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Best Practices in Estimating the Cost of Capital: An Analysis of the Italian Market

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To my mother and father, for never ceasing to remind me to aim high, even when I was the first to believe I was unable to do so. Thank you

A sincere thanks to Professor Emanuele Tarantino, without whose trust and constant guidance this study would not have been possible

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INTRODUCTION

For any business executive, the question on Cost of Capital estimation is truly on of the most important ones for the survival of their firm, and ultimately a crucial chance to assess their future corporate strategies with a clear and concise benchmark to account for any opportunity costs. Precisely, the calculation of a correct cost of capital measure enables corporations to evaluate any investment project through their Net Present Values and, eventually, to reject any opportunity which might impede the overall performance of the business. As both equity and debt are available to most firms as their main sources of financing, companies normally make us of a mixed form of cost of capital which incorporates a weighted average of the two: this discount rate is what financial analysts and scholars refer to as the Weighted Average Cost of Capital, or WACC.

Alongside its cruciality in capital budgeting decisions, the WACC allows by definition the companies' executives to observe important information on their capital structure and to adopt all the consequent financing and dividend decisions. As a matter of fact, designing a balanced mix of equity and debt can help financial managers to compare the specific costs of the available sources of capital, with the aim of maximising the firms' value. Furthermore, it enables officers to make important decisions about the selection of their working capital sources, the capitalization of profits, and the consequent dividend policies.

Besides its primary role for a company's financial planning and analysis activities, the WACC measure is also a crucial one from an investor's side. In the same way through which a firm's cost of capital is a measure of the minimum return rate that it should earn to provide shareholders with enough value creation, investors will only be willing to undertake an investment opportunity in the said firm if its return will exceed their opportunity cost of capital.

Given the primary importance of this financial indicator, this paper sets out to investigate the methods for estimating the Cost of Capital within the industry, with the aim of observing its main practices. To do so, the analysis intends to update the observations of Robert F. Bruner, Kenneth M. Eades, Robert S. Harris, and Robert C. Higgins, who published their study *Best Practices in Estimating the Cost of Capital: Survey and Synthesis in 1998*. The paper authored by the four American academics presents the results of a survey of *twenty-seven highly regarded corporations, ten leading financial advisers, and seven best-selling textbooks and trade books* on the matters of capital budgeting and cost of capital estimation.

With the idea of changing the basis of Bruner et al.'s study by adding some international scope to the flourishing literature on the subject, this work investigates the choices of the primary active players in the Italian market and attempts to grasp the main differences and asymmetries existing both within the national market and with the American one. To do so, a batch of the most significant and replicable questions from the original study was selected and submitted to the attention of a group of leading financial professionals active in Italy. Given the different conformation of the reference market, populated by a large number of SMEs and a growing number of financial advisory firms with an ever-increasing deal volume, the survey focused on the answers of a sample made of leading Italy-based investment banks and consultancies[1].

The adoption of such an interview methodology is valuable for several reasons:

i) First, it helps readers observe the main discrepancies and touch points between the application of cost-of-capital estimation practices among a heterogeneous sample of financial advisory firms, including Italian, European, and American ones

ii) Second, it focuses on complex transactions like the ones of mergers and corporate acquisitions, rather than observing them in the same discussion of ordinary activities such as the ones of the purchase of assets, or other minor investment projects

iii) Third, it provides researchers with some noteworthy insights among the technicalities behind the different 'merger-waves' that characterized the Italian economy in the past decades

iv) Finally, it provides financial professionals and researchers with a comparison between the main divergences and touch points between industry processes and finance literature guidance, with the ultimate goal of observing a *Best Practice for Estimating the Cost of Capital* for Italian firms

In the first chapter of this paper, readers will find a comprehensive overview of the main equity and enterprise valuation methods used by leading financial advisory firms to calculate the value of companies subject to an acquisition. In the first subchapter, a distinction is made between direct and indirect valuation methodologies, and the main strengths and weaknesses that characterise the uniqueness of each model are identified. In the second subchapter, the components necessary for calculating the WACC are analysed in detail, with space for initial reflections on the correctness of the formulae given in the main academic sources.

[1] Although the financial analysts' answers are expressed as tied up to the investment bank or advisory firm they worked for during the interview period, the data do not purport to represent guidance on the individual firm's modelling guidance, but rather intend to report an overview of the main practices of a representative sample of professionals active in Italy. The research would not have been possible without the expertise and the cooperation of the respondents; these contributions notwithstanding, any errors remain the author's.

While the first chapter has a purely explanatory purpose, with the aim of providing an overview of the main theoretical foundations of this study, the second has a descriptive function and is intended to characterise the sample under analysis. In the first subchapter, a historical overview of investment banks and the services they offer is provided, starting with the traditional underwriting services up to the more recent advisory services. It is here, moreover, that the importance of the intermediation of a dedicated advisor for financial transactions is analysed, through the citation of one of the leading studies on the subject. The second subchapter aims instead to review the main structural changes that have affected the Italian M&A market in the past, analysing the main trends, the most significant transactions, and the core players.

Finally, the third chapter presents the results of the survey, proposing a suitable background for its placement within the diverse world of capital budgeting studies. In the first subchapter, a historical overview of cost of capital surveys introduces readers to the main focal points of the research, and then the investigative methodologies, questions, and main conclusions of the survey of which this paper is meant to be an update are presented in detail. Concluding, the final subchapter discusses the final results of the survey which readers can see in its entirety in the appendix, also devoting attention to a comparison between this and the main historical precedents.

1. THE VALUATION PROCESS: A THEORETICAL OVERVIEW

1.1 Key Valuation Methodologies

Despite being one of the key topics taught in every business university course, the amount of literature concerning the definition and the historical development of valuation is not as rich as the one concerning the narrative on the stock markets in the past centuries. Indeed, while even everyday news got accustomed to telling the effects of the subsequent booms and busts of the world economy, there's far less more information on the methodologies that investors used to operate in those times. What is even more surprising is that, in presence of events as the technology bubble of the late 1990s, *New valuation methodologies became implicated in the share values then prevailing*[2]

To trace a brief history of the main changes in equity valuation practices, we must go back to the nineteenth century, in concomitance of a heavily bond-reliant economy as the one of the 'railway boom' in the United States of America, where dividend yield and book value emerged as the most adopted practices. The main reason behind this *exploit* is that bonds were widely recognised as the main financial instrument available at that time and, consequently, stocks could be considered as a particular, riskier type of obligation, characterized by an uncertainty of both their dividend payments and their maturity.

This convincement, however, only survived until the economic boom of the 1920s, when many companies proved most of the before-mentioned investors wrong. A considerable number of firms, as a matter of fact, generated earnings which substantially exceeded their dividend payments: retained earnings could therefore be reinvested to generate higher earnings in the future, thus paving the way for the introduction of equity valuation.

Ten years later, things changed again when events as decisive as the Great Depression took place. As markets were not believed to be accurate in pricing every asset anymore, the concept of 'value' started to circulate again in most of Wall Street's meeting rooms. Graham and Dodd's work[3] of the early 1930s first introduced the concept of 'Intrinsic Value', an estimate arising from a series of rigorous calculations which was, indeed, different from the one attributed from public markets. From an investor perspective, a viable opportunity arose –

[2] Janette Rutterford Professor (2004). *From dividend yield to discounted cash flow: a history of UK and US equity valuation techniques*, Accounting, Business & Financial History, 14:2, 115-149.
[3] Graham, B., and Dodd, D.L. (1934). *Security Analysis*, New York: McGraw-Hill.

ceteris paribus – whenever an asset's intrinsic value was above its market price: 'Value investing' was born.

While this new-born valuation technique was heavily reliant on ratios, with the P/E (or 'Price to Earnings') being the most common for large part of the twentieth century, the 1930s also gave life to the first groundings of the so-called 'Discounted Cash Flow' method, which aimed to figure out the value of an investment by discounting its estimated future cash flows[4]. However, to see the mentioned approach overtake P/E ratios, one must jump to the last decade of the century, when the 'Tech Bubble' took place. The only methodology allowing analysts to attribute a value to a young company with little to negative earnings was by calculating the present value of its future cash flows, which accounted for several variables and expectations including, obviously, a rampant growth rate that could justify a recommendation to buy. These observations, alongside the rising adoption of Microsoft Excel and other more sophisticated computer software that made further dynamic analyses possible, set the standard for valuation which is - in theory – adopted by the majority of financial advisors and companies throughout US and Europe nowadays.

But what is valuation really about and why is it really that important in financial markets? Quoting one of the most popular thoughts of Professor Damodaran[5], one of the leading scholars on the subject, valuation copes with the objective of attributing an explicit value to a Business, and, while it strongly relies on complex formulas, models, and assumptions – those three being the main object of the next chapters – it is still subject to several pitfalls such as biases, uncertainty, and complexity. As a matter of fact, most individuals approach investments opportunities with preconceptions which, if wrong, might be reflected onto the valuation's assumptions in a textbook 'garbage-in-garbage-out' process; furthermore, more struggles are predicted to arise in developing a complex model to value, for instance, a private and fast-growing company, with little to no information on its previous earnings reports. In this case, while risky projects are commonly regarded as the ones which reward investors with the best returns, the valuation process might become long and stressful, in the end causing the final result to be potentially approximate and full of fatigue errors.

[4] Corporate Finance Institute (CFI): corporatefinanceinstitute.com/resources/knowledge/valuation/discounted-cash-flow-dcf/
[5] Damodaran A. Professor: Valuation course at NYU Stern: https://pages.stern.nyu.edu/~adamodar/New_Home_Page/equity.html

Given this, an investment decision can be justified - consciously or unconsciously - even when there is little evidence to support it: this is where valuation reveals its role, providing a safety vest to someone who is about to jump off a cliff like a lemming[6].

Having defined what valuation really is and why it is important from an investor's perspective, we will then dive into the three leading techniques taught on leading textbooks in the next paragraphs. The first two models are methods regarding the so-called 'Intrinsic Valuation' technique, which attempts to value a firm based on its fundamentals, mainly cash flows, revenue growth and risk. The third one is instead an ensemble of several practices of 'Relative Valuation', whose main effort is to value an asset looking at how similar assets are currently priced on the market. As can be easily imagined, no model is perfect and they are based on assumptions and preconceptions that may easily not be reflected in real life; what is common to all three practices, however, is an important axiom for all corporate finance scholars: to value an asset is to assume that the market is ineffective in assigning a price to it.

The Discounted Cash Flow ("DCF") Method

The first valuation method presented is probably the most academically taught and, arguably, the most complex one. Indeed, to build a meticulously designed Discounted Cash Flow model, analysts are required to show an advanced level of knowledge of financial accounting, and they are furthermore expected to exhibit an outstanding level of judgement capacity, as growth forecasts play a key role in this process. The key idea behind DCF valuation is that the best method *to estimate the real value of a firm*[7] is to estimate the worth of the cash flows it is expected to generate in the future. The first step into the development of such a model is to evaluate the firm's Free Cash Flow, which is calculated by taking the Operating Income (or "EBIT") for a business net of taxes applicable, changes in Operating Working Capital and Capital Expenditures (or "CapEx"); in this process, the last step is to add-up any Depreciation and Amortization (or "D&A) incurred by the business' assets, as they don't account for any physical cash outflow. The current industry norm is to use Unlevered Free Cash Flows (or "UFCF") rather than the Levered (or "LFCF") ones: the rationale for this is that accounting for any cash or expenses from Interests means taking a firm's capital structure into account and thus evaluating only the equity portion of the company. Performing a DCF valuation using UFCFs, instead, grants an investor the chance to calculate the intrinsic value of the investment

[6] See Investopedia: www.investopedia.com/terms/l/lemming.asp "A disparaging term for an investor who exhibits herd mentality and invests without doing their own research, which often leads to losses".
[7] Vernimen, Quiry, Dallocchio, Fur, & Salvi (2007). *Corporate Finance: Theory and Practice.* Wiley.

as a whole and furthermore provides him with the opportunity to compare it with other companies who might exhibit different capital structures.

DCF Valuation	Projected Free Cash Flow					
Calendar Years ending December 31,	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
($ in thousands)						
EBITDA	$8,954	$9,898	$10,941	$12,093	$13,367	$13,367
Less D&A	1,112	1,222	1,343	1,476	1,623	1,623
EBIT	7,842	8,676	9,598	10,617	11,745	11,745
Less: Cash Taxes (35%)	(2,745)	(3,037)	(3,359)	(3,716)	(4,111)	(4,111)
Tax-adjusted EBIT	**5,097**	**5,639**	**6,239**	**6,901**	**7,634**	**7,634**
Pluss: D&A	1,112	1,222	1,343	1,476	1,623	1,623
Less: Capital Expenditures	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)
Less: Change in Net Working Investment	(318)	(350)	(384)	(423)	(465)	(465)
Unlevered Free Cash Flow	**$4,141**	**$4,762**	**$5,447**	**$6,205**	**$7,042**	**$7,042**

Figure 1 – An example of UFCF model

Source: Streetofwalls

The process described before is performed both for the last available 12-month figures and for fixed time horizon in the future, which is usually set to 5 years; in this phase, key focus is devoted to the assumptions lying behind the growth rates used in future figures' forecast: even some slightly overvalued metrics might in fact imply a radically different result that may impair the entire valuation process. Once this work is completed, the cash flows are discounted to the present date: a simple application of the 'Time Value of Money' principle states that money obtained in the future is worth less than the one available in the present, which can be invested in the market to provide a profit. In this scenario, the choice of calculating a firm's cash flow before or after any interest expense will influence the choice of the discount rate: as a matter of fact, LFCFs are discounted at the rate of return required by equity investors, while UFCFs requires a so-called 'Weighted Average Cost of Capital' (or "WACC) which we will deal with in the next chapters. Once the sum of the discounted Free Cash Flows for the considered *n* years is calculated, a reasonable market value estimate is obtained by adding up one more estimate: the so-called Terminal Value ("TV" or "Terminus"). The TV's most common approach as taught by the academia is to assume that a firm's growth is going to stabilize over time, thus exhibiting quasi-perpetual growth.

