevailing during 2019 in the EMEA (Europe, Middle East and Asia) region. Among the most reliable and accurate databases, the report made by Refinitiv[127] for the full-year 2019, available on Thomson Reuters Eikon, has been selected to collect the average acquisition premium. In particular, the table reported on the following page[128], containing the average acquisition premium (by region and macro industry), has been used for the current analysis. The considered premiums are calculated as the average premium paid over the four-weeks stock price of the companies, prior to the deals.
The Thomson Reuters Eikon's "page" on TopCashback includes the company in the "Business Support Services" industry, identifying the economic sector as "Industrials". The table above reports that for the macro-sector "Industrials", on average, the premium paid in M&A deals during 2019 has been approximately 28% of the four-week stock price of the target firm. Among the available ones, the macro-sector, other than "Industrials", that are more representative of TopCashback's business, are "Consumer Production/Services" and "Retail"; these two sectors presents average acquisition premiums for the EMEA region of, respectively, 29% and 30%, near to the average premium of the reference industry. Taking the premium prevailing in "Industrials" is now possible to project a first estimate for the upper bound of TopCashback's price, premium included.

Table 7 – Bid Premium – 2019 Avg. Premium to 4-week Stock Price by Macro Industry

[127] *"Global Mergers & Acquisition Review – Full year 2019, Financial Advisors"*, Refinitiv, 2019

[128] Table 7 - *"Bid Premium – 2019 Avg. Premium to 4-week Stock Price by Macro Industry"*, Refinitiv, 2019



In light of the consideration previously done regarding the bargaining power of both companies, the most likely scenario sees Amazon starting negotiations at a price slightly lower than the one of $96.713.360,00, that is the equity value estimated with the discounted cash flow analysis, increased by the 28% premium, and then, if necessary, rising the offer until the upper bound (increased with the 28% premium) of $116.674.270,00 proposed in the previous paragraph.

Anyway, before deepening the financial analysis of TopCashback (using the most recent financials, that are reserved) and then making an offer, the first and fundamental step for Amazon is to get in touch with the target company's board and assess how much the ownership is likely to sell and at which conditions, in order to establish the magnitude of the premium to be paid so as to ensure that the offer is accepted. To conclude the current paragraph, a first range for the premium to be paid can be assessed based on the outputs of the analysis performed on the target company's financial statements, but a more accurate measurement should be done by Amazon itself, especially according with the policy and best practices it followed for the premiums previously paid in its long track record of M&A deals.

4.3 Interview with Amazon's employees

The assessment of the suggested deal's feasibility is almost complete: after having performed the financial analysis of TopCashback, the key considerations about the growth opportunities created by the acquisition have been discussed, and a range of price for TopCashback's takeover have been set, starting with the estimated equity value and then adding a possible premium. The relevance of the eventual implementation of cash-back services for Amazon, is supported by a number of factors, among which the most important that have been reported on this study are: the current market environment, the changes in customer's behavior created by the pandemic, the growing adoption of rewards programs and the Amazon's own growth policy. Before stating the final word on the effective feasibility and profitability of the suggested deal, it is undoubtedly meaningful to directly ask to professionals that are working for Amazon whether, according to their opinion, the adoption of cash-back services (and the subsequent acquisition of TopCashback) is strategically significant when contextualized within the future growth strategies of Amazon. To this purpose, an interview has been conducted with three Amazon's employees. In order to avoid any complain or problem between the interviewees and Amazon, the questions do not contain any specific reference to Amazon and the interviewees' name are not mentioned. The professionals who participated to the interview are two Account Managers and a Project Management Intern. The interview has been structured as follows:

- First phase – *Introduction*: the entire case has been briefly explained to the Amazon's employees, after having summarized the current state of M&A markets as well as the principal considerations and projections about the economic environment, TopCashback and the main features of cash-back services have been introduced to the interviewees.
- Second phase – *Financial and strategic implications*: once the interviewees have been provided with an overview of the proposed deal, the financial analysis, the assumptions on which it relies and the output of the analysis (the price including the premium) have been presented to them. The objective of this phase is to collect a first set of feedbacks regarding the strength of the results obtained so far.
- Third phase – *Preliminary questions*: once the interviewees have both the relevant information about the target company's value and the outline of the current economic context, the first set of questions can be asked. This first set is composed by the following questions:
    - Do you agree with the assumption "currently, the e-commerce is increasing its importance in the retail industry, and significant amount of investments should be made to keep up with times? What are your personal considerations regarding the current state of the markets?
    - Do you think that the implementation of cash-back services is likely to create value for large online retailers? Please give an answer considering both the short and the long term.
    - Do you consider the estimated price of the target company as prohibitive, from the point of view of huge online retailer?

- Fourth phase – *Follow-up questions*: in this phase, deeper questions are asked to the interviewees. The objective of this phase is to collect the points of view of Amazon's employees, so as to understand which areas of the analysis should be empowered and/or extended. These questions are:
    - Which kind of cash-back services would you suggest to online retailers?
    - Do you think that the acquisition of TopCashback would be, for a hypothetical online retailer, likely to create value over the long run?

The interviewees basically provided very similar answers. Following the questions' order, the key points emerged are:

- The e-commerce growth is clear, especially for industry insiders. A topic mentioned by all the interviewees is the sprawling of e-commerce among very different customer segments; this is valid especially for people over 40, who are now more aware of the advantages provided by e-commerce, especially when contextualized in a difficult period with a pandemic in progress.
- Regarding the second question, whether an Account Manager stated that the cash-back has effectively huge potentials, the other two interviewees said that it depends by the type of online retailers. They argued that each online retailer has its own policy to retain customers, therefore it should be questioned whether cash-back can coexist with the already existing policies.
- The third question has been answered only by one of the two Account Managers and, according to him, the price of TopCashback is little if compared to the average prices that huge online retailers pay for the acquisitions they usually pursue. It stated that an online retailer's team eventually has the information (and the skills) to project a possible ROI for the proposed acquisition, and this would probably be used to decide for the acquisition.
- The cash-back services suggested by the interviewees are various, ranging from coupons, discounts and others. A very interesting point mentioned by the Managers is that, given that online retailers usually have voucher systems, it is important to project cash-back services so as to avoid cannibalization between the two systems
- The last question was answered only by the Account Managers and they both argued that it is worth investing in e-commerce: it is an industry that is growing sharply, especially in this period, and it is important to pursue intelligent investments for the right technologies. One of the two then said that, in light of the premises regarding TopCashback, if an important online retailer is willing to implement a certain type of cash-back strategy, the suggested target may be an optimal chance to gain expertise and specialized human capital, at a relative cheap price.

Even if they stayed cautious, what emerged from the interviewees' points of view is that, given the growth experienced by e-commerce and the current socio-economic environment, cash-back is an interesting strategy with significant potential for rising both sales and customers' retention; TopCashback is an interesting company and its eventual acquisition would be perfectly aligned with the Amazon's objective to invest in technologies and exploit the current period.

Only one of the two account managers went a little further with his personal considerations and said that, from the point of view of a big online retailer, it would be worth deepening both the possibilities created by cash-back services and by a possible acquisition of a company doing these services.

The main objective of the interview was to gather the point of view of professionals that are in the position to look at the e-commerce from an insider's perspective, in order to understand whether the proposed acquisition could be attractive for Amazon or a company dealing with the same business and, most importantly, if it is likely to create value. The objective was reached and, in addition, the Amazon's possible takeover of TopCashback implicitly collected positive feedbacks, as well as the implementation of the most appropriate form of cash-back within Amazon's lines of business.

4.4 Conclusions, discussion and implications

At this point of the process, the last word regarding the feasibility of the proposed acquisition involving Amazon and TopCashback can be said. The long process of collecting all the relevant information regarding the two companies, as well as their financial data, is the root of the first conclusions regarding the attractiveness of the deal, reported at the end of the third chapter. By using this information and setting all the required assumptions with the highest degree of attention as possible, the financial analysis of TopCashback was conducted, providing as an output the estimated dollar value of the target's equity. A range of price has been created around this value, and then an estimate for a possible acquisition premium has been applied. The final step of the process was to conduct interviews with Amazon's employees, with the objective to collect some feedbacks on the attractiveness of the deal (and, in general, of cash-back services) directly from inside Amazon.

The process of driving the conclusions is not a stan-alone step in the assessment on the deal's feasibility, but rather it is something that accompanied the entire analysis. Step after step, some key considerations have been collected, reviewed and questioned, to the point where general conclusions can be drawn.

With the objective to drive the reader through all the conclusions obtained so far, these have been divided and organized in three main categories reporting the reasons why the acquisition of TopCashback, undertaken by Amazon, should be successful if effectively conducted; these conclusions are:

1) *Economic Rationale*: according to the analysis conducted on TopCashback, the upper bound of the price to be paid for its acquisition should be $ 116.674.270,00, whereas, as for the last balance sheet available, the cash balances of Amazon are of $36.092,00 million! Therefore, if the acquisition is going to take place, it should have a very little impact on Amazon's liquidity and probably no impact on its capital structure. Then, it should not be forgotten that a significant part of TopCashback's estimated value is represented by an important amount of cash balances, which is going back to Amazon if the takeover will happen. Furthermore, the price of TopCashback is way lower if compared to the one attributed to some of the biggest players of the cash-back industry; if, by contrast, Amazon would like to acquire a company like Ibotta (considered as a unicorn), this will surely have some impact on Amazon's financial position, probably making the acquirer to rise additional debt. Acquiring TopCashback represents for Amazon a chance to break into the cash-back services industry without exposing the company to an excessive liquidity risk or changing the capital structure.
2) *Strengthening Customer's Retention Rate*: as widely reported in the various steps of the process, the importance of e-commerce is something that has been made clear due the COVID-19 pandemic. The lock-down experience forced people to stay at home and to prefer purchasing from the internet, in order to avoid physical contacts, in this way online shopping became increasingly more common in people's life, compared to the period before pandemic (this is valid especially for generations prior to

millennials). In this context, the customer experience (especially the digital one) is fundamental and it is something that should be among the first attention points in the top manager's agendas. As reported by McKinsey and Company[129], there are many critical points to keep in mind regarding the changes in customer experience after COVID-19, it is fundamental to care for customers, providing them with support. The digital-lead experience will continue to grow in popularity among customers, that are increasingly seeking for accelerating digital options and avoiding as much as possible physical contacts typical of superstores. Probably the key point of the report (and among the opinions shared by practitioners) is that customers are particularly focused on finding savings without sacrificing the purchase experience; in this period of economic slowdown the purchase power of common customers is contracted and therefore the possibility to save some money plays a fundamental role in the choices of many people. This last consideration clearly explains one of the principal advantages that Amazon could obtain with this deal: the implementation of a cash-back system represents a clear and concrete bonus for customers that, on the one hand, will benefit from these reward programs by saving money on future purchases, on the other hand, they will continue to enjoy the Amazon's purchase experience, that is one of the most important and popular characteristics that made Amazon as successful as it is. In light of these evidence, and of the ones reported throughout the chapters, it is reasonably assumable that, by implementing cash-back features within its lines of business, Amazon may strongly increase the retention rate of its customers, that, if incentivized with the promise of saving money, will continue to purchase from Amazon with higher frequency. In addition, given that many consumer classes are now increasing the frequency of their online purchases, to provide savings may be an important strategy to gather and retain new customers.

3) *Favorable Economic Period*: This may sound as a contradiction, given that the 2020 has been a challenging year, characterized by an economic slowdown that sprawled worldwide. But, following the arguments of the BCG's analysis[130], already reported in the first paragraph of the first chapter, companies with healthy and strong balance sheets may have the opportunity to create long-term value through mergers and acquisitions. Indeed, the economic crises generally causes the companies valuation to decline, as the demand for takeovers drops. Whenever significant recessions occur, markets and consumer behaviors generally experience some changes and, whether for some companies this may mean loss of market shares and internal crises, for the more forward-looking firms, these periods represent a concrete opportunity to innovate and gain market power. A recurring

[129] R. Diebner, E. Silliman, K. Ungerman, M. Vancauwenberghe, *"Adapting customer experience in the time of coronavirus"*, McKinsey & Company, 2020

[130] J. Kengelbach, J. Gell, G. Keienburg, D. Degen, D. Kim, *"COVID-19's Impact on Global M&A"*, Boston Consulting Group, 2020

theme throughout this thesis is the objective to “ride the wave of change” that managers, board members and CEOs should have if looking for carrying out the most from economic slowdowns; this objective appears to be particularly suitable for Amazon: the exogenous global shock caused by the pandemic is definitely bringing the e-commerce inside the daily life of the vast majority of customers, and Amazon is in all respects one of the biggest and leading companies of the broad industry of e-commerce. In light of all the considerations made so far, this is a favorable economic period for Amazon and a possible strategy aimed at exploiting the available opportunities to gain market shares would be to pursue inorganic growth strategies. For Amazon the best choice would probably be to follow the trend to prioritize the collection of innovative technologies, as enhanced among dealmakers; to acquire TopCashback, that is a fast-growing and forward-looking company, specialized in cash-back, is likely to be a winning strategy.

Obviously, there are still some critic aspects of the proposed acquisition that may undermine the effective feasibility of the deal. The first criticism that should be kept in mind is that TopCashback is a private company having a very restricted ownership (recall, three shareholders), and this may complicate the effective takeover: if the shares are not purchasable on equity markets, there is no room for an “hostile takeover”, but rather an appropriate offer must be delivered to the target’s shareholders. TopCashback’s shareholders will actually have the final word on the success of the deal and this may force Amazon to significantly rise its bid, before target’s ownership is effectively satisfied, deciding to accept the deal. This criticism may be partially solved by the experienced Amazon’s management, that can boast an impressive track record of acquisitions; their ability in negotiations, especially if backed by the abilities and skills of a solid investment bank, may be the key to obtain TopCashback’s consent on the deal.
Another possible criticism lies in the type of integration that Amazon will choose, if the acquisition takes place: to fully exploit the potential of the deal, it is fundamental to integrate TopCashback in the best way as possible. Negative effects or inefficiencies may arise both if the target company is left with no decision power, as an “office” of Amazon, or if TopCashback is almost not integrated and left as a separate entity from the acquirer. This criticism is reasonably considerable as improbable, if compared to the first one, in this case the Amazon’s track record of deals play a fundamental role: having acquired more than one hundred companies, Amazon has a very important experience of integration strategies, therefore is rationally assumable that the company’s management will take the best decision regarding the target’s integration.
Despite the possible criticisms, the three main categories of reasons in favor of the acquisition suggest that the acquisition of TopCashback should be at least considered and taken into account by Amazon. The COVID-19 pandemic accelerated a change that was already expected: e-commerce is here to stay and the majority of companies around the world are trying new strategies to better manage their presence over online markets. The possible applications of cash-back services for Amazon are various, as anticipated in the fourth paragraph of the third chapter; the inclusion of a cash-back program among Amazon’s different lines of business may strengthen the already efficient customer experience. The idea to collect money back from

purchases of completely different goods, ranging from an e-book to be read on a Kindle, to a power bank branded “Amazon Basics”, has very disruptive effects for Amazon: it probably has the potential to convert Amazon from being the online retailer used for “once in a while” purchases, to being perceived as a daily retailer like, for example, the next-door supermarket.
The history has always been characterized by both economic booms and recessions, to exploit a favorable period is almost easy, but to overcome a crisis with a strongest and more innovative company is something that only the most talented managers (executives) and the most forward-looking companies can boast.
What is important, is to embrace the changes, looking at innovations with curiosity and always investigating what can be considered as a bubble and what is going to be consolidated in the World’s economy.

Conclusions

Now that the assessment of the feasibility of the deal is completed, and the conclusions are obtained, the final part of this thesis takes place. The conclusions that are reported from here on out are basically the main limitation encountered during the analysis and some ideas for the professionals that are eventually interested in deepening the analysis.

Talking about the limitations encountered so far, the most recurring is represented by the problems arising with the valuation of a private company like TopCashback. To evaluate this type of companies means relying primarily on book values rather than market values, this may lead to a series of imperfections, especially regarding the appropriate discount rate: the stock of TopCashback is not priced, the company has no beta available and therefore the discount rate has been constructed by setting a number of strong assumptions, in the most coherent way as possible. To partially overcome the issues arising with the evaluation of private companies, a possible strategy could be to directly ask the company to provide the latest financial statements, as well as their personal considerations on the beta that mostly represents their business; otherwise, all the assumptions and the valuation performed in this study may be reviewed, and eventually corrected/improved, by experienced professionals directly working in the M&A industry.

A second limitation affecting this thesis is the lack of legal considerations on the feasibility of the deal, this is due principally to the fact that the study represents a preliminary assessment of a possible acquisition and, as such, its main objective is to indagate both the reasons why the proposed acquisition should be taken into account and a possible range of price for the target company. Even if, given the significant difference in terms of size between the companies, the deal should not encounter problems with Antitrust authorities, it is strongly advisable to perform a thorough legal due diligence, in the case in which the two companies would be effectively interested in proceeding with the takeover and before allocating significant resources in the process of deepening the true fair value of TopCashback and leading negotiations.