Mathematically, the described equations can be summarized as:

$$TV = \frac{FCF(1+g)}{(r-g)}$$

$$Value = \sum_{n=1}^{t} \frac{FCF_n}{(1+i)^n} + \frac{TV_t}{(1+r)^t}$$

Where

FCF = Free Cash Flow

i = Discount rate

n = Time periods

g = Perpetual FCF growth rate

TV = Terminal Value

The Dividend Discount ("DDM") Model

To conclude our brief overview of the main intrinsic valuation practices, we introduce the Dividend Discount Model (or "DDM"), which applies a similar approach to the one of the DCF concerning dividend-paying stocks. The rationale for such a method is that, if *dividends are essentially the positive cash flows generated by a company and distributed to the shareholders*[8]*,* then they must provide analysts with a good estimate of a security's intrinsic value. While it seems logic that the DDM is a simpler model that requires far less inputs than the one described before, its execution relies as well on several assumptions which require a careful estimation; furthermore, a number of different versions of the DDM exist, each one requiring a different bundle of observable metrics to be applied.

The 'Gordon Growth Model', named after Myron J. Gordon[9] who published it along with Eli Shapiro in 1959, assumes that the stream of future dividends will show a constant growth rate for an infinite time, thus exhibiting a 'quasi-perpetual growth'. This approach is

[8] Corporate Finance Institute: corporatefinanceinstitute.com/resources/knowledge/valuation/dividend-discount-model/

[9] Gordon M., Shapiro E. (1956). *Capital Equipment Analysis: The Required Rate of Profit*. Vol.3, No.1, 102-110, INFORMS

consistent with the aforementioned methodology concerning the estimation of the Terminal Value in the Discounted Cash Flow Valuation.

Mathematically:

$$Value = \frac{D_1}{r - g}$$

Where

Value = Current fair value of a dividend-paying stock

D_1 = Dividend paying at t_1

r = Cost of equity

g = Constant growth rate of the company's dividend

The 'One-Period Dividend Discount Model' is applied to determine the intrinsic value of a security that the investor is prepared to hold only for one year. To apply such a method, an investor must compute the sum of the present values of the future dividend payment and that of the estimated selling price.

$$Value = \frac{D_1}{1 + r} + \frac{P_1}{1 + r}$$

Where

Value = Current fair value of a dividend-paying stock

D_1 = Dividend paying at t_1

P_1 = Stock price at t_1

r = Cost of equity

The 'Multi-period Dividend Discount Model' applies the principle of the one-period method to the general case where an investor is willing to hold a security for a period which may exceed one year. As one might expect, the approach consists in adding up the present value of the sum value of the expected dividend payments and of the security's selling price.

$$Value = \sum_{i=1}^{n} \frac{D_i}{(1 + r)^i} + \frac{P_n}{(1 + r)^n}$$

As mentioned before, while the DDM seems to be an easier to apply than the DCF valuation method, the latter is by far preferred in the industry than the former. The main reason behind this is the fact the easiness of the Dividend Discount Model comes with several drawbacks: in fact, the constant dividend growth rate assumption is inadequate for companies which exhibit irregularities in their dividend payment schedules and it is in any case inapplicable whenever firms show a lower rate of return than their dividend's growth rate. Even though the method might not be the preferred practice for those analysts who are covering high growth rate firms, the DDM is one of the common ones for valuing Financial Services Firms[10] along with the Cash Flow to Equity discount model and the Excess Return model.

Indirect Valuation: Multiples-based Approaches

The main idea behind indirect (or "relative") valuation is that an asset's value can be derived after having compared it to a selection of similar ones, which is commonly referred to as 'peer group'. Once the peer group is selected, the analyst must set out one or more ratios which must be calculated for each component of the panel and find a correct statistical measure to summarize them: the choice relies most frequently on an average value excluding the minima and maxima outliers. Finally, the target company's financial metrics are multiplied for the respective multiples to evaluate the correct value.

Before diving into the two practices used to value a company through the indirect method, a distinction between the two main typologies of valuation multiples must be done. Investors who aim to acquire minor positions into companies shall prefer Equity Multiples, which provide them with the opportunity to calculate a firm's equity value. A list of the most used metrics is listed below:

P/E Ratio – computed as Share Price to Earnings Per Share ("EPS")
Price to Book Ratio – computed as Share Price to Book Value Per Share
Dividend Yield – computed as the proportion of Dividend Per Share to Share Price
Price/Sales – computed as the proportion of Dividend Per Share to Share Price

[10] Damodaran A. (2009). *Valuing Financial Service Firms*. pages.stern.nyu.edu/~adamodar/pdfiles/papers/finfirm09.pdf

Enterprise Value (or "EV" or "Asset-side") Multiples are instead more common in Mergers and Acquisitions deals, as they allow analysts to eliminate the effects of debt financing. A selection of the most common EV Multiples is listed below:

EV/Sales (or "EV/Revenues") – computed as the proportion of Enterprise Value to Sales

EV/EBITDA – computed as the proportion of Enterprise Value to Earnings before Interest, Tax, Depreciation & Amortization (or "EBITDA)

EV/EBIT – computed as the proportion of Enterprise Value to Earnings before Interests and Taxes ("EBIT" or "Operating Income")

EV/Invested Capital – computed as the proportion of Enterprise Value to Invested Capital

Comparable Company Analysis	Summary				P/E			EV/EBITDA		
	Price	Shares	Mkt Cap	EV	2010A	2011E	2012E	2010A	2011E	2012E
Company Comps										
Company A	$16.95	60.2	$1,032	$1,805	13.6x	11.7x	10.9x	4.4x	3.8x	3.7x
Company B	$5.26	1,730.2	$9,257	$19,074	15.8x	15.2x	14.5x	4.4x	4.6x	4.7x
Company C	$7.57	352.7	$2,635	$5,190	18.5x	13.8x	11.1x	5.2x	4.5x	4.2x
Company D	$11.07	456.6	$5,014	$10,033	12.8x	12.6x	13.5x	5.7x	5.8x	6.1x
Company E	$17.88	77.5	$1,398	$3,611	14.0x	13.2x	12.1x	5.9x	4.9x	4.3x
Company F	$15.03	30.2	$422	$417	10.4x	10.0x	8.6x	6.0x	5.4x	4.9x
Company G	$3.28	201.1	$640	$2,777	7.7x	7.5x	6.9x	6.0x	6.1x	6.1x
Company H	$1.49	63.1	$95	$78	17.5x	12.4x	9.9x	8.9x	8.0x	6.2x
Company I	$1.60	200.0	$318	$470	10.7x	8.9x	7.3x	7.9x	6.9x	6.5x
Median					**13.6x**	**12.4x**	**10.9x**	**5.9x**	**5.4x**	**4.9x**
Mean					**13.4x**	**11.7x**	**10.5x**	**6.1x**	**5.6x**	**5.2x**
Min					7.7x	7.5x	6.9x	4.4x	3.8x	3.7x
Max					18.5x	15.2x	14.5x	8.9x	8.0x	6.5x

Source: Company Filings, Bloomberg Consensus Estimates

Figure 2 – An example of a typical table including Equity and Asset-side Multiples for a generic peer group of selected comparable companies.

Source: Streetofwalls

The selection of multiples mentioned above is obviously only a collection of the most common ratios in the corporate valuation process. While the denominator expressed in each ratio varies depending on the multiple chosen, the principle of general application is always the same: multiplying the multiple by the financial metric expressed in the denominator yields the desired result (i.e., the Equity Value or the Enterprise Value).

In addition to this, there are several specific coefficients used by analysts specialising in the coverage of companies operating in certain niche sectors characterised by characteristics. One of the most common is EV/EBITDAR, used in the transport sector as it allows rental costs to be added to the denominator, while EV/ (EBITDA - CapEx) is largely adopted in capital-intensive sectors.

Finally, an ideal valuation should ideally conduct an in-depth analysis of the companies in the 'peer group', as the mere application of an elementary operation to public operating data risks leaving out important aspects related to the financial performance of the given company. As a matter of fact, *although the one-time nonoperating items in net income EBITDA superior to earnings for calculating multiples, even EV/EBITDA multiples must be adjusted for nonoperating items hidden within Enterprise Value and EBITDA, both of which must be adjusted for these nonoperating items*[11]. The most common adjustments include the adoption of the IFRS 16 Principle for the consideration of Operating Leases[12], the addition of the Present Value of Pension Liabilities and employees' Stock Options to the Enterprise Value and the separate evaluation of any Excess Cash and other Nonoperating Assets.

Having defined the main duality between different typologies of valuation multiples (i.e., the different results arising from EV or Equity multiples), we can now dive further into the world of relative valuation by looking at Transaction and Trading Multiples, the two main benchmarks used by analysts in this phase.

As one might expect, Trading Multiples are available whenever a peer group of publicly traded (or "listed") companies is available for the company that is set to be valued. After having chosen a coherent group of listed peers, the Enterprise Value is calculated through the so-called 'Equity Bridge': an arithmetic sum of Equity Value, Preferred Stock, Non-Controlling Interests, Operating Leases, Pension Funds and Net Debt, less of Equity Affiliates and Non-operating Assets. Finally, financial metrics as Revenues, EBITDA, EBIT, and Earnings Per Share are derived from the firms' latest available annual reports, as used to compute the relevant valuation multiples.

[11] Goedhart M., Koller T., Wessels D. (2005). *The right role for multiples in valuation*, McKinsey

[12] An operating lease is a contract granting the right of use of an asset without transferring its ownership rights. Issued on the 13th of January 2016, the IFRS 16 abolishes the distinction between an operating lease and a financial one in the lessees' financial statements. As GAAP measures would exhibit too low EVs, the value of the leased assets shall be added back to the firm's market value of equity and debt, and the EBITDA shall be adjusted by adding the implied interest expense. For further information, see: https://www.ifrs.org/content/dam/ifrs/meetings/2019/june/iasb/ap30e-smes-review.pdf

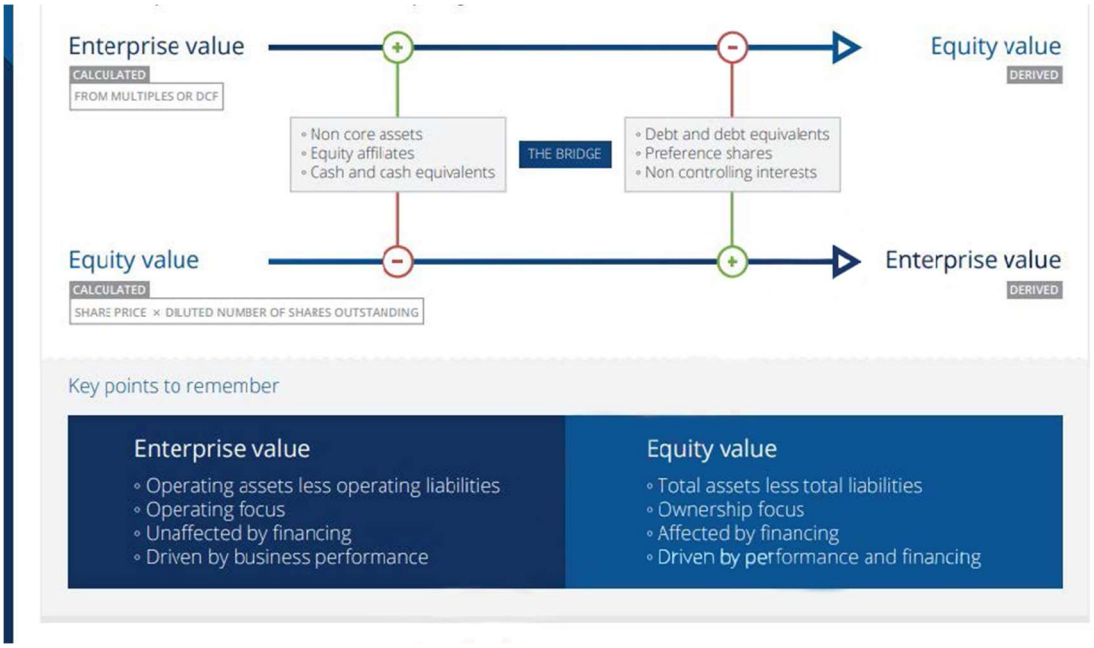

Figure 3 – An in-depth look at the 'Equity Bridge' calculations

Source: Financial Edge

The approach for drawing up a panel of Precedent Transactions Comparables is slightly different, however, due to the different nature of the companies involved. The method described, in fact, aims to analyse relationships resulting from previous extraordinary finance transactions - generally mergers and acquisitions - by looking at the price paid by the bidder to acquire a controlling position in a company. While the process seems quite straightforward, it comes indeed with some drawbacks. First, a long and complex screening process is needed to select the correct group of 'Peer Transactions': an analyst shall therefore take into consideration many parameters while searching for the information, including the firms' relevant industry, their geographical area, their size and main financial metrics for the year in which they were acquired. Second, a clear look at the bidder's nature is needed to have a clear idea about the story behind the transaction: indeed, strategic buyers' aim to exploit synergies and differentiation by acquiring a controlling stake in the target company generally results in the payment of a higher multiple, while Private Equity players' valuations are usually impacted by projections regarding the target's future capacity to repay debts[13].

[13] While strategic buyers usually finance small acquisitions by internal cash sources, Private Equity firms have access to a large amount of debt-financing which becomes key in performing a 'Leverage Buyout' and thus in enhancing the transaction's IRR. See Vild J., Zeisberger C. (2015). *Strategic Buyers vs Private Equity Buyers in an Investment Process*. INSEAD

Finally, the high presence of unlisted (or 'private') companies in the analysis of past transactions threatens to drastically reduce the amount of information available to the market: While it is indeed expensive and sometimes impossible to obtain data on the financial performance of companies operating abroad, especially in certain countries, things become even more difficult when the parties involved choose not to disclose the value of the transaction. In this sense, market intelligence services such as Refinitiv Eikon and Mergermarket have recently offered a helping hand to analysts, who would otherwise often have to forego the calculation of this multiple.