For a professional that is interested in extending the research on the proposed acquisition, there are two main areas that may be investigated and expanded:

- *Integration Strategies*: there is room to conduct significant research on the possible integration strategies to be employed by Amazon. Even if some principle insights have been provided by this thesis, a professional specialized in company’s organization is likely to add an important contribution to this topic. The process of integrating TopCashback can be deconstructed and investigate in each of its relative steps; to integrate 182 (and more) employees within a new organization is not easy and a set of critical decisions must be made in order to do not divest the intellectual capital of the target company. In addition, the degree of independency that TopCashback should have if the acquisition takes place is not a simple choice. Therefore, the entire integration strategies proposed in this thesis may be completely re-imagined by professionals specialized with these issues.

- *The effective cash-back system to be employed by Amazon*: this is another great area of deepening; in the third chapter there is a preliminary proposal of what could be the best way to implement cash-back features within Amazon's lines of business, that is to create a cash-back system that is cross-functional between all the different products offered by Amazon, like Amazon basics products, the goods sold in Whole Foods Markets, the e-books for Kindle and so on. However, this is just a preliminary proposal; undoubtedly a professional experienced with reward programs is likely to elaborate a more complex and profitable system. As a matter of fact, among the proposals made during the assessment, there was the one to integrate TopCashback's employees so as to already have this type of expertise within Amazon's human capital.
- *Type of offer*: during the thesis, the assessment was conducted considering a cash offer for the eventual bid. This is not the only option available; once collected the feedbacks from TopCashback's management regarding their willingness to sell, the team of professionals in charge of preparing the offer may propose for a hybrid offer. This consists in a bid that is composed both by cash and by Amazon's stock: if the perfect balance between the two components is found and the target's ownership agrees, a hybrid offer may sensitively reduce the amount of cash to be employed for the transaction.

These are some of the main ideas for further deepening on the topic discussed. Obviously, every experienced reader may find out that there are other possible areas to be improved. The process of defining the limits and the areas of improvements of an analysis lies in one of the ultimate objectives of academic research. Any deepening and improvement, of any research, should be welcomed with enthusiasm, and represents one of the key characteristics of humanity: taking the good that was made, and improving it with ideas and curiosity, in the constant process of growth and discovery.

Any question or opinion is highly welcomed by the author of this thesis.

Thank you for your attention,

Marzio Montebello

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Executive Summary

The ultimate goal of this executive summary is to summarize the entire thesis in a short document, reporting all the main concepts and findings. The summary follows the same path of the thesis and its relative chapters' order; it is composed of four sections, each corresponding to a chapter.

In a context characterized by significant changes in customers' behavior and in companies' strategies, due to the COVID-19 pandemic which sprawled around the world, new important trends in M&A Markets emerged, as well as the need to keep up with times and to try riding the wave of change. What is partially driving the markets, is the sharp growth that the e-commerce industry has experienced. This growth is due to the lock-down period that many people, of very different nationalities, age and spending capacity, have experienced during the first months of 2020. Nowadays, the majority of people is well aware of the possibility to rely on both small and large online retailers, to make their purchases of goods that are then delivered directly to their respective homes, partially removing the need to purchase personally in physic shops. The great majority of companies around the world needs to understand how these changes will affect their lines of business and try to reinvent part of their strategy in order to avoid being negatively impacted by the pandemic and consequently losing market shares.
Undoubtedly, Amazon comes at a position of strength, given that it is the largest online retailer over the markets. However, even if it has a competitive advantage when compared to large physics retailers, it still has room to improve itself and to exploit this period of economic changes by adopting the right strategies. Against this background, the choice to implement tangible reward programs, as a cash-back system, appears to be a valuable and disruptive strategy for Amazon, especially for the potential increase in the retention rate of the company's customers that it could experience. Being a huge company, probably the best choice for Amazon would be to pursue inorganic growth strategies, acquiring companies that already own new innovative technologies and procedures. To this aim, the hypothetical acquisition of TopCashback, a company based in the U.K. doing cash-back services, to be undertaken by Amazon, is assessed in the following four sections. The first section contains a general portrait of the current state of M&A markets around the world, investigating the main trends driving the market. The second section is a sort of "guidebook" for company evaluation, to be employed when approaching to M&A deals. The third section is the core of the proposal and contains the effective valuation of TopCashback, performed on Microsoft Excel, and providing as output a possible value for the target company's equity. The last section is the conclusive part of the study and provides a possible range for the price to be paid by Amazon for TopCashback's takeover, accompanied by the conclusions on the deal that can be derived thanks to this study.

a) M&A Outlook in Recent Years

Nowadays, the M&A sector is driven by the trends of sustainability and digitalization, the sustainability is devoted to the creation of a positive social impact through investment, the digitalization is the process through which a company is transforming the method to approach the market, the interactions with customers and the implementation of their operations[131]. About the last one, the digitalization, Werner Rehm, partner at McKinsey, states that within its famous consulting firm there's a particular attention on this trend for M&A deals, given that since 2016 about 4 or 5 percent of the overall M&A value is represented by "digital deals"[132]. According to him, there are two types of digital M&A: one is a company buying skills, analytics and software to enhance the production process and the product development; the second type is focused on the Internet of Things applications to improve the product, making it better, secure and connected. In addition to digitalization and sustainability, the factor that will influence mostly the entire M&A sector and, more in general, the economy of the entire world in the next years, is the COVID-19 pandemic in progress. The pandemic also impacts the availability of deal financing and the time to obtain third-party approvals for transactions. As a result, M&A levels in the United States fell by more than 50% in the first quarter of 2020, compared to 2019; in many cases, top executives of companies that would have been strategic buyers, have been forced to redirect their efforts on the financial health (and sometimes survival) of their own companies. Also BGC (Boston Consulting Group) tried to analyze the possible implications of the pandemic with the article "COVID-19's Impact on Global M&A"[133], one of the most interesting information within the publication is that, according to BCG's point of view, companies that have risen healthy and strong balance sheets during the economic boom of recent years have the opportunity to pursue deals that can create long-term value, given the declining valuations connected to the crisis. Their research demonstrates that deals done during recessions are more likely to create value for dealmakers and shareholders, in these periods a company can focus on integrating the target more easily thanks to the fact that most competitors would be busy trying to survive. Because of the objectively difficult environment, fraught with uncertainty, for dealmakers an M&A deal must be strategically meaningful for the firm, it therefore should have a good chance of creating value. In order to achieve this goal, it is fundamental to take a position on a sector that could experience a growth rather than a downturn, compatible with the characteristics of the current crisis. One of the sectors that seemed to have consistently strengthen in this context is e-commerce, an article on Forbes[134] reports some numbers that validate this conclusion:

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[131] Nadir Hirji, Gale Geddes, *"What's your digital ROI? Realizing the value of digital investments"*, PwC – Strategy&, 2016

[132] Werner Rehm, Robert Uhlaner, *"Reflections on digital M&A"*, McKinsey & Company, 2017

[133] J. Kengelbach, J. Gell, G. Keienburg, D. Degen, D. Kim, *"COVID-19's Impact on Global M&A"*, Boston Consulting Group, 2020

[134] L. Columbus, *"How COVID-19 Is Transforming E-Commerce"*, Forbes, 2020

- U.S. online retailers reported a year-over-year (YoY) revenue growth of 68% as of mid-April 2020, compared to the 49% in early January.
- Online conversion rates increased 8,8% in February, thanks to a level of shopping urgency typically seen during Cyber Mondays.
- U.S. and Canadian e-commerce orders grew of 129% YoY as of April 21 and a 146% growth in the overall online retail orders.

Even when the pandemic will be considered as concluded, the retailing sector and e-commerce will experience a change for years to come, obviously affecting many other sectors. It can be thought that major players in the e-commerce sector have experienced an impressive growth in this period, thanks to the quarantine and the relative general fear for superstores, but this is not exactly the case. Considering Amazon, this period has presented challenges never met before. If on the one hand, considering the first quarter of 2020, Amazon reported a sharply rise in revenues[135], which are $75.4 billion due to a rise in sales of 26% compared to the same time last year, on the other hand the profit fell 29% from the last year to $2.5 billion due to the incredible costs generated by the pandemic.
In the period 2019-2020, the main deals observable on the markets are:

- Bristol-Myers Squibb's acquisition of the biopharmaceutical company Celgene for $74 billion.
- Salesforce's acquisition of Tableau at $15,7 billion and of Vlocity at $1,33 billion.
- Google's acquisition of Looker Data Sciences at $2,6 billion.
- Visa's acquisition of Plaid at $5,3 billion.
- Mastercard acquisition of Finicity at $825 million.

How the acquisition premium has been determined is fundamental to understand the share price adjustments eventually occurring once the deal is closed, especially over the long run; whether the synergies have effectively been realized affect the equity value of the acquiring firm: the post-merger value of the combined corporation is composed by the sum of the fair values of both firms plus the realized synergies[136], so if the target has been overvalued, or the synergies have been overestimated, the post-merger value would decrease, lowering the share price of the combined firm. Considering the buy-side in an M&A deal, one of the key issues that should always been taken into account in order to maximize the value created is to get sure that the acquisition effectively brings synergies and positive effects for the acquiring firm and, most importantly, to estimate these effects with accurate and reliable approaches.
Whenever cash is used to purchase the stock of a target firm, this mechanic usually causes the target company's share price to rise so as to reflect the offer and the relative premium proposed, while the acquirer stock price is likely to decrease initially, especially if its shareholders are not particularly confident with the

[135] D. Rushe, M. Sainato, *"Amazon posts $75bn first-quarter revenues but expects to spend $4bn in Covid-19 costs"*, The Guardian, 2020

[136] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 26

effective value created by the deal[137]. When stock is offered as a payment method to acquire a target firm, share price adjustments are more complex; according to a publication of the Oxford Review of Finance[138], empirical evidence shows that often, stock-financed public firm acquisition generates negative effects for shareholder wealth at the announcements, the standard interpretation of that outcome is based on the adverse selection theory[139] associated with public issues of shares, stating that a corporation's management is more likely to sell stock when it is overvalued, expert investors are aware of this behavior and cause the stock price to adjust downwards upon the announcement of the issuance of new shares to finance a deal. Over the long run, significant findings have been provided by a study[140] , which confirms the adverse selection theory but with very different implications with respect to the short run; over the long run, in fact, stock-financed deals create value for the acquirer's shareholders through market timing, since overvalued equity is used to purchase hard assets at an effective discount. The outcome of that study implies that, sometimes, the acquiring firm's management may be incentivized to artificially boost the stock price of their firm before the acquisition effectively takes place.

Considering the evidence provided up to this point, a conclusion can be drawn about the current environment for dealmakers: despite the difficulties that a crisis period carries, M&A deals are still possible and are happening. In order to carry out the most from this type of transaction, dealmakers considering acquisition in the current context should:

- Focus on what are the main trends of the period, speculate on why these have gained importance and how to exploit them in a proper way. Take into consideration mainly the development of new technologies and all the sustainability-relative issues.
- Pay attention to the real financial stability of the acquiring firm, if on the one hand the weak-economy can give to the acquirer the chance to pursue deals at a lower price, on the other hand an instable financial situation , when undertaking an acquisition, could lead to disruptive consequences for the entire firm.
- Rethink at due diligence processes in a more comprehensive way, in order to address all the specific issues that could arise in the peculiar context created by COVID-19 and the relative crisis. This, in turn, means that it is better to consider involving third-parties expertise in the due diligence process.

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138 A. Golubov, D. Petmezas, N. Travlos, *"Do Stock-Financed Acquisitions Destroy Value? New Methods and Evidence"*, Oxford Review of Finance, 2015

139 S. Myers, N. Majluf, *"Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have"*, Journal of Financial Economics, 1984

140 P.G. Savor, Q. Lu, *"Do Stock Mergers Create Value for Acquirers?"*, The Journal of Finance, 2009

b) The Theory Behind M&A

Generally, corporations grow through internal expansion by doing investments for improving its existing divisions and for the R&D department, these investments are decided through capital budgeting activities. However, the most dramatic examples of growth for a company are represented by M&A deals, consisting in the process of acquiring another firm's assets, divisions or entire operations by gaining control over the target's ownership. This type of deals is motivated by several strategic rationales, deepened in the thesis. In most of the cases M&A deals happen as "friendly" transactions but, whenever the target firm's management resists to the acquisition offer and refuse to collaborate to set the deal, the acquirer company may attempt a hostile takeover. This strategy involves bypassing the board of directors of the target company and directly making the tender offer to target's shareholders, asking them to exchange their shares for the offered price. To avoid a hostile takeover, the target firm has a number of different countermeasures, better explained in the thesis. A fundamental part in the process of an M&A deal is played by the investment banks or boutiques, providing a wide range of services to both the buy-side and the sell-side of the deal, both parties are obviously doomed at maximizing the benefits resulting from the acquisition. Considering the buy-side of a transaction, the financial intermediary involved performs the following activities: it starts with an acquisition search identifying potential targets, organizes the M&A team for the project (composed by bankers, accountants and lawyers), does extensive valuation, organizes due diligence activities, formulates an appropriate offer, it then assists its client during negotiations and, if the parties reach an agreement, the intermediary prepares the contracts. Representing the sell-side in an M&A transaction involves a different effort, in this case the commitment of the financial intermediary starts with the collection of information from the company's executives. Them they prepare a 'selling memorandum' containing all relevant information about the company. After this step, the bank starts two processes in parallel, a team establish the exact value of the company or the assets to be sold, another team sets a list of relevant potential buyers. If a potential buyer is interested in deepening the deal, it will sign a 'confidentiality agreement' in order to receive the selling memorandum, then if a certain buyer is still interested, it may submit an 'indication of interest' to the seller. Following this step, the process is basically the same as the one for the buy-side.
The starting point of basically all valuation techniques, employed to evaluate companies, is financial statement analysis. Financial statements are the first source of information that firms provide about themselves and a reliable way to estimate what the real value of a company's shares is. Financial statements are so important because they summarize the economic consequences and results of the business activities on which the company is based; on a periodical basis firms typically produce five financial reports[141]: income statement, balance sheet, cash flow statement, statement of other comprehensive income and statement of changes in equity.

[141] K.G. Palepu, P. Healey, E. Peek, "*Business Analysis and Valuation: IFRS Edition*", Cengage, 2015, Chapter 1

For M&A deals, evaluation techniques are usually used to get the value of the target firm so as to have a range for the offer price. The most common analyses employed in M&A are three: comparable method, the method based on discounted cash flows (DCF) and the precedent transaction analysis. The *method of comparable firms*, also called comparable multiple analysis is structured as follows[142]: as a first step the analyst has to identify the comparable firms related to the one to be valued, then the key measures of comparable firms available on their financial statements (and on the markets), are employed for multiples' calculation. A multiple is defined as the ratio of the company's stock price, or enterprise value, to a particular measure in the financial statements, the most common multiples are: price to earnings ratio (P/E), price to book ratio (P/B), price to sales ratio (P/S), enterprise value on EBITDA or EBIT (EV/EBITDA, EV/EBIT), and enterprise value on sales (EV/Sales), but many other multiples involving other measures are calculated to reflect some special feature of the analyzed firm. The final step is to apply an average and/or median of the multiples obtained from the previous step to the corresponding measures of the target firm, contained in its financial statements, in this way is possible to obtain the target firm's share price and/or enterprise value. If, on the one hand, the method of comparable is less time consuming than the discounted cash flows approach, on the other hand, it is affected by some considerable biases, one of the most important is that it generally (not for private company) relies on market values, thus assuming that stock markets are efficient when setting the price for the comparables, this usually is not the case given that also trading behaviors (which impact stock prices) are affected by a great number of biases. The *precedent transaction analysis* is a valuation method similar to the comparable multiple approach, like this last method it involves a multiple-based analysis but departs from it because it focuses on precedent M&A transactions entailing comparable companies. This valuation approach consists of the following steps[143]: at first, a number of acquisitions that can be considered as comparable is selected, this process requires a screening of precedent transactions in terms of industries/sectors, size of acquired companies, and so on. The screening proceeds until a list including just the most fit deals is obtained. After this step, the decided multiples and the relative averages (medians) are calculated; for this type of analysis, multiples involving the enterprise value are often preferred. Being a method based on multiples, precedent transaction analysis basically bears all the biases affecting the comparable multiple approach and, in addition, it is affected by time lag and by a possible lack of comparable acquisitions, given that within some industries is particularly difficult to select a coherent list of similar transactions.