		Transaction		Valuation		
Date	Target	Value ($M)	Buyers	EV/Sales	EV/EBITDA	EV/EBIT
01/24/2017	Current Ltd	2,350	Average Limited	1.9x	9.4x	11.2x
04/19/2016	Recent Inc	6,500	Bohemeth Industires	1.4x	8.0x	12.6x
04/19/2014	Past Co	2,150	Other Group	1.3x	8.7x	12.1x
11/07/2014	Historical LLP	450	Junior Enterprises	2.3x	11.1x	13.6x
11/01/2012	Old Group	325	Minature Company	5.1x	18.8x	21.5x
10/07/2011	Dated Enterprises	150	Micro Partners	2.1x	9.3x	13.2x
Average				**2.3x**	**10.9x**	**14.0x**
Median				**2.0x**	**9.4x**	**12.9x**

Figure 4 – An example of Precedent Transactions Analysis

Source: Streetofwalls

1.2 The Weighted Average Cost of Capital ("WACC")

After having defined the three main valuation methodologies available to each investor who is approaching the demanding task of estimating a firm's value, we will now dive more deeply into the direct approach defined before to provide a first theoretical standard for the calculation of a company's Cost of Capital.

As introduced in the first subchapter, when talking about the Discounted Cash Flow model, the choice of a correct discount rate is key to apply the time value of money law correctly and, therefore, to arrive at the ultimate estimation of an investment's present value. One of the first lessons that a corporate finance student should learn in their early days is indeed that any use of capital represents an opportunity cost to investors: the rationale behind this idea is that, by devoting some funds to a given investment opportunity, those funds cannot yield some other return on another investment with equal risk.

Therefore, a correct measure of a firm's cost of capital is key to provide a correct benchmark against alternative capital markets alternatives: ultimately, a firm is able to create value for investors only by aiming for the generation of abnormal profits, and thus performing above its cost of capital. Given that the Unlevered Cash Flow is the most adopted method to perform a DCF valuation, as it enables analysts to value a company as a whole, both of the entity's financing sources – Equity and Debt – must be taken into account in the discounting process. To solve this task, UFCFs are divided by a mixed form of discount rate: the Weighted Average Cost of Capital (or "WACC"), which is usually made of two components: i) the Cost of Equity and ii) the Costs of Debt and Preferred Stock. In the next paragraphs, we will deal with these two sections separately to analyse the computations required to estimate them; finally, we will express a theoretical formula for the WACC, which will provide the main discussion point for the survey's findings.

Cost of Equity

A firm's Cost of Equity represents the rate of return that its equity investors are paid off and it is estimated via the application of the Capital Asset Pricing Model (or "CAPM"), which aims to evaluate a security's expected return by considering the amount of risk an investor is willing to face in the phase of underwriting such an investment opportunity. The main idea behind the CAPM's findings is that there exists some kind of risk called 'Systematic Risk' which cannot be offset by diversification and thus requires investors to be compensated by a 'Risk Premium': the higher the systematic risk connected to the security, the larger the magnitude of the premia offered by the firm who has issued it.

Mathematically, a firm's Cost of Equity can be expressed in this form:

$$K_e = R_f + \beta(R_m - R_f)$$

Where:

R_f is the return that an investor can earn by investing in a risk-free security ("Risk-free rate"). While no asset can generally prove to be risk-free in its entirety, most financial analysts adopt government securities as a proxy to estimate such a return, with a constant debate concerning the duration of them.

R_m is the return of the market portfolio, which can be determined by targeting an appropriate market benchmark on the basis of the target's historical returns: commonly accepted choices

are the ones regarding index funds of exchange traded funds (or "ETFs"), which usually include the entirety or at least a portion of the stocks in the S&P500.

β Is a measure of the overall sensitivity of a security to systematic risk relative to the market and can be mathematically expressed as the percentage change in the security's return after a change in the market benchmark.

For any asset i, Beta is computed as: $\beta_i = \frac{Cov(R_i,R_m)}{Var(R_i,R_m)}$

In the process of estimating a firm's cost of equity using the CAPM, analysts use the Levered Beta (or "Equity Beta"), a measure that include the effects of capital structure on a firm's exposure to risk; the rationale behind this practice is that a higher amount of debt financing – and thus a higher Debt-to-Equity (or "D/E") ratio comes with a higher risk of default for equity investors, who will get paid after debt holders and thus face the opportunity of getting left with a zero payback. Since the concept of relative valuation is more than recurrent in corporate finance, investment analysts are often asked to compare the beta of a company with those of a group of peers, which might - of necessity - express different capital structures from it. To overcome this gap, Professor Robert Hamada[14] developed an equation which lays its foundations on some of Modigliani-Miller Theorem's assumptions[15], and aims to compare a levered company to its ideal, unlevered counterpart.

Mathematically, the Hamada equation can be derived as: $\beta_L = \beta_U(1 + (1 - T)\left(\frac{D}{E}\right))$

Where:

β_L is the firm's Levered Beta

β_U is its unlevered equivalent

T is the firm's tax rate

$\frac{D}{E}$ represents its Debt-to-Equity ratio.

[14] Hamada, R. S. (1972). The Effect of the Firm's Capital Structure on the Systematic Risk of Common Stocks. The Journal of Finance, 27(2), 435–452

[15] The Modigliani-Miller theorem states that within an efficient market and in the absence of taxes, bankruptcy costs, agency costs and asymmetric information, a firm's value is unaffected by its capital structure decisions. For further information see Modigliani, F., & Miller, M. H. (1958). *The Cost of Capital, Corporation Finance and the Theory of Investment*. The American Economic Review, 48(3), 261–297.

Cost of Debt

By referring to a firm's 'Cost of Debt,' an analyst is willing to identify *the cost of capital that a firm must pay on its debt*[16] and thus the expected return required by its creditors. To ease the understanding of this definition, we start by considering a one-year bond with a yield to maturity of γ, with a probability of default of ρ and a consequent expected yearly loss of L. The expected return of the so-defined bond, will therefore be:

$$r_d = (1-\rho)\gamma + \rho(\gamma - L) = \gamma - \rho L$$

Therefore, a firm's bond holders' expected return can theoretically be expressed as the difference of its yield to maturity and the expected loss rate weighted by the bond's probability of default.

However, correctly estimating the annual interest on this bond is not the most correct definition of a company's cost of debt. The main reason behind this conclusion lies in the fact that the process of pricing debt is the result of a contract negotiated in the past, which necessarily leads to a different result from what a company would face in the present time if it were to raise debt in the credit markets. As the fundamental idea behind Discounted Cash Flow analysis is in fact that investment opportunities must be valued by discounting future earnings at the present date, the target's cost of debt should reflect its present credit profile, and thus would require a different estimation. A more accurate approximation of a company's current interest rate can be provided by its yield to maturity, which refers to the bond's internal rate of return (or "IRR"); while the nominal interest rate on debt is indeed a historical figure as mentioned above, the latter calculation accounts for a more up-to-date measure, as it can be calculated on a daily basis.

In practice, the most reliable source to find the market-based yield is the Bloomberg terminal, with two values – the Bond Equivalent Yield (or "BEY") and the Effective Annual Yield (or "EAY") – available: the former being an annualized version of the yield which incorporates compounding, the latter an annualization of a bond's semi-annual yield consisting in its mere doubling. While the two formulas may differ in theory, the two approaches are in practice very similar in their results, to the point that one is considered equivalent to the other in most cases.

[16] Berk J., DeMarzo P. (2020). *Corporate Finance* 5th edition, Ch. 12 Par. 4 *The Debt Cost of Capital* pp. 453-455. Pearson

In the presence of privately owned companies, however, the analyst's task requires a number of different practices to compute a reasonable cost of debt. If the target firm does not have any public debt, one of the most common approaches is the one requiring the addition of some default spread associated with a comparable credit rating to the risk-free rate. For all firms that choose not to get rated – a category in which most private businesses fall into – two alternatives are possible:

i) As most non-rated firms still borrow money from banks or other financial institutions, an analyst can use the default spreads that have been charged to the firm in its recent borrowings and therefore calculate a form of cost of debt

ii) A 'Synthetic Rating' can be assigned to a firm by analysing its Interest Coverage ratio, which is expressed mathematically as EBIT/Interest Expense, and matching it to the one of a range of rated comparables, which is frequently updated in NYU Professor Aswath Damodaran's[17] portal.

Having concluded that searching for market-based yields from verified sources is the favourable option for most professionals, a company's Pre-Tax Cost of Debt can also be calculated manually by dividing the firm's Annual Interest Rate (often expressed as "Effective Interest Rate") by the total amount of debt in its balance sheet.

$$Pre\ tax\ Cost\ of\ Debt = \frac{Annual\ Interest\ Expense}{Total\ Debt}$$

The 'Pre-tax' phrase is not used randomly: as a matter of fact, a firm benefits from issuing debt as the payment of interest expenses as these reduce its taxable income and the consequent amount of taxes due.

Such a benefit is translated into a Tax Shield, which can be expressed as:

$$Interest\ Tax\ Shield = Interest\ Expense * Tax\ Rate$$

In the calculation of a firm's Weighted Average Cost of Capital, therefore, analysts use an After-Tax version of the Cost of Debt formula:

$$After\ tax\ Cost\ of\ Debt = Pre\ tax\ Cost\ of\ Debt * (1 - Tax\ Rate)$$

[17] See Damodaran A. *Estimating a synthetic rating and cost of debt* at https://pages.stern.nyu.edu/~adamodar/New_Home_Page/valquestions/syntrating.htm

Is 'Textbook Economics' correct about the WACC estimation?

Having correctly defined two frameworks to compute a company's cost of capital analysing both its main financing sources – equity and debt – we can now provide an enunciation of a standard formula for the calculation of the firm's Weighted Average Cost of Capital, which would ultimately serve as a discount rate in its valuation process.

Mathematically, a firm's WACC can be written as:

$$WACC = (W_D(1-T)K_D) + (W_P K_P) + (W_E K_E)$$

Where:

K_i is the component i's cost of capital

W_i is the weight of the component i as a percent of the total capital available

T is the marginal corporate tax rate

Alongside equity and debt financing, the formula written above also takes Preferred Stock into account as a separate component of its capital structure, and the same is usually done with other 'hybrid' forms of financing. In contrast to common stocks, holders of preferred stocks have limited power over the corporate governance of the company whose shares they hold but benefit from a prior claim on assets compared to common stockholders. However, though being considered a more senior form of investment than the one represented by common stocks, preferred stocks still follow all types of debt instruments – regardless of their risk profile – and the dividends paid on them are not tax-deductible.

A firm's cost of preferred stock can be calculated as follows:

$$Cost\ of\ preferred\ stock_t = \frac{Preferred\ Stock\ Dividend\ Per\ Share_{t+1}}{Current\ Price\ of\ Preferred\ Stock} + g$$

With g being the expected dividend growth rate, which is assumed to be perpetual as seen before in the Dividend Discount Model.

While the WACC's formula might seem straightforward, its definition must be correctly understood to avoid getting caught into several errors that most analysts when asked to perform a valuation. In this sense, IESE Professor Pablo Fernández[18] examined the most common errors that affect most WACC calculations in the financial industry and started his argument from a key observation on the measure's formula.

[18] Fernandez, Pablo. (2013). *WACC: Definition, Misconceptions and Errors*. SSRN Electronic Journal. 29.

Rather than a pure measure of a 'Cost of Capital', the WACC shall be considered *a weighted average of a cost and a required return*. As a matter of fact, while the debt component K_D of the formula is evaluated as a cost measure, its equity counterpart K_E is instead a required return, even though most professionals ignore this difference. Alongside definition errors, the Spanish scholar identifies several other potential errors underlying the practical evaluation of the WACC. First, the correct tax rate T should be the one relating a firm's yearly Levered Free Cash Flow to its Unlevered counterpart[19], as a change in its evaluation methodology may seriously impede the result. Secondly, there is a growing debate regarding the weights of debt, equity, and existing hybrid forms of financing. In one of the finest works regarding the asymmetries among financial professionals in the estimation of the WACC, R. Brunner. K. M. Eades, R. S. Harris and R. C. Higgins[20] tackled the duality between book and target values with a certain clarity. The analysis' finding was that, even though *debt and equity costs clearly depend on the proportion of each employed*, *if the firm's target weights are publicly known, and if investors expect the firm soon to move these weights, then observed costs of debt and equity may anticipate the target capital structure*.

Finally, a few one-spot errors are likely to arise when particular, nearly unrepeatable investment opportunities are brought to the analysts' attention. One of the instances mentioned by Professor Fernández is the one where the valuation team assumes a capital structure which is neither the firm's current one nor the forecast or, more frequently, when a firm is expected to change its capital structure during the valuation period. In this case, a correct analysis would be the one relying on a variable WACC, tailored to each year's capital structure, with the current debt deducted from the firm's Enterprise Value. Apart from the cases mentioned above, certain projects are by definition harder to value and therefore require some specific adjustments which are usually passed down by word of mouth by industry experts to junior analysts: valuation of large Telecommunication, Media, and Technology (or "TMT") and Infrastructure corporates, for instance, usually requires an accurate partition into several, complex business units, each with its own valuation peculiarities. Eventually, the debate on the simplicity of valuation becomes even more topical in cases as the ones described, where the risks of input-fatigue errors, theoretical misconceptions, and too rough approximations are likely to lead to the drafting of a 'Black-box Model', whose results may be very hard to validate.