A more complete valuation model is the one based on the valuation of cash flows and it takes the name of *discounted cash flow (DCF) model*[144]; this method is more complex than the previous ones and involves both a greater number of calculation and a mental effort to set all the assumptions in the most appropriate and realistic way. Focusing on the DCF approach that lead to the enterprise value, basically, the most of its

[142] S. Penman, *"Financial Statement Analysis and Security Valuation"*, McGraw Hill, 2012, Chapter 3

[143] Corporate Finance Institute, *"Precedent Transaction Analysis"*

[144] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 8

components can be extracted by the firm's financial statements. The first element underlying this valuation model is represented by the free cash flows, forming the stream of cash, generated through operations, that all the firm's investors expect to receive now and in the future. The free cash flow formula[145] is the following: $FCF = EBIT \times (1 - T) + Depreciation - Capital\ Expenditures - Increases\ in\ Net\ Working\ Capital.$ Analyzing its components, the earnings before interest and taxes, multiplied to the inverse of the taxation lead to the net operating profit after taxes (NOPAT); given that free cash flows accounts for effective cash movements, the depreciation is added back since it is not a cash expense, contrary to capital expenditures, but it has been already accounted in the NOPAT. The net working capital is the difference between current assets and current liabilities and it represents the cash that is required by the company to run the day-to-day operations, a positive variation in the net working capital means that the operations need more cash to be continued, thus when the YoY net working capital is positive it takes a negative sign on the FCF formula. Free cash flows represent the cash earned by the firm before any payments to shareholders and debtholders are made, for this reason free cash flows are discounted using the firm's weighted average cost of capital[146] (WACC), this ratio represents the average of the returns required by different classes of investors providing capital to the company, averaged using as weights the relative capital structure of the company. The most common WACC formula is the following:

$$WACC = (1 - T) \times \frac{Debt}{Enterprise\ Value} \times r_D + \frac{Equity}{Enterprise\ Value} \times r_E + \frac{Preferred\ Stock}{Enterprise\ Value} \times r_{PS}.$$

The weights composing the capital structure of the company are calculated as the proportion of a specific source of capital (whether equity, debt, preferred stock or others) on the total capital the company employs to finance the assets it owns. Regarding the interest rates composing the WACC, the cost of equity (r_E) represents the return required by the firm's shareholders as a premium for bearing the risk of holding the firm's equity. The most employed model is the capital asset pricing model (CAPM)[147], which states that the required return of a security is equal to the risk-free rate (r_f) observable on the market plus a measure of the asset's systematic risk (beta, β), which is a measure of the security's exposure and sensibility to the market movements and shocks, in turn multiplied to the risk premium of the selected market portfolio $(r_M - r_f)$. The formula underlying the capital asset pricing model is: $r_E = r_f + \beta_M \times (r_M - r_f)$ and, by definition does not depend on the total volatility of the stock. Another common model used to calculate the cost of equity is the Fama-French Three-Factor model which, as all the multifactor models, tries to overcome some of the biases affecting CAPM. To calculate the cost of debt composing the weighted average cost of capital equation, the faster solution is to take risk-free rate observable on the same market of the considered company, but the common proxy is to measures directly belonging to the enterprise characteristics. Usually,

[145] J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 9

[146] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Cengage Learning, 2019, Chapter 11

[147] Z. Bodie, A. Kane, A. Marcus, *"Essential of Investments"*, Mc Graw Hill Education, 2019, Chapter 7

if the company's probability of default is reasonably low, the cost of debt is calculated[148] as the corporate bond's yield to maturity minus the probability of default times the expected loss rate: $r_D = Yield\ to\ Maturity - Prob\ (default) \times\ Expected\ Loss\ Rate$. The term (1 – T) that multiplies the weighted cost of debt into the WACC equation, reflects the interest tax shield.

Cash flows can be forecasted with a reasonable certainty for just a short period, usually from five up to ten years. Generally, the longer the selected time horizon for the forecast, the more uncertain will be the reliability of what have been forecasted. When the company to be valued is supposed, with justifiable certainty, to do not have any "expiration date", its value is calculated by adding to the forecasted discounted cash flows, another component reflecting the continuation of the firm's operation after the forecasting period, measured with the terminal value[149]. The model for the calculation of the terminal value requires as a fundamental input, the definition of a reasonable growth rate (g) accounting for the supposed growth of the firm. The year corresponding to the last forecast of the firm's cash flows represents the period in which the terminal value is located within the timeline of the valuation, it thus defines which forecasted cash flow should be taken as numerator for the terminal value model; such a period takes the name of horizon date or terminal date. The terminal value (TV_t) can be therefore estimated with the following equation: $TV_t = \frac{FCF_t \times (1+g)}{WACC-g}$. Having defined all the fundamental inputs of the discounted cash flow approach, the equation to get the enterprise value can be expressed as: $EV = \sum_{t=1}^{T} \frac{FCF}{(1+WACC)^t} + \frac{FCF_T \times (1+g)}{WACC-g}$.

No matter which model has been chosen as a starting point for the valuation process, to ensure making the more accurate and independent valuation as possible, therefore avoiding being affected by biases founded on wrong assumptions, it is advisable to perform both sensitivity and scenario analysis after having developed the model, changing key inputs. In addition, when valuing a company, it is always more straightforward to consider a range of values for the analyzed firm's share price, rather than a single value.

Synergies are one of the main reasons motivating companies to undertake mergers and acquisitions and play a fundamental role in the determination of the premium to be paid over the intrinsic value of the target firm. The principal distinction that can be made is between economic synergies and financial synergies[150], the former are generated through increases in revenues, costs reductions or cost avoidance; the latter consist in improving the balance sheet of the acquirer, by decreasing the working capital requirements, fixed assets, or other sensitive voices. The simplest way to measure synergies[151] is to think at the value of them as being equal to the fair value of the combined firms, after deal, minus the fair value of both firms valued as separate entities, before the deal effectively occurred. One of the main reasons why deals turns out to be more convenient for the seller than for the bidders is that managers and professionals often tend to overestimate

[148] J. Berk, P. De Marzo, *"Corporate Finance",* Pearson Education, 2017, Chapter 12

[149] E. Brigham, P. Daves, *"Intermediate Financial Management - Thirteenth Edition"*, Chapter 8, Cengage Learning, 2019

[150] M. Fleuriet, "Investment Banking Explained", McGraw Hill, 2018, chapter 16

[151] M. Fleuriet, "Investment Banking Explained", McGraw Hill, 2018, chapter 16

synergies, by doing so, they pay a disproportionate premium over what effectively is the value added by the realized synergies.

c) Amazon and TopCashback: Valuation and Deal Considerations

The current section describes the proposed acquisition involving Amazon playing the role of the acquirer and TopCashback as the target. Amazon is headquartered in Seattle, Washington, and it has been founded on July 1994 by Jeff Bezos, nowadays is considered as one of the biggest and more successful enterprises ever created. The company is now principally known as the world's largest online retailer, but its businesses portfolio can boast a variety of services and products. About the services, through a paid subscription to Amazon Prime the company guarantees its customer shorter delivery times for all orders and, in addition, provides many additional benefits. Under the name Amazon Web Services[152] (AWS), the company offers a broad set of cloud-based products and services as data storage, analytics, databases, IoT and many others. Furthermore, since 2009, Amazon is also the leading producer of e-book readers under the famous trademark Kindle. The company has an impressive track record of successful mergers and acquisitions transactions; during its life it has already bought more than one hundred companies with the objective of continuously expanding its lines of business and gaining strategic advantages, especially by absorbing and integrating companies with high expertise in the development of technologies and IoT. The largest deal undertook by Amazon is the acquisition of Whole Foods Market[153] in 2017. Regarding the sell-side of the proposed acquisition, TopCashback is a cash-back website based in Stafford, England, and launched in the summer of 2005[154] by O. Ragg and M. The functioning of the website is simple: when using TopCashback's website to shop from one of the 4.000 retailers partnering with the company, the retailer pays a commission to TopCashback for referring the customer to their website; that commission is entirely charged to customers as cash-back. The company is continuously growing, the 17 employees of 2011 became 179 as of ending 2018, also net income constantly grew in this period. According with its own website[155], over the last seven years the company has paid back more than $600,00 million to users; the app has been downloaded by more than 35 million people around the world. It is generally recognized that cash-back carries positive effects for the service issuer. Among the most important benefits attributable to the adoption of cash-back systems[156] there is the encouragement to the repeated purchase using the website offering the service, making it possible to increase the order frequency and to retain a greater number of customers.

Financial information available for companies doing cash-back is very scarce, given that most of these companies are private. For TopCashback, financial statements are available both on Thomson Reuters Eikon

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[152] Amazon Web Services official website

[153] N. Wingfield, M.J. de la Merced, *"Amazon to Buy Whole Foods for $ 13.4 Billion"*, The New York Times, 2017

[154] TopCashback official website

[155] Ibotta official website

[156] M. Swan, *"Do cash-back sites really drive incremental sales?"*, Digital Commerce 360, 2014

and on Orbis, covering the period between 2010 and 2018; unfortunately, no financial statements was available for 2019 since, due to the pandemic, companies around the world have been allowed, by their respective jurisdiction, to postpone the disclosure of latest financials. The latter database has been chosen as data source. Among the data available on Orbis, there are the "global ratios" and the more interesting are reported in the following table. Each ratio has been re-calculated to confirm its truthfulness, and indeed they were all accurate.

Table 1 - TopCashback Limited - Financial Ratios

Ratios	2018	2017	2016	2015	2014	2013	2012	2011	2010
∟ ROE using Net income (%)	24,283	42,744	53,022	37,258	57,413	97,813	48,425	92,444	n.a.
∟ Profit margin (%)	2,274	8,168	7,714	3,142	3,728	3,015	2,782	6,719	n.a.
∟ Gross margin (%)	22,605	20,048	14,877	14,257	14,2	12,426	13,456	10,808	n.a.
∟ EBITDA margin (%)	2,646	6,645	4,745	3,71	3,74	3,014	7,587	6,454	n.a.
∟ EBIT margin (%)	2,592	6,582	4,664	3,601	3,625	2,888	7,545	6,395	n.a.
∟ Current ratio (x)	1,15	1,285	1,202	1,118	1,117	1,041	1,098	1,112	1,079
∟ Acid test (%)	1,09	0,95	0,89	0,85	0,81	0,97	1,08	1,10	0,52
∟ Costs of employees / Operating revenue (%)	3,989	4,192	4,057	3,972	4,291	4,205	3,04	1,995	n.a.
∟ Number of employees	179	158	144	139	118	77	30	17	n.a.

From the reported ratios and financials, some initial key considerations about TopCashback can be drawn:

- It is a growing company. The majority of the voices presented on financial statements presents a constant growth, as also deducible from the constant growing number of employees.
- The growth of TopCashback has fallen slightly in recent years, meaning that the company is more mature and that the profitability of the business is about to grow at a more stable rate.
- The greater area of uncertainty is represented by EBITDA and its linked voices as EBIT and net income. This suggest that the company cannot be considered as already mature and that it will be reasonably continuing to grow over the next years.

In light of these considerations, the growth rate of revenues employed in the valuation process was calculated as the average of the growth rates of the last three years of observations, in order to avoid the bias of affecting the valuation with the high growth rates registered when the company was experiencing its period of highest growth. The average growth rate of revenues for the period 2016-2018 is 11,25%. Being a private company, no market values are available for TopCashback, for this reason only book values have been used for the valuation, exception made for the components of the unlevered cost of capital. TopCashback has always had a negative net debt in the reference period, meaning that the firm can be considered as all-equity-financed, for this reason the unlevered cost of capital corresponds to its cost of equity and this has been calculated using the capital asset pricing model. It is necessary to calculate the cost of equity coherently, both by using as risk free rate and equity risk premium, rates that belong to the same context and period, and by choosing the most appropriate beta. The data used for the calculation of the

TopCashback's cost of equity refer to the first days of 2019. Given that the company is based in England, the U.K. ten years nominal-par-yield of treasury bonds[157] has been used as risk-free rate, that is 1,33%. For the equity risk premium observable over the U.K. equity market, the choice has been to use the one available on Damodaran's website[158] and it is 6,65%. The beta has been chosen considering the reference sector of TopCashback, that is "business support services", as defined by Thomson Reuters Eikon[159]. The beta used in the analysis has been taken from the historical tables of industry betas computed on Damodaran's website; the sector nearest to "business support services" is "business and consumer services" and the unlevered beta corrected for cash observed on this sector as of 1/1/2019 is 0.92[160]. By plugging these components on the CAPM equation described in the previous chapter, the cost of equity for TopCashback for 2019 has been 7,45%. The starting point of the DCF analysis begins with the voices reported on financial statements by the company, referred to the fiscal year 2018. These values have been forecasted until 2025 and then discounted to reflect the price that the company should had in 2019. The first line of the analysis, starting in 2019, is the EBITDA of 2018, which has been forecasted using the average growth rate of revenues of 11,25%. This growth rate has been used also for the projection of capital expenditures, net working capital and depreciation; the rationale of this decision lies in the fact that the assumed growth in revenues should be generated by further investments in fixed and short-term assets. The average tax rate of 17,15% (calculated over the sample period available) is applied to the EBIT so as to get the NOPAT. Being a non-cash expense, the depreciation is added back to NOPAT to get the cash flow of TopCashback. Given that the net working capital grows at a constant rate, its variation is always negative for the forecast period. The capital expenditures, for the first year of the analysis, have been calculated as the difference between the fixed assets of 2018 and 2017, plus the depreciation expense of 2018. Using a long-term growth rate of 1% (following the conservative approach), the terminal value is $26.952.016,90, while the sum of discounted cash flows is $10.884.636,32, leading to an enterprise value of $37.836.653,22. To get the equity value, the net debt has been subtracted to the enterprise value; being the net debt "in red" of $37.720.658,95, the equity value of TopCashback is $75.557.312,17. The entire DCF analysis can be found in the appendix of this Executive Summary, under the name "*Table 1 – TopCashback Limited – DCF Analysis*".
The equity value obtained through the DCF analysis has been subjected to two sensitivity analyses, with the objective to inspect in what measure, a change in the long-term growth rate and in the revenue growth rate, would cause a change in the equity value of TopCashback. Both these analyses are available in the appendix of the Executive Summary. The sensitivity analyses conducted constitute the starting point of the proposed price range for TopCashback's equity, reported in the last section of this Summary, under the name "*Table 2-3-Robustness Check*".

[157] *"End year level of yield from British Government Stock, 10 Year Nominal Par Yield"*, Bank of England, 2020

[158] Aswath Damodaran, *"Risk Premium for Other Markets"*, Damodaran Online – Data: Archives, 2019

[159] Thomson Reuters Eikon, *"TopCashback Limited",* 2020

[160] Aswath Damodaran, *"Levered and Unlevered Beta by Industry"*, Damodaran Online – Data: Archives, 2019

With the objective to get a countercheck for the value obtained with the DCF approach, a multiple analysis based on comparable firms of TopCashback has been developed. The number of companies around the world doing cash-back services is very limited and basically all of these companies are private. Anyway, two companies offering services similar to cash-back, providing public financial statements, have been found. The first of these companies is the British segment of RetailMeNot, Inc. that is multinational company providing coupons to be used by its customers on other websites; the choice to take only the British segment for the analysis, has been taken because it is more similar to TopCashback in terms of dimension and key metrics. The second company that run a business similar to the one of TopCashback is OpenTable, owning platforms used to make reservation on the restaurants that have joined the OpenTable initiative; by doing so, the customers earn "Dining Points" for each reservation they made, these points can then be used for a variety of rewards. Following the same rational of RetailMeNot, the British subsidiary of OpenTable has been chosen for the analysis. In addition to these two companies, the multiple analysis has been performed using some of the comparables suggested by Orbis among the closest 20 national (U.K.) and international companies according to operating revenue of 2018 within the standard peer group, which is based on 'NACE Rev. 2 industry classification: 6312 – web portals'. Among this list, the selected companies are Cision Group Limited, CV-Library LTD, Deliveroo France SAS and Google Italy SRL.
The only multiples that can be constructed for TopCashback are those involving the enterprise value as key metric, given that the company is private. These are Enterprise value / Operating revenue and Enterprise value / EBITDA. While the Enterprise value on EBITDA multiples obtained provides an average enterprise value excessively low for TopCashback, the enterprise value obtained with the EV/Operating revenue multiple is incredibly robust with value obtained with the DCF analysis: the average value obtained with this multiple is $37.618.595,00 and it is surprisingly similar to the enterprise value for 2019 of $37.836.653,23 obtained with DCF. The multiple analysis can be found in the appendix of the Summary under the name "*Table 4 – TopCashback Limited – Multiple Analysis"*.
Even if the success of Amazon is undisputed, as confirmed by the numbers that it records each year, every business (whether it is a small family business or a market colossus with net sales over $280 million) has room to further improve and grow over time. The strategic potential of this acquisition is much more shattering if contextualized to the actual socio-economic environment characterizing our society; especially if considering how the pandemic changed customers behavior. people all over the world changed the way, the timing and the source of their purchases. A report,[161] made in July 2020 by McKinsey, states that the e-commerce industry experienced, in just eight weeks during the lock-down, a growth that would have been experienced in ten years without a pandemic. Being a period of conjuncture, it is of fundamental importance trying to ride the wave of change; against this background, Amazon is in a position of advantage, being the