[19] A common equation relating a company's Levered Free Cash Flow to its Unlevered counterpart is the one adding the increase in debt ΔD_t to the firm's $UFCF_t$ before subtracting the interest paid $I_t(1-T)$. Mathematically: $LFCF_t = UFCF_t + \Delta D_t - I_t(1-T)$

[20] Bruner R.F., Eades K. M., Harris R. S., Higgins R. C. (1998). *Best Practices in Estimating the Cost of Capital: Survey and Synthesis.* Financial Practice and Education. 8. p. 3

2. THE SAMPLE OBJECT OF THE ANALYSIS

2.1 The Role of Investment Banks in Mergers & Acquisitions

After having defined the main rules and formulae that will serve us as theoretical frameworks in the analysis of this thesis' objective, this chapter aims to characterise the sample under investigation and provide readers with the right context about its composition and the selection methods used. In the first sub-chapter, the focus will converge on the first portion of the interviewed population: investment banking professionals. Analysing the practices most frequently used by financial advisors in extraordinary finance transactions, in fact, is perhaps the most appropriate way to confirm or refute academic dictates on company valuation: it is precisely these companies that are, indeed, often in charge of estimating the true value of a business and are par excellence the players that are most exposed to different industries and companies, each with its own competitive and regulatory peculiarities. Specifically, an overview of the main services offered by investment banks will be given in the first paragraph, which will - among other things - clarify the now well-known dualism between "Investment Banks" and "Investment Banking Activities", in order to give a clear definition of the scope of our analysis. Space will also be given to a general narration of the main historical events that have characterised the development of this sector within financial services, starting from the global scale and ending in the national one. Subsequently, the second paragraph will introduce the first steps of advisory in the field of mergers and acquisitions in the Italian market, addressing the difficult question as to why the hiring of financial advisors in restructuring transactions has gained so much popularity over the decades. Finally, one of the leading academic sources on the subject will be presented, which will attempt to investigate the reasons why companies hire an investment bank as an advisor in an acquisition, developing a theoretical framework for decision-making on the matter.

Investment Banking Services: An Historical Overview

The beforementioned selection of valuation techniques provides investors with a broad portfolio of general techniques, which can be tailored to each single investment opportunity. Ultimately, the application of such a process will yield to a result assessing the intrinsic value of a security, implying a long or short opportunity based on the comparison with the latest price assigned in the stock market.

However, the play's tale becomes far more complex and intricated when we change the actors involved by moving from a retail to a wholesale finance environment. While value investing and fundamental analysis are still common among all players seeking for a profit in the stock market, the most complex and perhaps meaningful part of the 'art' of valuation is the one done by industrial clients, in the event of a corporate finance transaction. The phrase 'Extraordinary Finance', which is very common among Italian scholars, seeks to target a broad ensemble of all those *corporate operations which require the use of forms of financing other than those ordinarily used*[21], and thus require a particular set of skills, knowledge, and capabilities which are usually performed by dedicated teams of financial advisors. Within all extraordinary finance transactions, those that by definition have corporate valuation as their focal point are those defined under the clause 'Mergers & Acquisitions', probably the best *catch-all phrase for the purchase, sale, and combination of companies, their subsidiaries and assets*[22]. The reason is quite straightforward: M&As allow a firm to grow its business through a facilitated expansion, which requires the completion of an investment in another commercial entity; the extent of this growth can depend on a number of factors underlying the business acquired, including: the achievement of synergies and economies of scale, the reduction of competition, the research for forms of integration, and a number of other diversification strategies.

Although the reasons for pursuing such a route may vary, there is no doubt about the roles of the players involved in this intricated game, which comes with considerably high stakes. Both the acquirer (or the "Buy-side") and the seller (or the "Sell-side") are in fact looking to maximize the results of the transaction, which is translated into an enhanced value for all stakeholders they represent.

[21] Borsa Italiana: https://www.borsaitaliana.it/borsa/glossario/operazione-di-finanza-straordinaria.html
[22] Rosenbaum J., Pearl J. (2013). *Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions*. Wiley.

In this setting, Joshua Rosenbaum, MBA, and Joshua Pearl's work is clinical in introducing a third group of players – Investment Bankers – whose purpose is to provide the *extensive analysis, planning, resources, expense, and expertise* to perform the deal in a proper way. While Boards of Directors take the strategic lead of the action, therefore, there is a dedicated team of Financial Advisors who are taking care on the deal's key issues, such as *valuation, financing, deal structure, process, timing, and tactics*.

Having introduced investment bankers as the main holders of valuation expertise in extraordinary finance transactions, it is advisable to spend some time to provide the best possible definition for these actors. Notwithstanding the fact that most financial training portals and textbooks provide the curious with a range of different explanations for the expression, there is a certain amount of confusion about the activities it actually indicates. In a sea of turmoil, LUISS Business School Professor Massimo Bello, MBA's work in the late 1990s[23] still represents one of the finest attempts concerning the matter, in one of the few academic publications addressing the characteristics and historical developments of corporate finance advisory in Italy. For the Italian scholar, a clear distinction between *'Investment Banking activities'* and *'Investment Banks'* must be done before diving deep into the peculiarity of these business practices. Usually, the former indicates a portfolio of services provided to corporate clients, including: the raising of funds in capital markets, the assistance in the issuing of securities, the advisory of Mergers & Acquisition transactions and other financial consulting activities such as asset valuation and debt restructuring. The latter, instead, refers to a financial services company which combines the 'Investment Banking' core business with other offerings, such as project financing, investment management, private wealth management and brokering services. In the next sections, we will adopt the definitions just mentioned above, and thus refer to 'Investment Banking' as a range of services whose main provider are Investment Banks, which generally place these alongside a wide range of asset and liquidity management activities.

In defining the main developments of the Investment Banking industry, a three-stage process can be identified in the financial services market's history[24]. The first one is to be located in the first half of the nineteenth century, which is commonly thought to be the actual birthdate of capital markets advisory in the United States:

[23] Bello M. *L'Investment Banking: Descrizione dell'Attività e Caratteristiche degli Operatori*. LUISS
[24] On the history of Investment Banking, see Hayes, S. L. & Hubbard, P. M. (1990). *Investment banking: A tale of three cities*. Harvard Business School Press.

in this phase, Investment Banks established themselves as the leading experts in 'underwriting' activities, including issuing funds in the capital markets and finding investors for the above. As the twentieth century came, 'brokering' activities entered the market, with market making solutions and mutual funds being offered alongside private wealth management services tailored to high-net-worth clients. To see underwriting activities leave their place as the core business for investment banks, however, we must wait until the middle of the century, after the Great Depression hit the world market. In this final stage of 'Industrial Restructuring', corporate finance transactions saw a steady growth momentum: this is where Mergers & Acquisitions emerged as a primary growth strategy, giving rise to genuine consolidation trends destined to endure over time and – probably - to change the collective conception of the investment banker forever.

M&A's First Steps in Italy: The Choice of The Financial Advisor

For a better understanding of the starting conditions of the M&A market in Italy (or the "Nation"), it is useful to recall the words of Bocconi University Professor Valter Conca, who, in a research conducted between 1994 and 1998, managed to lay the groundwork for an early study of extraordinary finance transactions, in a nation hitherto characterized by a possibly illiquid stock market and a low aversion to the assignment of mandates to specialized advisors. The Italian (or "National") market for Mergers & Acquisitions, therefore, was defined as a *still immature, highly fragmented, and non-transparent*[25] one.

In the late 20th century, as a matter of fact, the National demand for Mergers & Acquisitions services was still much less developed than today's, with most companies performing all the required valuation matters in-house, mainly through Book Value or other less sophisticated accounting-based methods. The rationale behind this is to be found in the in the distinctly local nature of Italian industry at the time, with small and medium-sized enterprises (or "SMEs") accounting for most of the market. In 1994, for instance, a survey on a sample of Italian firms with more than 50 employees in the origination process of an M&A transaction yield the result that nearly half of the buy-side or sell-side companies would not appoint any financial advisor for the process.

[25] Conca V. (2000). *Il mercato delle acquisizioni e delle fusioni in Italia. Le motivazioni, i settori, i prezzi pagati.* Rivista Direzione Aziendale, Economia & Management, SDA Bocconi, n.6

While this finding might sound surprising, a second glance at a broader time period, such as the one encompassing the five years from 1991 to 1995, shows that an advisor was hired in 20% of the transactions, up to only 11.8% when both the buying and the selling companies had recorded revenues for less than £1.000mld[26].

A rapid analysis of the data just presented leads us to immediately conclude one thing above all else: several sociological and financial characteristics of the actors involved in a corporate finance transaction affect the choice of hiring a financial advisor, and thus the nature of the transaction itself. While observing all these factors would indeed require an extensive knowledge of all the macroeconomic indicators of a nation's industrial market, corporate finance academics have been successful in producing a general framework providing at least some guidance on the matter. Among others, University of North Carolina at Chapel Hill Professors Henri Servaes and Marc Zenner[27] provided us with a rigorous analysis of the importance of Investment Banks in M&A transactions, focusing on the differences that characterize advisor-mediated versus non-advisor-mediated transactions. To do so, the two scholars examined 99 acquisitions occurred between 1981 and 1992 when an Investment Bank wasn't hired neither by the bidder nor by the seller and compared them with an alternative sample comprising only mediated transactions. In their analysis, Servaes and Zenner investigated three hypotheses, each containing several coherent proxy variables to be tested:

I. The *Transaction Costs Hypothesis* posits that *investment banks can analyse acquisitions at a lower cost than other firms*. As a matter of fact, the said financial intermediaries' main expertise is to *identify takeover targets, value them, and put together a bid at a lower cost than individual firms*. To capture transaction costs, the authors use two sets of variables:
    a. The *Complexity of the Transaction* is higher in all those deals that require hostile takeovers or bidding wars, and those which require a mixed consideration consisting, for instance, of cash and equity.
    b. A higher *Acquiror's prior acquisition experience* is related to lower transaction costs, instead: experienced buyers are indeed more likely to exhibit in-house, well-structured M&A groups, whose fixed costs can be spread over multiple transactions over time.

[26] *Autorità Garante Conc. E Mer. e Banca d'Italia (1998)*. For further reference, see Bello M. *L'Investment Banking: Descrizione dell'Attività e Caratteristiche degli Operatori*. LUISS. p. 26
[27] Servaes H. & Zenner M. (1996). *The Role of Investment Banks in Acquisitions*. The Review of Financial Studies Fal 1996. Vol. 9. No. 3. pp. 787-815.

II. The *Asymmetric Information Hypothesis* states that the need for Investment Banking services is likely to be higher the larger is the information asymmetry between the acquiror and the target. To test for asymmetric information, the authors used four proxies:
   a. *Industry relatedness*
   b. *The Type of the Acquisition*, which can either be i) *a complete takeover*, ii) *an acquisition of assets*, iii) *an acquisition of a partial ownership interest*
   c. *The number of industries in which the target operates*
   d. *Whether or not the eventual acquiror was the first bidder*

III. The *Contracting Costs Hypothesis* states that *investments banks reduce agency costs in the acquiring firm when they certify the value of an acquisition*. Since the perception of an Investment Bank's quality of advice is crucial for its recognition among experts, a company should be better off if a financial intermediary – which is liable for any error in the valuation of the company, similarly to what happens in IPOs[28]. To measure the bidding firm's demand for monitoring services, Servaes and Zenner chose two proxy variables:
   a. The larger the *Ownership in acquiring firms by corporate insiders*, the lesser the potential *to embark on value reducing corporate acquisitions*, thus diminishing the need for monitoring services
   b. The higher the *Percentage of independent outside directors on the Board of Directors*, the lesser the need for any of Investment Bank's monitoring services, as the arbitration task is performed by the independent directors themselves[29].

Even after some decades, Servaes & Zenner's analysis is still very meaningful for any corporate finance scholar and its findings provide us with one of if not the most accurate overview of the factors that influenced the growing trend which characterized the presence of Investment Banks as M&A advisors in the past years.

[28] In the process of an Initial Public Offering, which is usually performed by Investment Bank's Equity Capital Markets teams, a failure to correctly under-price the advised company's stock on the market would seriously harm the bank's reputation and potentially lead to a consistent loss in market share.

[29] Another finding of Servaes & Zenner's analysis is that those boards which exhibit a high presence of outsiders may request a *Fairness Opinion* of an Investment Bank to protect themselves from shareholder lawsuits. While this possibility seems to suggest that the use of investment banking advice could rise when more outside directors are represented on Boards, *Fairness Opinion* services are typically regarded as a different and independent service than those of origination, negotiation, and valuation which are typically offered to the bidder or the seller in such an operation. Therefore, this possibility should be analysed in a separate analysis and does not impact the paper's findings.

Overall, the authors found evidence to support the three hypotheses mentioned before and concluded that:

I. Consistent with the *Transaction Costs Hypothesis*, firms acting as bidders are more likely to hire an Investment Bank when they have less prior acquisition experience and when they are engaging in more complex form of transaction.
II. Consistent with the *Asymmetric Information Hypothesis*, Investment Banks are more likely to be hired in the acquisition process of a company operating in a different industry than that of the bidder.
III. Consistent with the *Contracting Costs Hypothesis*, Investment Banks are more likely to be hired as buy-side advisors by firms showing lower degrees of insider ownership, and – in any case – the intervention of the said financial intermediary is favourable here publicly traded companies are being taken over.

Finally, the paper addressed the question about the quality of the Investment Bank to be hired for an acquisition, in order to find some evidence behind the choice of a 'First-tier' advisor versus a 'Second-tier' one. To address this task, the authors estimated three models checking: i) the likelihood of a choice in favour of a first-tier bank v. a second-tier one, ii) transactions advised by a first-tier Investment Bank v. the ones performed by in-house teams, iii) transactions advised by a second-tier Investment Bank v. the ones performed by in-house teams.

While the analysis finds evidence that only transaction costs have a meaningful impact on the choice of a first-tier advisor versus a second-tier one, in the end it is interesting to have a glance to the results of each model:

I. First-tier advisors are more likely to be preferred to second-tier ones only when firms with little to no acquisition experience engage in large takeovers, rather than middle market or minority stake-driven transactions
II. While the size or the type of the transaction does not affect the choice of a second-tier advisor versus an in-house team, it does affect the one between in-house teams and first-tier investment banks

2.2 Recent Developments in the Italian M&A Market

Having defined the main theoretical foundations on the role of Investment Banks in Mergers & Acquisitions, this last subchapter aims to continue the analysis of the Italian M&A market by addressing the last decades, trying to identify the main growth trends and the most relevant consolidation indices in the National market. It is in this section that, ultimately, we will observe the operators that have grabbed the majority of the market in the different historical periods: the data collected, together with the evaluations expressed by academia and study centres of leading consulting firms, will serve to provide us with the right evidence for the composition of the sample, which will be presented in the third chapter.