[161] S. Kohli, J. Timelin, V. Fabius, S. Moulvad Vernanen, *"How COVID-19 is changing consumer behavior – now and forever"*, McKinsey & Company, 2020

biggest player of the industry that probably has benefited the most from the situation. What probably will be more relevant for the near future is the importance of customer experience, especially of the digital one; when purchasing from web online retailers, customers pay an increasing attention both to the style of the website and to the advantages provided by a certain retailer.
For Amazon, adding cash-back features to its lines of business may represent an additional and important step in the process of expanding and improving the customer experience it offers and, therefore, to increase the retention of customers, this strategy is perfectly aligned with the company's objective to continue investing in new technologies. By integrating TopCashback, Amazon could efficiently establish a cash-back policy for its customers, to be applied, for example, on Amazon Basic products, e-books for Kindle and even on the goods sold in the Whole Food Markets store! Following this strategy, the customers have the opportunity to benefit from purchasing books, daily goods and food from the same retailer, Amazon. The possibility to save money on daily purchases is likely to increment the volume of purchases on the Amazon's platforms, boosting the company's as well as the customers' loyalty. It is important to consider that, for the proposed deal, the revenue synergies are not easy to be predicted and forecasted; trying to predict a revenue growth rate and, at the same time, the possible growth in costs due to the cash-back, requires a number of risky assumptions that may undermine the reliability of the entire assessment.

d) The Deal: Price, Premium and Conclusions

Once the analysis has been carried out, one of the conclusive parts of the valuation process takes place: the definition of a price range for a possible bid to purchase TopCashback. The DCF analysis conducted, (backed by the multiple analysis) provides a range of price for TopCashback referred to the fiscal year 2019. The equity value of 75.557.312,17 is the suggested price (without any premium) for the company's equity. The range around this price is defined by using the sensitivity analyses previously conducted: it is reasonable to assume that the suggested cost of equity of 7,45% may suffer variations of +1% or -1%. Variations having a higher magnitude are unlikely to occur, since the hypothesis underlining that rate are consistent with each other. Considering the acquirer's point of view, the worst case is the one which sees the value of TopCashback maximised; this case involves the lower cost of equity of 6,45% and the higher long-term growth rate of 2%, resulting in an equity value of $91.151.774,02, that is the upper bound for the range of price of the company, without considering any premium over the fair value. On the other hand, the best case is the one which involves the highest cost of equity of 8,45% and the higher revenue growth rate of 17,25%; in this case the lower bound is $67.051.797,10. Of course, the range of price for TopCashback's equity just provided, still does not represent the actual price that Amazon is going to pay, if it will decide to proceed with the acquisition. Given that the estimation of synergies is not straightforward for the reference case, the considerations behind a possible premium are various; Amazon's financial strength is impressive, and its capital structure would not be changed by acquiring a firm like TopCashback, way smaller than the acquirer. In addition, if the target's ownership is not willing to sell, Amazon may still identify some relevant

competitors performing the same type of services and then opt for acquiring one of those. These two arguments suggest that Amazon should not overpay for TopCashback.
Regarding the sell side of the deal, TopCashback can be considered as a growing, all-equity financed, company, not subject to a significant liquidity risk. It is not in the position of a distressed company, almost obliged to sell, but rather the company's management may have reasons to avoid a deal. Furthermore, being a private company, for a hypothetic bidder it is not possible to attempt a hostile takeover if the stock of the company is not publicly traded, especially if the ownership is composed by just three shareholders and one of them is also the CEO of the company! This suggest that, even if the M&A markets experienced a slowdown during to the COVID-19 pandemic and there are less bidders over the markets, TopCashback's management is likely to ask for a premium.
Not having any market value for the target company, the best choice would be to consider the average acquisition premium prevailing during 2019 in the EMEA (Europe, Middle East and Asia) region. Among the most reliable and accurate databases, the report made by Refinitiv[162] for the full-year 2019, available on Thomson Reuters Eikon, has been selected to collect the average acquisition premium. The considered premiums are calculated as the average premiums paid over the four-weeks stock price of the companies, prior to the deals. The Thomson Reuters Eikon's "page" on TopCashback includes the company in the "Business Support Services" industry, identifying the economic sector as "Industrials". For the macro-sector "Industrials", on average, the premium paid in M&A deals during 2019, according to Refinitiv, has been approximately 28%. Taking this premium is now possible to project a first estimate for the upper bound of TopCashback's price, premium included. Considering the bargaining power of both companies, the most likely scenario sees Amazon starting negotiations at a price slightly lower than the one of $96.713.360,00, that is the equity value estimated with the discounted cash flow analysis, increased by the 28% premium, and then, if necessary, rising the offer until the upper bound (increased with the 28% premium) of $116.674.270,00 proposed in the previous paragraph.
An anonymous interview with three Amazon's employees has been conducted. It was composed of an introductive part, in which relevant information was presented to interviewees, and five questions.
The main objective of the interview was to gather the point of view of professionals that are in the position to look at the e-commerce from an insider's perspective, in order to understand whether the proposed acquisition could be attractive for Amazon or a company dealing with the same business and, most importantly, if it is likely to create value. The objective was reached and, in addition, the Amazon's possible takeover of TopCashback implicitly collected positive feedbacks, as well as the implementation of the most appropriate form of cash-back within Amazon's lines of business. The complete questions and main findings can be found in the third paragraph of the fourth chapter of the thesis.

[162] *"Global Mergers & Acquisition Review – Full year 2019, Financial Advisors"*, Refinitiv, 2019

At this point of the process, the last word regarding the feasibility of the proposed acquisition involving Amazon and TopCashback can be said. The process of driving the conclusions is not a stan-alone step in the assessment on the deal's feasibility, but rather it is something that accompanied the entire analysis. Step after step, some key considerations have been collected, reviewed and questioned, to the point where general conclusions can be drawn. With the objective to drive the reader through the conclusions obtained so far, these have been divided and organized in three main categories reporting the reasons why the acquisition of TopCashback, undertaken by Amazon, should be successful if effectively conducted; these conclusions are:

4) *Economic Rationale*: according to the analysis conducted on TopCashback, the upper bound of the price to be paid for its acquisition should be \$ 116.674.270,00, whereas, as for the last balance sheet available, the cash balances of Amazon are of \$36.092,00 million! Therefore, if the acquisition is going to take place, it should have a very little impact on Amazon's liquidity and probably no impact on its capital structure. Then, a significant part of TopCashback's estimated value is represented by an important amount of cash balances, which is going back to Amazon if the takeover will happen. Furthermore, the price of TopCashback is way lower if compared to the one attributed to some of the biggest players of the cash-back industry; if, by contrast, Amazon would like to acquire a company like Ibotta (considered as a unicorn), this will surely have some impact on Amazon's financial position. Acquiring TopCashback represents for Amazon a chance to break into the cash-back services industry without exposing the company to liquidity risk or changing the capital structure.
5) *Strengthening Customer's Retention Rate*: as widely reported in the various steps of the process, the importance of e-commerce is something that has been made clear due the COVID-19 pandemic. The lock-down experience forced people to stay at home and to prefer purchasing from the internet, in order to avoid physical contacts. In this context, the customer experience (especially the digital one) is fundamental and it is something that should be among the first attention points in the top manager's agendas. The digital-lead experience will continue to grow in popularity among customers, that are increasingly seeking for accelerating digital options and avoiding as much as possible physical contacts typical of superstores. Customers are particularly focused on finding savings without sacrificing the purchase experience; in this period of economic slowdown the purchase power of common customers is contracted and therefore the possibility to save some money plays a fundamental role in the choices of many people. This last consideration clearly explains one of the principal advantages that Amazon could obtain with this deal: the implementation of a cash-back system represents a clear and concrete bonus for customers that will benefit from these reward programs by saving money on future purchases and, at the same time, continue to enjoy the Amazon's purchase experience. In light of these evidence, and of the ones reported throughout the chapters, it is reasonably assumable that, by implementing cash-back features Amazon may strongly increase the retention rate of its customers, that, if incentivized with the promise of saving money, will continue to purchase from Amazon with higher frequency

6) *Favorable Economic Period*: This may sound as a contradiction, given that the 2020 has been a challenging year, characterized by an economic slowdown that sprawled worldwide. But, following the arguments of the BCG's analysis[163], reported in the first paragraph of the thesis' first chapter, companies with healthy and strong balance sheets may have the opportunity to create long-term value through mergers and acquisitions. Indeed, the economic crises generally causes the companies valuation to decline, as the demand for takeovers drops. Whenever significant recessions occur, markets and consumer behaviors generally experience some changes and, whether for some companies this may mean loss of market shares and internal crises, for the more forward-looking firms, these periods represent a concrete opportunity to innovate and gain market power. A recurring theme throughout this thesis is the objective to "ride the wave of change" that managers, board members and CEOs should have if looking for carrying out the most from economic slowdowns; this objective appears to be particularly suitable for Amazon: the exogenous global shock caused by the pandemic is definitely bringing the e-commerce inside the daily life of the vast majority of customers, and Amazon is in all respects one of the biggest and leading companies of the broad industry of e-commerce. In light of all the considerations made so far, this is a favorable economic period for Amazon and a possible strategy aimed at exploiting the available opportunities to gain market shares would be to pursue inorganic growth strategies. For Amazon the best choice would probably be to follow the trend to prioritize the collection of innovative technologies, as enhanced among dealmakers; to acquire TopCashback, that is a fast-growing and forward-looking company, specialized in cash-back, is likely to be a winning strategy.

The history has always been characterized by both economic booms and recessions, to exploit a favorable period is almost easy, but to overcome a crisis with a strongest and more innovative company is something that only the most talented managers (executives) and the most forward-looking companies can boast. What is important, is to embrace the changes, looking at innovations with curiosity and always investigating what can be considered as a bubble and what is going to be consolidated in the World's economy.

[163] J. Kengelbach, J. Gell, G. Keienburg, D. Degen, D. Kim, *"COVID-19's Impact on Global M&A"*, Boston Consulting Group, 2020

Appendix

Table 2 – TopCashback Limited – DCF Analysis

Voice	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA ($)	3.111.532,49	3.461.667,43	3.851.202,40	4.284.571,02	4.766.705,79	5.303.094,29	5.899.841,58	6.563.739,74
(Depreciation) ($)	64.377,59	71.621,87	79.681,35	88.647,74	98.623,11	109.720,98	122.067,68	135.803,73
EBIT ($)	3.047.154,91	3.390.045,56	3.771.521,05	4.195.923,27	4.668.082,68	5.193.373,31	5.777.773,90	6.427.936,01
(Taxes) ($)	- 125.213,13	581.426,51	646.853,35	719.642,55	800.622,58	890.715,14	990.945,65	1.102.454,92
NOPAT ($)	3.172.368,04	2.808.619,05	3.124.667,71	3.476.280,73	3.867.460,10	4.302.658,16	4.786.828,25	5.325.481,09
Depreciation ($)	64.377,59	71.621,87	79.681,35	88.647,74	98.623,11	109.720,98	122.067,68	135.803,73
Cash Flow ($)	3.236.745,62	2.880.240,93	3.204.349,06	3.564.928,47	3.966.083,21	4.412.379,15	4.908.895,93	5.461.284,82
Net Working capital ($)	11.408.316,44	12.692.072,98	14.120.288,24	15.709.217,90	17.476.946,84	19.443.595,03	21.631.546,46	24.065.703,97
Net Working Capital Variation ($)	6.942.428,83	- 1.283.756,54	- 1.428.215,26	- 1.588.929,66	- 1.767.728,95	- 1.966.648,18	- 2.187.951,43	- 2.434.157,52
Capex ($)	85.175,45	94.760,08	105.423,26	117.286,34	130.484,36	145.167,52	161.502,95	179.676,57
FCF ($)	10.093.999,00	1.501.724,30	1.670.710,53	1.858.712,47	2.067.869,91	2.300.563,45	2.559.441,56	2.847.450,73
Discount period		1,00	2,00	3,00	4,00	5,00	6,00	7,00
Discounted FCF		**1.397.578,17**	**1.447.014,93**	**1.498.200,42**	**1.551.196,50**	**1.606.067,22**	**1.662.878,90**	**1.721.700,18**

Discounted cumulative FCF	$10.884.636,32
Terminal value	$26.952.016,90
Net Debt	$ -37.720.658,95
Enterprise value	**$37.836.653,23**
Equity Value	**$75.557.312,18**

Table 3 – Robustness Check – Cost of Equity and Average Revenue Growth Rate

Revenue growth				Cost of Equity			
$75.557.312,18	**4,45%**	**5,45%**	**6,45%**	**7,45%**	**8,45%**	**9,45%**	**10,45%**
5,25%	$109.356.257,12	$92.433.867,95	$81.734.433,79	$74.363.624,59	$68.980.765,90	$64.879.719,16	$61.653.212,99
7,25%	$110.862.427,32	$93.593.305,71	$82.680.968,21	$75.168.506,47	$69.686.280,41	$65.512.912,22	$62.232.355,17
9,25%	$111.594.709,09	$94.168.535,60	$83.162.835,56	$75.590.762,22	$70.068.827,94	$65.868.377,58	$62.569.180,50
11,25%	$111.397.596,23	$94.044.146,77	$83.089.780,72	$75.557.312,18	$70.067.746,88	$65.894.811,25	$62.619.660,45
13,25%	$110.097.824,45	$93.091.631,32	$82.361.370,35	$74.986.887,02	$69.615.620,29	$65.535.231,93	$62.334.924,98
15,25%	$107.503.053,68	$91.168.415,71	$80.866.242,72	$73.789.426,24	$68.637.781,44	$64.726.566,92	$61.660.910,65
17,25%	$103.400.490,50	$88.116.848,37	$78.481.323,68	$71.865.449,52	$67.051.797,10	$63.399.219,34	$60.537.992,85

Table 4 – Robustness Check – Cost of Equity and Long-Term Growth Rate

Long-term growth			Cost of Equity		
$ 75.557.312,18	**5,45%**	**6,45%**	**7,45%**	**8,45%**	**9,45%**
0,00%	$85.512.428,97	$77.526.894,13	$71.709.472,42	$67.289.237,54	$63.821.603,03
0,50%	$89.347.558,36	$80.074.677,31	$73.495.018,63	$68.591.138,58	$64.800.308,59
1,00%	$94.044.146,77	$83.089.780,72	$75.557.312,18	$70.067.746,88	$65.894.811,25
1,50%	$99.929.173,25	$86.713.762,22	$77.966.099,04	$71.756.758,74	$67.126.954,30
2,00%	$107.519.065,59	$91.151.774,02	$80.816.711,12	$73.707.555,78	$68.524.443,52

Table 5 – TopCashback Limited – Multiple Analysis

Accounting year: Peer group year	**Year**	**Operating revenue (Turnover) USD**	**P/L before tax USD**	**P/L for period [=Net income] USD**	**EBITDA**	**Total assets USD**	**Shareholders' funds USD**	**Number of employees**	**net debt**	**EV USD**	**EV/Operating revenue**	**EV of TopCashback USD – EV/Revenue**
Median	2018	63.531.499	3.579.458	3.594.656	5.421.668	56.109.546	17.511.290	182	-11.552.940	9.375.598	0,163	19.214.934
Standard deviation	2018	44.474.417	8.461.135	5.965.571	8.369.264	31.057.877	16.015.008	99	11.605.069	23.594.424	0,381	44.797.338
Average	2018	77.236.460	8.975.989	7.467.921	10.937.737	57.912.948	24.367.463	220	-9.450.042	17.057.469	0,320	**37.618.595**
TOPCASHBACK LIMITED (*)	2018	117.577.085	2.673.984	2.799.197	3.111.532	87.746.014	11.527.182	179				
DELIVEROO FRANCE SAS	2018	63.531.499	15.228.335	14.412.384	17.187.604	102.921.627	56.045.704	411	8.421.761	64.467.465	1,015	119.309.269
CV-LIBRARY LTD	2018	45.237.366	20.508.714	14.664.931	21.380.085	45.049.313	25.571.747	184	-14.968.625	10.603.121	0,234	27.558.724
DELIVEROO FRANCE SAS	2018	129.250.805	3.417.097	3.101.115	4.053.216	56.109.546	17.511.290	n.a.	-14.970.798	2.540.492	0,020	2.311.039
GOOGLE ITALY S.R.L.	2018	122.583.899	17.588.285	12.184.395	20.668.827	69.325.473	33.032.020	241	-24.883.946	8.148.074	0,066	7.815.274
OPENTABLE	2018	35.419.234	3.579.458	3.594.656	5.421.668	19.836.718	11.412.107	167	-8.137.255	3.274.852	0,092	10.871.144
RETAILMENOT	2018	27.055.331	-163.951	1.518.770	4.741.224	24.401.947	15.472.194	139	-2.161.386	13.310.807	0,492	57.846.120

(*) subject company