The first paragraph will give an overview of the Italian M&A market in the years between the end of the 20th century and the beginning of the current one, which proved to be fundamental in shaping the industry as it is now. After identifying two macro phases within the indicated period, the main trends of the Italian corporate finance world will be analysed in conjunction with primary economic and political events of recent history, touching - among others - on the adoption of the single currency, the season of privatisation, and the main phases of economic crisis occurred during the observed period.

Finally, the second paragraph will analyse market developments over the past three years, thus touching on the pandemic from COVID-19, the merger wave of 2021, and signs of contraction in early 2022. Space will also be given at this stage to an overview of the major transactions that have changed the horizons of the Italian industry, along with the financial advisors who have made these possible.

The Dawn of the 21st Century: An Era of Structural Change

According to a KPMG Corporate Finance study[30], the Italian market for Mergers & Acquisitions has experienced a two-stage evolution process, which were each one heavily influenced by the main macroeconomic and political trends of the Nation during the current years. The first period, which runs from 1988 to 1998, is connected to the grand privatisation plan undertaken by the Italian Government in 1992, involving some 30 companies from its inception until 2005[31], and to the first appearances of private equity firms to the Italian *middle market* industry.

[30] KPMG (2010). *20 Anni di M&A. Fusioni e Acquisizioni in Italia dal 1998 al 2010. Egea*
[31] For further information, see *Le privatizzazioni avviate negli anni Novanta*, available at https://www.dt.mef.gov.it/it/attivita_istituzionali/partecipazioni/privatizzazioni/privatizzazioni_avviate/

The second one, concerning the first decade of the 21st century, is the result of a combination of several, unique historical events, such as the adoption of the Euro as a domestic currency and the strong globalisation processes preceding the global crisis of 2008.

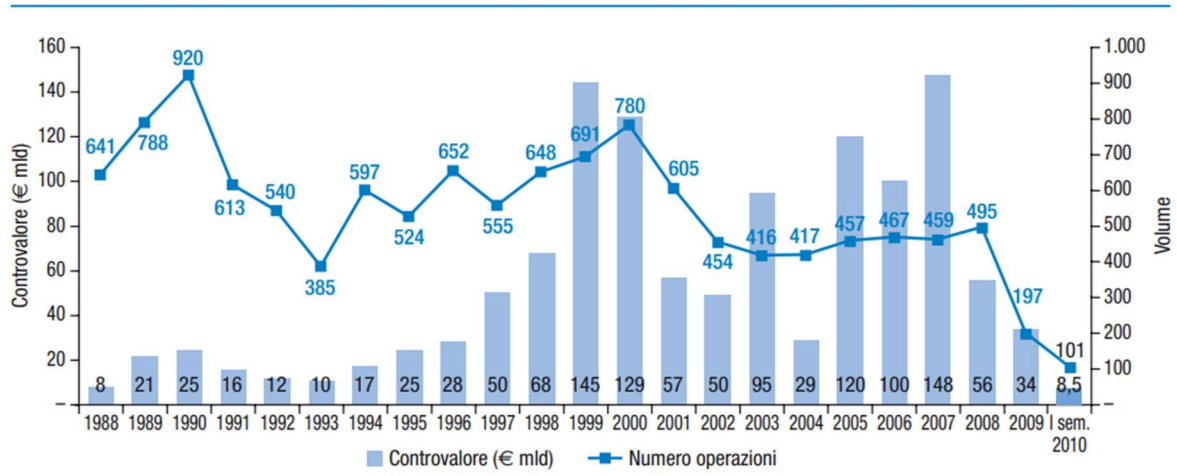

Figure 5 - The Italian M&A Market: Deal Value and Number of Transactions in the 1998-2010 period. Source: KPMG Corporate Finance

The graph above shows the relationship between the number[32] of M&A transactions occurred in Italy in the years between 1988 and 2010 and the deal value[33] of these; it is by observing this last financial measure, indeed, that we can present some data to support what has been stated before about the European integration process. While the number of transactions exhibit a constant-looking trend on the last years of the 1980s, in fact, the deal value of these skyrocketed in the same period, until the maximum point of €920 billion in 1990.

One of the main drivers behind this steady and immediate growth is the rapid change in the European Union's economic policy, which imposed on the Nation a virtuous path requiring a massive change in its public finances management.

This heyday for the Italian market is however countered by a downscaling phase in the first years of the 1990s, when foreign investors were dragged outside of the Nation by a combination of political instabilities and other macroeconomic concerns.

[32] Indicated as *Numero Operazioni* in the Italian graphs
[33] Indicated as *Controvalore* in the Italian graphs

To see an inversion of trend, we must wait until 1993, where the effects of the grand privatisation plan – including the placement of ENI, Enel, and Credito Italiano's shares on the market – and the depreciation of the Lira brought foreign investors back in a new, high-potential platform, paving the way for a prolific ground for cross-border operations. The final accession to the Euro, on January the 1st 1999, does nothing but confirm the internalisation trend of the end of the 20th century, with lower inflation and interest rates laying the foundations for the first appearances of American and British private equity firms in Italy.

After a period of consolidated growth which lasted for nearly seven years, the new millennium comes with a number of events which negatively affect the growth of Italian M&A; it is here that the *New Economy Bubble* and the aftermath of 9/11 gave birth to a waning cycle lasting until 2004. A year later, in 2005, a renewed confidence in global economic conditions returns growth to positive trends, with some impressive 300 Cross Border M&A transactions undertaken by Italian companies in a timeframe of large liquidity and low interest rates, with private equity firms acting as the protagonists of the national market. Finally, the major downturn phase can be easily identified in conjunction with the *Great Recession*, and thus in between 2008 and the first semester of 2010. At this juncture, M&A activity sees a real downsizing process, with a decrease in deal value from €148 billion to €56 billion, and a consequent reduction in the number of transactions – from 495 to 197 – in 2009. In this last phase, Cross Border deals diminished in volume and domestic companies take on a more risk-adverse attitude, favouring transactions within their national borders and preferring targets operating in the same market or similar industries: the subprime crises opens the doors to a new form of corporate finance advisory, focusing on the restructuring needs of the firms' debt rather than engaging in growth-driven M&A transactions.

In this geopolitical setting, there is far less room for complex merger transactions involving actors of similar size and a predilection towards low-deal value acquisitions undertaken by bigger buy-side companies on smaller targets.

Moreover, the above movements are usually part of larger consolidation plans followed by well-structured corporate groups and, usually, with proven track records of similar transactions. These trends, together with a general sense of risk appetite as a means of rapid recovery from the crisis period, actually lay the groundwork for that a new wave of the M&A phenomenon in the Italian country.

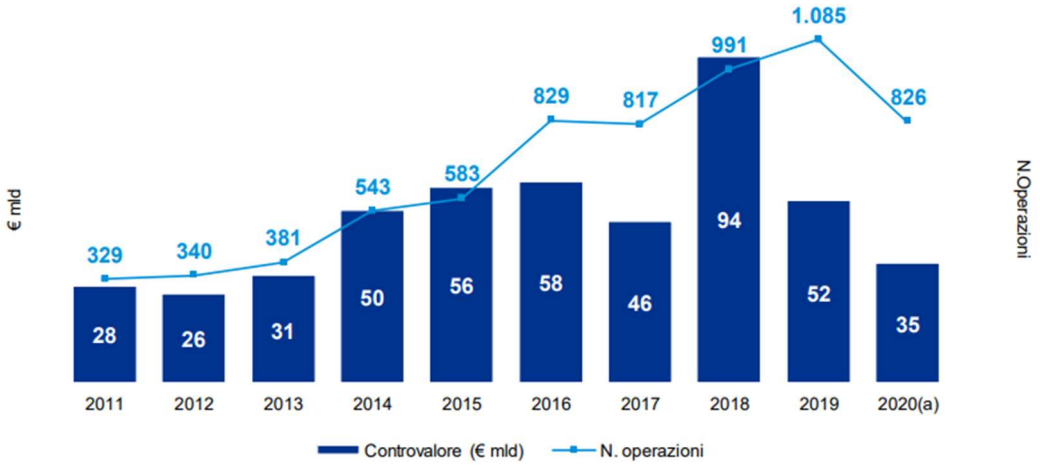

Figure 6 - The Italian M&A Market: Deal Value and Number of Transaction in the 2011-2020 period. Source: KPMG Corporate Finance

The above graph shows the main trends impacting the Italian market for Mergers & Acquisitions in the second decade of the 21st century, starting in 2011 and ending in 2020. A first glance at the graphical representation provided by the financial services giant KPMG[34] can yield to two main takeaways:

i) Except for the year 2017, the number of M&A transactions undergoes a positive trend of constant growth between 2011 and 2019 with a record in this last year, which exhibits some impressive 1,085 deals undertaken by Italian companies

ii) In terms of deal value, the growth trend is interrupted by some decreasing episodes, such as the one occurred in 2012, 2019, and 2020, alongside the already mentioned year 2017; the record figure is represented by the €94 billion registered in 2018.

2020s: Main Actors and Market Trends

As the new decade begins, Italy is the first European territory to come to terms with the COVID-19 pandemic (or "the pandemic") and its subsequent implications. Government actions to contain the emergency, in fact, force the closure of all non-essential economic activities located in the national territory, to contain the skyrocketing number of contagions and the consequent pressure on the national health system.

[34] KPMG (2021). *Mercato M&A in Italia nel 2020: Il Rapporto KPMG*

In order to address this complex economic and social crisis, governments and central banks take action by implementing some unprecedented aid measures to support households, local governments, and those firms which have been forced to stop their operations in compliance with the lockdowns imposed by the most recent decrees of the Prime Minister's office.

In this socio-economic setting, Italy's M&A activity faces a highly complex period, recording a downturn to €35 billion in deal value in the 826 transactions closed within January and December 2020. While foreign investments in National companies were close to €18 billion in 2019, the measure dropped to one-third of this value after the outbreak, with no incoming transaction to exceed 1 billion euros. Within the Industrials sector, a notable transaction is that concerning the takeover of nanotechnology-focused company MolMed by Japan's AGC, along with the transfer of Vicenza-based LAICA into the hands of the British Strix Group for €31 million. In terms of deal value, an inverse trend concerns those transactions undertaken by Italian bidders and targets, with a +18% increase from a starting measure of €13 billion in 2019; of these 480 transactions – a decreasing statistic when compared to the 571 in 2019 – the most relevant ones concern the financial services industry, such as the notorious acquisition of UBI Banca by Intesa Sanpaolo for an approximate €4 billion. If financial services is the nation's top sector in terms of countervalue, the consumer goods market remains at the top of the list in terms of the number of transactions conducted: 242 in the year 2020. Also strong is the activity of Italian industrial families, with Gi Group, FILA Fabbrica Italiana Lapis and the Campari group involved in a series of acquisitions both in Italy and abroad. Finally, positive signs also come from a range of other sectors, starting from the publishing field, and ending in the energy market, with the Agnelli family responsible for the purchase of a majority stake in the GEDI group and SNAM entering the share capital of OLT Offshore Toscana S.p.a. with a 49.07% participation.

A list of the top 20 M&A transactions in Italy in 2020, compiled by KPMG, is included on the following page

Top 20 M&A Italia 2020 [a]							
	Dir.	Target	Naz.T.	Bidder	Naz. B	%	€ mln
1	I/E	Vodafone Towers S.r.l.	UK	INWIT Infrastrutture Wireless Italiane S.p.A.	Italia	100%	5.300
2	I/I	UBI Banca S.p.A.	Italia	Intesa Sanpaolo S.p.A.	Italia	100%	4.017
3	I/I	Supermarkets Italiani S.p.A.	Italia	Giuliana Albera Caprotti e Marina Caprotti (tramite Unione Fiduciaria S.p.A.)	Italia	30%	1.830
4	E/I	INWIT Infrastrutture Wireless Italiane S.p.A.	Italia	Impulse Sarl (Ardian)	Francia	14,8%	1.600
5	I/E	Red de Carreteras de Occidente (RCO)[b]	USA (Messico)	Abertis Infraestructuras	Italia	51,3%	1.500
6	E/I	Intesa Sanpaolo S.p.A. (ramo azienda acquiring)	Italia	Nexi S.p.A.	USA	100%	1.000
7	I/I	Banca Popolare di Bari in AS	Italia	Fondo Interbancario di Tutela dei Depositi e Banca del Mezzogiorno (53,4%), MedioCredito Centrale S.p.A. (45,58%)	Italia	98,98%	933
8	I/I	Enel Américas S.A.	Italia	Enel S.p.A.	Italia	7,7%	914
9	I/E	Omtel, Estruturas de Comunicaçoes, S.A. (OMTEL, Portugal -3.000 torri)	Spagna	Cellnex (Gruppo Edizione)	Italia	100%	870
10	I/I	INWIT Infrastrutture Wireless Italiane S.p.A.	Italia	Mercato	Italia	8,6%	801
11	I/E	Nexi S.p.A.	USA	Mercato	Italia	8,8%	781
12	I/E	Renovalia Energy SA[c]	USA (Spagna)	EF Solare Italia S.r.l.	Italia	100%	700
13	I/E	Nexi S.p.A.	USA	Intesa Sanpaolo S.p.A.	Italia	9,9%	653
14	I/E	Stemline Therapeutics Inc	USA	A. Menarini Industrie Farmaceutiche Riunite Srl	Italia	100%	600
15	I/E	The Dedica Anthology Portfolio (Värde Partners)	USA	Covivio Hotels SCA	Italia	100%	573
16	I/I	GVS S.p.A.	Italia	Mercato IPO MTA	Italia	40%	571
17	I/E	Seguradoras Unidas[d]	USA (Portogallo)	Assicurazioni Generali S.p.A.	Italia	100%	510
18	I/I	I.M.A. Industria Macchine Automatiche S.p.A.	Italia	IMA BidCo S.p.A.	Italia	15,1%	443
19	I/I	La Villata S.p.A. Società Immobiliare	Italia	Unicredit S.p.A.	Italia	32,5%	435
20	I/I	OLT Offshore LNG Toscana S.p.A.	Italia	Snam S.p.A.	Italia	49,1%	332
Totale TOP 20						**€ mln**	**24.362**
%							*70,5%*
Totale 2020						**€ mln**	**34.537**

Figure 7 - The Italian M&A Market: A List of the Top 20 Italian M&A Transactions Occurred in 2020[35] by Deal Value. Source: KPMG Corporate Finance

After a period of high uncertainty, influenced by all the immediate consequences of the pandemic crisis, in 2021 the Italian market experiences a true record year, recording 1,165 deals for a deal value of 98 billion euros. Following a year of *severe sectorial impacts, worsening of public debt, impoverishment of the society*, some drivers – according to Italian auditing company Nexia Audirevi[36] - have helped to create a fertile ground for a rapid recovery: i) the huge amount of liquidity available to back acquisitions at record-low interest rates, ii) the unprecedented public incentives made available by governments to relaunch businesses, iii) the loosening on the regulatory profile from the possibility of high regulation that frightened businesses before the Pandemic outbreak, iv) the rising interest for ESG topics and the consequent opportunities *to build solutions at scale and propose a greener energy*.

[35] For the 12 months ended on 18th December 2020
[36] See Audirevi (2021). *La settima grande "Merger Wave" è qui. L'attuale boom dell'M&A è solo l'inizio*. Audirevi TALKS (About Economy) 2.0. at https://www.audirevi.it/audirevi-talks-about-economy-2-0-la-settima-grande-merger-wave-e-qui/

In this scenario, the global M&A market posts double-digit increases, with +47% in deal value and +31% in volume compared to 2020. This global growth trend, which affects all geographic areas of the globe, finds its peak in the Americas, with +60% in deal value and +39% in volume, while Europe follows with growths of +57% and +38%, respectively. In a period of recovery for corporate finance transactions, cross-border deals regain their popularity, with growth rates so high as to record increases in deal value and volume of +80% and +45%: it is also a good spell for Italian assets, attracting foreign capital in as many as 348 deals for €16.8 billion in deal value. On the other side, Italian buy-side activity on foreign targets is even more striking, with 200 deals for €56 billion in deal value, accounting for 57% of the overall market. Driving the great upswing in cross-border M&A are the mega-deals, including - in addition to the famous Stellantis deal, which alone recorded a deal value of €20 billion - EssilorLuxottica's acquisition of GrandVision for €7.2 billion and the five deals completed by Cellnex for approximately €12.5 billion.

M&A in Italia nel 2021: le prime 10 operazioni per controvalore

	Direzione	Macro Settore T.	Target	Quotata	Naz.T	Macro Settore B.	Bidder	Quotata	Naz. B	Quota (%)	€ mld
1	I/E	Industrial Markets	PSA Peugeot-Citroen SA	si	Francia	Industrial Markets	Stellantis NV	si	Italia	100%	19,8
2	I/E	Consumer Markets	GrandVision N.V.	si	Paesi Bassi	Consumer Markets	EssilorLuxottica	si	Italia	100%	7,2
3	I/E	Financial Services	Nets A/S	si	Danimarca	Financial Services	Nexi S.p.A.	si	Italia	100%	6,0
4	I/E	TMT	Hyvory S.a.S. (10.500 torri in Francia)	no	Francia	TMT	Cellnex Telecom SA (Edizione Srl)	si	Italia	100%	5,2
5	I/I	Financial Services	Sia S.p.A.	no	Italia	Financial Services	Nexi S.p.A.	si	Italia	100%	4,5
6	I/E	TMT	CK Hutchison Networks Italia S.p.A. (9.140 torri)	si	Cina	TMT	Cellnex Telecom SA (Edizione Srl)	si	Italia	100%	3,4
7	E/I I/I	TMT	OpEn Fiber S.p.A.	no	Italia	Private Equity	Macquarie Infrastructure & Real Assets (MIRA) Cassa Depositi e Prestiti S.p.A.	si no	Australia Italia	40% 10%	2,7
8	E/I	TMT	FiberCop S.p.A. (newco)	no	Italia	Private Equity TMT	KKR Infrastructure (37,5%) Fastweb S.p.A. (4,5%)	si no	USA Svizzera	37,5% 4,5%	2,0
9	I/I	Support Serv.& Infrastr.	ASTM S.p.A.	si	Italia	Financial Services	Naf 2 S.p.A.	no	Italia	47,6%	1,9
10	I/E	Industrial Markets	Raven Industries INC	si	USA	Industrial Markets	CNH Industrial N.V.	si	Italia	100%	1,8
Totale Top 10 nel 2021											**54,6**
Totale Mercato Italia 2021											**97,8**
% Top 10 2021 su Totale Mercato Italia											***55,8%***

Figure 8 - The Italian M&A Market: A List of the Top 10 Italian M&A Transactions Occurred in 2021[37] by Deal Value. Source: KPMG Corporate Finance

[37] For the 12 months ended on 31st December 2021

While there is strong international activity, transactions within Italian borders are nevertheless growing - 52% in countervalue and 21% in number of transactions. Of particular note, at this juncture, is the acquisition and subsequent merger of SIA into Nexi, for €4.5 billion, in addition to the numerous tender bids completed by various industrial families flanked by leading private equity operators.

In the first few months of 2021, delisting activity in the domestic market was indeed strong, balanced then by an equally significant growth in IPOs in the last quarter, which alone recorded 24 transactions compared to 25 in the previous nine months. On a sector basis, the Industrials and Consumer Goods industries recorded strong numbers, accounting for 29% and 20% of the market, compared to 5% and 11% in the previous year; the power of the TMT and Financial Services sectors, on the other hand, dropped significantly from figures of 33% and 27% in 2020. The Industrials segment, on the other hand, emerged as the leading sector, with 258 deals completed for a deal value of €28 billion.

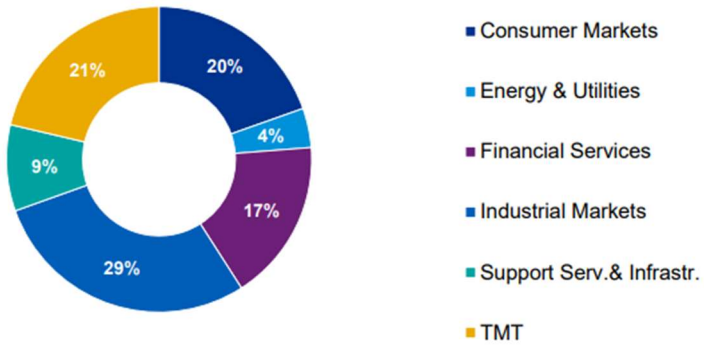

Figure 9 - The Italian M&A Market: Mergers & Acquisitions Activity in 2021 by Sector Data in € billion. Source: KPMG Corporate Finance

Following an annus mirabilis for M&A transactions in Italy, the activities of financial advisors, the primary focus of this discussion, also benefited from the high demand for their screening, sourcing, and valuation services. The usual regional league table compiled by financial intelligence giant Mergermarket, which is provided on the following page, provides an overview of the top 20 companies by deal value and volume of assisted transactions.

In this sense, it is interesting to note a certain change among the players when moving from one ranking to the other: the main reason is to be found in the focus of the large American and international investment banks on the so-called 'megadeals', with transactions involving SMEs - more numerous due to the very nature of the Italian industry - usually serviced by Big4 and national companies that can best exploit their local expertise.

Italy league table by value

Ranking			2021			2020
2021	2020	Company Name	Value (USDm)	Deal Count	% Value Change	Value (USDm)
1	6	JPMorgan	96,933	20	315.5%	23,332
2	1	Goldman Sachs & Co	90,892	14	134.6%	38,749
3	4	Mediobanca	59,289	51	142.9%	24,405
4	7	Rothschild & Co	58,389	46	157.3%	22,697
5	3	Morgan Stanley	50,801	12	97.7%	25,692
6	21	KPMG	42,653	95	692.5%	5,382
7	-	LionTree Advisors	40,092	1	-	-
8	26	UniCredit Group	33,850	21	776.9%	3,860
9	12	Bank of America	32,046	7	95.9%	16,361
10	31	Citi	30,571	8	1560.6%	1,841
11	10	Credit Suisse	30,398	7	66.3%	18,274
12	5	EQUITA S.I.M	30,018	18	26.9%	23,651
13	2	Lazard	27,739	19	6.1%	26,134
14	16	CC & Soci	22,388	5	138.7%	9,380
15	11	Deutsche Bank	17,179	14	4.6%	16,418
16	17	Barclays	14,963	5	78.6%	8,377
17	28	Deloitte	11,073	105	412.2%	2,162
18	23	BNP Paribas	10,751	19	122.6%	4,830
19	8	IMI - Intesa Sanpaolo	10,029	16	-53.0%	21,361
20	44	Banca Akros - Oaklins	8,758	13	1672.9%	494

Italy league table by deal count

Ranking			2021			2020
2021	2020	Company Name	Value (USDm)	Deal Count	Count Change	Deal Count
1	2	Deloitte	11,073	105	40	65
2	1	KPMG	42,653	95	19	76
3	3	PwC	3,180	63	19	44
4	4	EY	2,916	52	8	44
5	5	Mediobanca	59,289	51	20	31
6	7	Rothschild & Co	58,389	46	26	20
7	9	UniCredit Group	33,850	21	4	17
8	19	JPMorgan	96,933	20	11	9
9	8	Lazard	27,739	19	1	18
10	22	BNP Paribas	10,751	19	11	8
11	13	EQUITA S.I.M	30,018	18	5	13
12	14	Clairfield International	353	18	5	13
13	10	IMI - Intesa Sanpaolo	10,029	16	1	15
14	6	Vitale & Co	6,059	15	-7	22
15	12	Fineurop Soditic	288	15	1	14
16	11	Goldman Sachs & Co	90,892	14	0	14
17	33	Deutsche Bank	17,179	14	9	5
18	26	Lincoln International	594	14	7	7
19	20	Banca Akros - Oaklins	8,758	13	4	9
20	25	Clearwater International	201	13	6	7

Figure 10 – EMEA Advisory League Tables: Italy

Source: Global & Regional M&A Report 2021, Mergermarket

Following a year of encouraging growth, M&A deals in 2022 see themselves decline again given the complex macroeconomic and social circumstances characterising the global economy. According to JP Morgan Chase & Co's half-year outlook[38], a combination of macroeconomic and geopolitical events that have occurred over recent time have led to the above condition, namely: the *soaring inflation* and the consequent *tight monetary policies*, alongside the effects of the Russian invasion of Ukraine.

While the high yields caused by the strong inflationary trend make leveraged buyouts much more expensive, and thus should in theory discourage the activity of large private equity funds, the conditions of great geopolitical uncertainty have forced the consolidation plans of many companies to wait.

[38] See Glassman J. & Chambless G. (2022). *Economis trends to watch in the second half of 2022*. Commercial Banking Insights. JP Morgan Chase & Co. at https://www.jpmorgan.com/commercial-banking/insights/economic-trends

Moreover, the already penalising starting conditions have been compounded by an increasingly severe attitude on the part of American, British, and European regulators, aimed at safeguarding industrial competitiveness from any monopolistic prospects: in this sense, the graphical card giant Nvidia's decision to abandon its purchase of the microchip company Arm in a deal worth $54 billion is well known.

With respect to Italy's condition, the market for Mergers & Acquisitions sees 537 transactions in the first semester of 2022, accounting for a 13% decrease in volume with respect to 2021, while the deal value measure records €30 billion against the €52 billion of the previous year. The difference in the magnitude of the change in the two indicators is linked - according to the latest KPMG report[39] - to the resilience of the Italian middle market ecosystem, which still managed to attract the attentions of private equity firms, especially when alongside Italian companies in add-on[40] processes. The activity of the investment management companies just mentioned, in fact, registers an even more important and consolidated presence in this period, netting no less than 34 transactions for an aggregate deal value of €11.8 billion, with foreign investors' activity accounting for 30% of the total operations; in this category, the acquisition of 60% of Falck Renewables by JPMorgan's infrastructure fund for €1.1 billion clearly stands out. A closer look at the sector breakdown of M&A activity in this first part of the year delivers us the Food & Beverage sector as the real highlight, with important transactions such as the takeover bid of La Doria by the Ticino-based fund Investindustrial. In the ever-active Industrials sector, Leonardo secured a 25.1% stake in Germany's HENSOLDT AG for €606 million, while in the Healthcare sector the Italian scale-up InnovHeart succeeded in raising significant capital from the listed group Grand Pharma, flanked by leading private equity and venture capital players.

While global M&A activity has shown a certain level of resilience in a period of particularly complex conditions, the latest outlook from auditing giant Ernst & Young (or "EY") reports a certain apprehension as to what the coming months may hold in store for the extraordinary finance market: as a matter of fact *further systemic shocks, including escalating international tensions or a recession in one of the world's largest economies could very negatively affect deal-making activity in the second half of the year*[41].

[39] KPMG (2022). *Mercato M&A in Italia, primo trimestre 2022: il rapporto KPMG.*
[40] Common in the world of corporate finance, add-on transactions are carried out by private equity firms to add high-potential companies to the ecosystem of their invested businesses, or by strategic buyers as part of more permanent consolidation processes.
[41] EY (2022). *M&A in Italia: Review del primo semestre 2022 e outlook.*

A good proxy for the above-mentioned risks is brought by cross-border deals, which, as could easily be predicted, recorded declining numbers in the first quarter - a 24% of the total against 30% in 2015-2019. Opposite, an inverse trend affected so-called 'friend-shoring' deals, i.e. those involving allied countries or otherwise linked by economic agreements, which posted an increase from 42% to 51% was recorded over the same period. Also considering the ambivalent shift in investment attentions from the US, which preferred Europe - receiving $149 billion compared to $60 billion in the 2016 - to China - which lost $25.1 billion in the same period, bringing home only $1.9 billion of US capital - it is evident how the fear of a new and imminent polarisation on the geopolitical level has perhaps been going on for some time at least in the capital markets.

At the end of these considerations, it is clear that the last months of 2022 will certainly be complex for the market of extraordinary finance transactions, especially given the not very encouraging news on inflation and the difficulties in the supply of energy and raw materials. While a diplomatic resolution of the conflict in Ukraine would certainly calm an already shaken sector, an escalation of the tensions between the US and China in the context of the Taiwan crisis, on the eve of a winter that heralds major increases in utility bills, could severely constrain growth both in Europe and worldwide.

3. SURVEY: HOW DO ITALIAN-BASED FINANCIAL ADVISORS ESTIMATE THE WACC?

3.1 Capital Budgeting Asymmetries: The Need for an Experienced Answer

This last chapter's aim is to complete the analysis of valuation techniques used by financial professionals with a focused observation on the industry's main practices. While the theoretical foundations discussed in the first chapter of the paper represent a solid framework to analyse most of the companies' capital budgeting decisions worldwide, much of the decision-making process is left to the professionals' discretion. As it was pointed out in the first phase of this discussion[42], 'Textbook Economics' provides a broad portfolio of techniques, each one with its main pros and cons, but still leaves plenty of freedom in terms on an equally large amount of decisions. Examples of these are the identification of the best valuation approach for each investment opportunity, or the estimation of some of the formulae's most relevant inputs.

To resolve the issues mentioned above, the first paragraph aims to provide an overview of the main investigations conducted on the subject in recent decades, and to understand their most relevant conclusions.

Subsequently, the second paragraph serves to introduce a particular survey regarding the choices of a group of leading financial professionals on capital cost estimation: the paper in object, one of the most respected in the vast world of corporate finance literature, will serve as the main guideline for commenting on the experimental results of this paper, which will be presented in detail in the last part of the document.

Cost of Capital Surveys: An Historical Overview

As previously pointed out in this analysis, the evaluation of financial returns on investments can be key for a company, as the executives' choices on which project to follow will necessarily affect the firm's market performances in the subsequent time periods. In this process, the estimation of a correct cost of capital is crucial for a proper assessment of an investment opportunity as it provides financial professionals with a rate to discount future cash flows to their present value, and, more broadly, with a hurdle rate which to compare the expected return of the project.

Since this is such an appealing topic, it comes as no surprise when one notes the long and extensive tradition of academic surveys regarding the main capital budgeting practices

[42] See Par. 3, Ch. I.B: *Is Textbook Economics Correct About the WACC's Estimation?*

conducted on the industry. An example is provided by the work of Stanley and Block (1984)[43], which investigates the main methodologies used by a sample of US corporations of multinational calibre, or that of Poterba and Summers (1995)[44], which focuses on methods of measuring hurdle rates from the responses of a group of CEOs of Fortune 1000 companies.

With an even more pronounced interest in capital cost estimation practices, Gitman and Vandenberg (2000)[45] then updated the results of the earlier 1980 survey[46], with the aim of analysing the main dynamics impacting the capital budgeting choices of major US companies in the late 20th century. In their inquiry, the two scholars sent a mail questionnaire consisting of 23 closed-end questions to the CFOs of each firm listed in the 1996 Fortune 1000 listing, yielding a response rate of about 11%. Among the results, Gitman and Vandenberg found a large acceptance of the Capital Asset Pricing Model as a method to value a firm's cost of equity, with consensus of 93%, and a preference for the adoption of target debt/equity weights and after-tax cost of debt against their counterparts: respectively book weights and pre-tax cost.

A similar study is the one conducted by Duke University Professors John Graham and Harvey Campbell in 2002[47], which was published as *The Theory and Practice of Corporate Finance: Evidence from the Field* in the *Journal of Financial Economics* and won the Jensen Prize for the Best JFE Corporate Finance Paper in 2001. The two scholars' survey received 392 completed forms, its recipients being the CFOs of all 1998 Fortune100 firms and of 4,400 companies whose financial executives were part of the Financial Executive Committee. This particular choice allowed Graham and Campbell to observe a population sample made by a diverse and varied audience, with annual revenues ranging from less than $100 million ("small companies") to more than $1 billion ("large companies") and differentiated levels of leverage.

With respect to the firms' capital budgeting decisions, the two scholars observed that:

i) 75.7% of CFOs always or almost always used the IRR; 74.9% of them always of most always used the NPV

ii) Large companies were more likely to use NPV instead of IRR

[43] Stanley M.T. & Block S.B. (1984). *A Survey of Multinational Capital Budgeting*. Financial Review Vol. 19 (No. 1) pp. 36-54.
[44] Poterba J.M. & Summers L.H. (1995) *A CEO Survey of U.S. Companies' Time Horizons and Hurdle Rates.* Sloan Management Review; 37, 1. ABI/INFORM Collection p. 43
[45] Gitman L.J. & Vandenberg P.A. (2000) *Cost of Capital Techniques Used by Major US Firms: 1997 vs. 1980.* Financial Practice and Education, 10 (No. 2). pp. 53-68
[46] See also Gitman L.J. & Mercurio V.A. (1982) *Cost of Capital Techniques Used by Major US Firms: Survey and Analysis of Fortune's 1000*. Financial Management 11 (No. 4). pp. 21-29 and Gitman L.J. & Forrester J.R. (1977). *A Survey of Capital Budgeting Techniques Used by Major US Firms.* Financial Management (No. 6). pp. 66-71.
[47] Graham J. & Campbell H. (2002) *How Do CFOs Make Capital Budgeting and Capital Structure Decisions?* Journal of Applied Corporate Finance. Vol. 15 (No. 1). pp. 8-23

iii) Highly levered companies were more likely to use NPV, while firms with lower levels of leverage preferred the IRR
iv) Within levered companies, those which paid dividends and usually show higher levels of leverage preferred to use the NPV

Regarding the Cost of Capital estimation, the following results emerged:

i) CAPM, adopted by 73.5% of the respondents, was the most popular method to estimate the cost of equity, followed in terms of preferences by Average Stock Returns and a multi-factor version of the CAPM; furthermore, the Dividend Discount Model was not used by many firms to back out their cost of equity
ii) Large firms were more likely to use the CAPM then small ones
iii) Given the greater ease of observation of the beta, public firms were more likely to use the CAPM than private firms
iv) Overall, 60% of firms reported to use a single cost of equity firm-wide

Although the responses collected by Graham and Harvey provide a clear and detailed insight into the strategic choices of the most representative US companies at the turn of the millennium, it is even more interesting what emerges when comparing the responses of CFOs in relation to a number of variables related to their own company, such as annual revenue or debt ratio. With respect to Capital Budgeting, for instance, the questionnaire reports a clear change in the valuation methodologies adopted in the 2000s with respect to the last century: if, in fact, in 1977 among the 103 large companies interviewed by Gitman and Forrester only 10% used NPV as their primary methodology, now *a dollar measure of value added* is preferred, which prevents managers from abandoning all those positive value projects that were otherwise discarded in the process of maximising IRR. While this result seems encouraging for the increasing rigour in corporate finance, it also gives us a disjointed growth in this regard, with smaller companies less inclined to adopt NPV and CAPM in favour of less sophisticated methodologies. What can be deduced, finally, is that the growth trend identified earlier is undoubtedly present but is proceeding at different speeds depending on the size of the company involved.

Alongside the well-established interest from academia in the gap between textbook finance and industry practices, Capital Budgeting and Cost of Capital are periodically analysed by various surveys of consulting firms or professional associations related to the financial world.

An example of the former are the annual Studies presented by KPMG, which publishes each year a report aimed at examining the impact of various market forces, such as the regulatory environment, the global geopolitical situation, the growing importance of new drivers such as those related to the ESG world, or particular moments of crisis such as the pandemic one. In the year 2021 study of the German branch, for instance, 332 companies agreed to participate in the survey, of which 53 operated in Switzerland, 36 in Austria, and 243 in Germany, with an important 83.3% response rate within the DAX 30 companies. While this survey certainly provides less detail about the estimation methodologies used by financial professionals, it is nonetheless useful for getting a snapshot of the values used in the main inputs of cost of capital calculations at a given historical point in time. Regarding the latest available document, the accounting services giant noted that[48]:

i) While a heterogeneous WACC development was observed between the different sectors in which the surveyed firms operated, the highest increase and decrease being in the Technology and Transport & Leisure industries, respectively, the average WACC of 6.6% across industries remained at the same levels of 2020
ii) After a significant decrease in 2020, the risk-free rate's downturn was consolidated in 2021, with a drop from 0.5% to 0.2%
iii) The average market risk premium reported a slight increase from 7.1% of 2020 to 7.2% in 2021
iv) The highest unlevered beta factor was the one applied by the Automotive industry, followed by the Technology one
v) A consolidated downward trend also affected the average cost of debt, which decrease to a new historic low of 2.1% from the 2.3% of 2020

Furthermore, the respondents were also asked to elaborate on the reception of changes in ESG reporting in their businesses' development and in consumer markets' valuation. In this sense, while most firms recognised the relevance of ESG-driven issues, an increased level of sensitivity was observed in resource-intensive industries, among others.

Finally, among the major surveys conducted by trade associations and professional organisations in the world of finance, it is worth mentioning the study conducted by the Association for Financial Professionals (AFP), a Singapore-based organisation that established and administers the Certified Treasury Professional and Certified FP&A Professional

[48] For a more in-depth look at the trends observed, see KPMG (2021) *Cost of Capital Study 2021: Sustainability vs. Return – ESG as a key driver for long-term performance?* Available on request at https://home.kpmg/de/en/home/insights/2021/10/cost-of-capital-study-2021.html

credentials, which set the standards of excellence in the worlds of treasury and FP&A. It is precisely from one of the AFP studies, analysed by Michael T. Jacobs and Anil Shivdasani for Harvard Business Review in 2012, that important considerations emerge regarding the capital budgeting choices of American companies in the new millennium.

The article shows that in an enquiry conducted on more than 300 respondents, 80% of them relied on the Discounted Cash Flow analysis, and the percentage of acceptance rose up to 90% when the surveyed population only included companies which had reported over $1 billion in revenues in the previous year. Furthermore, 90% of the professionals used the CAPM to estimate their costs of equity, but there was much less alignment on the inputs required to run both models.

i) First, the projects' forecast horizon varied among the interviewed executives, with 46% of them using a 5-year period, and 34% a 10-year one. While a longer timeframe of 15 years showed only a 5% acceptance, 14% of the companies reported other timings

ii) When the participants were asked to indicate the benchmark that they used to estimate their companies' cost of debt, 37% of them relied on the current rate on outstanding debt, 34% used the forecast rate on new issuance, and 29% used the average historical rate

iii) Regarding the risk-free rate, a low level of alignment arose with respect to the maturities of U.S. Treasuries used to determine such a value. The large majority of respondents, which amounts to 46%, chose a 10-year timeframe, 4% preferred a 20-year period and 11% a 30 year one. While 6% of the professionals indicated some other timings, the remaining part of the sample favoured a shorter maturity, with 90 days, 52 weeks, and 5 years recording a 16%, 5%, and 12% acceptance, respectively

iv) While, in theory, the market risk premium should be equal at any given moment for all investors, its estimates showed again a high level of heterogeneity, with 49% of the professionals reporting a 5%-6% value, and 23% of them choosing a 3%-4% one. Furthermore, 17% of respondents told the interviewers that they opted for an equity risk premium of 7% or higher, and 11% of them chose one lower than 3%

v) Considering the effects of the 2008 crisis and the corresponding rise in volatility which characterized the world economy, it is no surprise that the measurement period can have a significant impact on the calculation of the beta. In the analysed sample, 29% of respondents chose a 1-year period, with 13% and 15% of the

professionals reporting timeframes of 2 and 3 years, respectively. Most of the respondents, accounting for a 41% portion, chose a 5-year period, and 2% reported other choices

vi) With respect to the choice of the most accurate debt-to-equity ratio, only 28% of the respondents opted for a targeted book ratio, with most professionals leaning towards a current proportion. Of these ones, 30% preferred a current book debt-to-equity ratio, 23% chose a current market one, and 19% selected a current book debt to current market equity

vii) Finally, the survey stood out among the many available for addressing the issue of terminal value estimation, reporting a 46% acceptance for the perpetuity formula

The First Enquiry on Financial Advisers' Practices

Given the examples given above, it is evident that finance literature has a broad portfolio of choices when it comes to investigating industry choices in valuation and capital budgeting. Within the entire available literature, however, one study in particular stands out for its precision in investigating the cost of capital estimation choices of a diverse and very representative group of professionals in the corporate finance world. In 1998, in fact, Robert F. Bruner, Kenneth M. Eades, Robert S. Harris, and Robert C. Higgins published the paper *Best Practices in Estimating the Cost of Capital: Survey and Synthesis*, which still represents one of if not the main gold standard in this field of specialisation. In their study, the four academics conducted an analysis of a sample of twenty-seven highly regarded American corporations, comparing the results with the dictates of best-selling books on corporate finance. What is also interesting to note is the expansion of the questionnaire to include ten leading financial advisers, reflecting, in a way, the increasing importance of investment banks in the valuation process in extraordinary finance and market coverage transactions, as already mentioned in Chapter Two.

To conduct the aforementioned analysis, the interviewers opted for a telephone approach, albeit guided by a series of questions that would then guide the conversation: according to the authors, this methodology allowed both an effective and structured collection of the professionals' answers, while still leaving them the necessary space to discuss the main implications of their answers, and potentially to elaborate further. Such a rigorous process required just as much dedication in the selection of the entities involved in the study. First, the scholars selected the corporations to be interviewed from those identified at the time as having the best financial management.

From the companies listed in a research report, *Creating World-Class Financial Management: Strategies of 50 Leading Companies (1992)*, they eliminated the 18 incorporated outside the United States, and excluded from the study five firms that declined the opportunity to be interviewed; the population sample, therefore, finally consisted of 27 corporations. Then, with the aim of including the main practices of as broad and diverse a group of financial professionals as possible, the authors selected a group of 10 leading M&A advisors from a league table published in the 1995, 1994, and 1993 issues of *Institutional Investors*. To do so, they decided to draw the sample by computing a four-year aggregate by deal volume over the described period and reached out to the top 12 advisers resulting from this ranking: of these, 2 firms decided again not to participate, thus leaving the scholars with a sample of 10. Finally, to add an academic reference on corporate finance to the already extensive study, the authors selected the 4 best-selling graduate-level books in 1992 from a leading publisher and added to the sample 3 trade books addressing the topic of cost of capital in sufficient detail.

Company Sample	**Adviser Sample**	**Textbook/Tradebook Sample**
Advanced Micro	CS First Boston	*Textbooks*
Allergan	Dillon, Read	Brealy and Myers
Black & Decker	Donaldson, Lufkin, Jenrette	Bingham and Gapenski
Cellular One	J.P. Morgan	Gitman
Chevron	Lehman Brothers	Ross, Westerfield, and Jaffe
Colgate-Palmolive	Merrill Lynch	*Tradebooks*
Comdisco	Morgan Stanley	Copeland, Koller, and Murrin
Compaq	Salomon Brothers	Ehrhardt
Eastman Kodak	Smith Barney	Ibbotson Associates
Gillette	Wasserstein Perella	
Guardian Industries		
Henkel		
Hewlett-Packard		
Kanthal		
Lawson Mardon		
McDonald's		
Merck		
Monsanto		
PepsiCo		
Quaker Oats		
Schering-Plough		
Tandem		
Union Carbide		
US West		
Walt Disney		
Weyerhauser		
Whirlpool		

Figure 11 – Three Survey Samples

Source: Bruner R.F., Eades K. M., Harris R. S., Higgins R. C. (1998). Best Practices in Estimating the Cost of Capital: Survey and Synthesis. Financial Practice and Education. 8.

By interviewing such a large sample of experienced professionals, the four scholars were available to provide readers with a clear picture of the most adopted techniques in the calculation of a firm's cost of capital which also touched those key moments in the estimation process that are by definition left to one's personal decisions, and thus might exhibit discrepancies when compared with traditional 'textbook finance'.

While the researchers successfully showed that the Discounted Cash Flow is the dominant valuation technique and WACC is the most accepted discounted rate for DCF analyses, it is interesting to note the amount of in-depth knowledge that they were able to collect with respect to the estimation of the Weighted Average Cost of Capital.

Particularly, the authors concluded that:

i) Debt-to-Equity weights should have been based on market value of debt and equity
ii) The after-tax cost of debt should have been estimated from marginal pre-tax costs, and should include marginal or statutory tax rates
iii) CAPM was the most adopted method to estimate a firm's cost of equity
iv) An appropriate risk-free rate should have been one matching the tenor of the free cash flows object of the valuation; in this sense, the yield on the US Treasury bond of 10 or more years represented the most appropriate proxy for the majority of acquisitions or investment projects
v) While most interviewed companies adopted an equity risk premium of 6% or lower, higher figures were preferred by the sample of financial advisers and textbooks
vi) Any change in the WACC should have been linked to some major changes in financial markets conditions, but an annual check was nonetheless considered as the minimum re-estimation period
vii) Finally, the WACC should have been adjusted to encompass all the different businesses making up a large corporation; in this sense, financial advisers generally used the corporate WACC to value the different parts of a corporation, and companies also mentioned the necessity of an adjustment of capital costs across national boundaries

In considering these observations, it is evident that the work of Bruner, Eades, Harris, and Higgins is of particular importance and probably a fundamental prerequisite for anyone wishing to approach the exploration of cost of capital estimation methods adopted in industry.

In fact, what characterises the study of the four academics is the strong concentration on the issue of capital cost estimation, which in itself represents the most insidious phase of the valuation process, identifying its main ambiguities given the warnings of industrial professionals. In doing so, the paper succeeds in providing a clear and organised picture of the drivers that influence the adoption of each estimate during the given process. The value of the study, finally, lies in the constitution of a true set of Best Practices for capital cost estimation, and in the provision of an accurate answer to the following question: *How do companies really estimate their cost of capital?*

3.2 Survey Results

Finally, this chapter presents the results of a survey conducted on a sample of active players in the Italian market, with the aim of expanding the research of Bruner, Eades, Harris, and Higgins[49] to a geographical sample other than that of the United States of America, which so far has been the main focus of most surveys on capital budgeting issues. To do so, I decided to tackle this research topic by applying a similar approach to that of the authors of the previously analysed survey on the Italian market, investigating the cost of capital estimation choices, and, more generally, the valuation methodologies, of major players active in the domestic industry. In the selection of the sample under analysis, my research focused on the approaches used by Financial Advisors active in the Italian territory, with a dedicated attention to their country of origin and the resulting international scope. The reason for the following choice was dictated by several reasons, starting with the desire for consistency with the main theme of this thesis, i.e., the valuation of extraordinary finance projects, mainly represented by corporate acquisitions. The nature of the transactions we are preparing to analyse, besides, intrinsically requires the expertise of a dedicated player such as investment banks and financial advisors, especially at a particularly effervescent time such as that represented by the latest merger wave occurred during the recovery from the covid-19 pandemic. While we have already shown how even corporate acquisitions can be managed in-house by corporate M&A teams in the same way that FP&A professionals manage capital budgeting processes related to less complex

[49] The enlargement of the survey to firms from other countries was indeed defined as a *subject worthy of future studies* by the authors in their original work. For further reference, see Bruner R.F., Eades K. M., Harris R. S., Higgins R. C. (1998). *Best Practices in Estimating the Cost of Capital: Survey and Synthesis.* Financial Practice and Education. 8. p. 3

investment opportunities, few Italian companies have a consolidated and organic structure in this area compared to their American counterparts, and the process of gathering responses would have been complex in any case given the absence of a common hierarchy among the various companies. To select the main financial advisory companies active in Italy, therefore, it was necessary to analyse a league table like the one produced last year by Mergermarket, which every year draws up a ranking of the main players active in each country based on deals completed in the previous twelve months. As with the Bruner, Eades, Harris and Higgins analysis, I decided to operate a selection by deal volume, rather than deal value, and proceeded to identify twenty players[50] who could best reflect the heterogeneity of a market composed of advisors from different countries of origin, international scope, and main client segments.

Regarding the mode of contacting the sample, the authors of the original paper, published in 1998, weighed up their choice in favour of a telephone conversation, so as to be able to take in as much information as possible and put the professionals in a position to elaborate further on their answers. Given the different scope of this project and the increasing opportunities made available by the advent of new internet platforms, I decided to operate a different process, with a more immediate execution but with a preserved fidelity of data collection. After selecting the reference advisors, in fact, I proceeded to identify via the companies' websites the contacts of employees who had the appropriate knowledge to answer the questions posed; having done so, the professionals were contacted via e-mail or LinkedIn with a message introducing the research project, its objectives, and the interview methodology. Those who agreed to contribute to the study were then sent an anonymised questionnaire, guided by multiple-choice questions with the possibility of adding further answers or explanations via a personalised response embedded in each Q&A; the interview process, in the end, yielded an overall response rate of 63%[51].

[50] To make this selection, the deal count table already illustrated in Chapter 2 (2020s: Main Actors and Trends - Figure 10) was chosen, which lists the top 20 advisors active in Italy in the year 2021. Among the players selected, it was not possible to find participation from five advisors, who were replaced by as many players whose proven importance is attested by prominent positions in the previous league tables in terms of deal volume or deal value.

[51] The interview process in total required the contact of thirty-two professionals, net of the need to contact several employees of the same firm to be sure of a response. At the end of this process, a total of twenty-two responses were received from employees of twenty leading Italian financial advisors, as represented in the final sample

Financial Advisors			Textbooks/*Tradebooks*
Italian Firms	**American Firms**	**Other Foreign Firms**	
Equita	Morgan Stanley	Credit Suisse	Brealy & Myers
Vitale&Co	JPMorgan	Deloitte	Berk & DeMarzo
Arkios Italy	Goldman Sachs	Barclays	
Banca Akros - Oaklins Italy	Citi	KPMG	*Koller, Goedhart & Wessels*
Unicredit		Rotschild & Co	*Rosenbaum & Pearl*
Mediobanca		PriceWaterhouseCoopers	
Banca IMI - Intesa Sanpaolo		Deutsche Bank	
Fineurop Soditic		Lazard	

Figure 12 – Survey Samples: Financial Advisors by Region and Textbooks/Trade books

Source: Own Elaboration

Like the authors of the survey of which I propose an update, a sample of textbooks was added in this study to represent the main responses in the academic literature on the subject. For this purpose, recent versions of two primary textbooks on corporate finance[52], used in numerous undergraduate and postgraduate courses in Italian and international universities, were used. In addition, to add to an already rigorous academic reference a glimpse of the main studies available to financial analysts, the two main trade books[53] often available to employees of investment banks and advisory firms in the area were selected on the advice of the professionals with whom it was possible to have a preliminary comparison.

Having defined the way the targeted sample was selected and interviewed, we are now going to observe the main trends that can be deduced from the respondents' answers.

In the first paragraph, we will highlight the main points of contact and the main discrepancies between the advisors active in Italy according to their geographical origin, with an eye to comparing the industry's answers with those provided by textbooks or trade books.

In the second paragraph, instead, the same responses will be compared with those found in the Bruner, Eades, Harris, and Higgins surveys, with the aim of observing any changes dictated by time progress and change of geographic area. These observations, together with the final considerations, will serve to outline the main purpose of this work: to draw up a *Best Practice* for the calculation of the Cost of Capital for companies operating in Italy.

[52] Namely: Berk J., DeMarzo P. (2020). *Corporate Finance.* 5th edition. Pearson. and Brealy R., Myers S. et al. (2013) *Principles of Corporate Finance.* 13th edition. McGraw Hill

[53] Namely: Koller T., Goedhart M., Wessels D. (2020). *Valuation: Measuring and Managing the Value of Companies.* 7th edition. McKinsey & Co. and Rosenbaum J., Pearl J. (2013). *Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions*. Wiley.

2022 Answers by Country of Origin

The interview conducted with the employees of leading Italian financial advisors is of particular importance, as it gives us a snapshot not only of the alignment of corporate best practices with those of the financial literature, but also allows us to explore how these practices change within a very heterogeneous pool of firms[54]. If, in fact, the authors of the original survey had grouped in a single sample the answers of the primary American players in the field of financial advisory, given the strong presence of firms from that country within the American market, the situation is radically different in the Italian case. In Italy, in fact, alongside the common ecosystem of the so-called 'bulge brackets' and the large international banks and advisory firms, it is a group of smaller advisors: the so-called 'boutiques' that are taking up a large number of deals. These companies, which often define themselves as independent[55] since they only provide advisory services to which they do not add the traditional lending ones, have managed over time to gain a prominent position in the national league tables, thanks to a marked aggressiveness that has enabled them to best serve small and medium-sized Italian companies with tailored services. To best incorporate these differences, therefore, I divided the sample of respondents into three groups[56], using the country of origin of the company headquarters as a differentiator. This allowed me to separately observe the answers given by employees of Italian, American, and European advisors.

After a careful observation of the responses obtained, which can be accessed in their entirety in the appendix, a general acceptance for a number of important practices for the valuation process among the various pools of advisors can be deduced. Firstly, Discounted Cash Flow is considered a fundamental part of this process, and as such needs some form of hurdle rate to be discounted: in this sense, the WACC is obviously the leading indicator for this. Moreover, the Capital Asset Pricing Model registers broad acceptance as the best way to estimate the cost of equity of a company, and all professionals report how their in-house models for estimating the cost of equity are consistent with the general dictates of the CAPM. In this sense, the adoption of debt and equity market weights is also generally preferred to the simpler book weights, with an acceptance rate of 87.5% in Italian and European advisors and 100% in American advisors.

[54] When talking about the components of the survey sample, the term ‘firm’ will hereby used to define financial advisory firms, i.e. Investment Banks or Consultancies

[55] A good rendition of the arrival of this type of player on the market is provided by the article written by Paolo Bricco from Il Sole 24 ore in memory of Guido Roberto Vitale, considered by many to be the pioneer of this revolution in the investment banking profession. Url: https://www.ilsole24ore.com/art/addio-guido-roberto-vitale-innovatore-dell-economia-impronta-anglosassone-AFKWpFH

[56] See Figure 12 for an overview of the sample participants

Finally, there is a certain transversality in the preference for single-part valuation of multidivisional corporations, instead of the one of the enterprises as a whole, and a combination of the perpetuity formula with exit multiples is perceived as the best proxy for the estimation of the terminal value.

While professionals of such diverse firms report concordant answers on the main phases of the valuation process, however, an important number of differences emerge about numerous inputs and methodologies concerning the estimation of the cost of capital. In particular:

i) The Discounted Cash Flow method is overall the most accepted one, but 50% of Italian firms regard it only as a secondary tool in their valuation process. This result, compared with the 25% and 27% reported by American and European advisors, respectively, suggests that Italian professionals rely more on indirect methods, such as precedent transaction and trading multiples, than their foreign peers

ii) While debt and equity target weights are generally preferred to their market counterparts due to their better ability to account for firms' projected intentions to change their capital structure, 50% of professionals from American advisors reported that they still used market weights, while less than half do the same among their Italian and European counterparts

iii) The before-tax cost of debt estimation is one of the topics that comes with the highest level of discrepancies. Financial analysts from Italian Advisors, in fact, prefer to adopt a current average value, while the ones from other European ones lean towards using the marginal cost of new debt. Among these two techniques, it can be observed that American advisors are indifferent

iv) The maturities of the bonds used to choose the correct risk-free rate exhibit some level of divergence: while a preference for 10 to 20-year periods is greater in Italian and American advisors, the other European advisors prefer shorter time horizons of 5 to 10 years.

v) With respect to the beta estimation, 87.5% of Italian financial advisors rely on some published sources, with subscription-based portals such as Bloomberg and Factset being cited as the most checked resources by the analysts who elaborated more on their answer. In contrast, 50% of American and 62.5% of European advisors are keener on engaging in a self-calculation process

vi) Different answers were also recorded with respect to the estimation of the market risk premium, in which the selection of some fixed rate or the reliance of public

information such as the one represented by Professor Damodaran's database[57] were the most common choices among Italian and European advisors. American advisory firms, on the other hand, exhibit an equal level of preference towards the use of the premium over treasuries, an average of historical and implied values, and the other two techniques mentioned before

vii) Finally, while 50% of American advisors and 62.5% of European ones reported to be open to operation of any adjustments on the equity risk premium to reflect any changes in the market conditions, Italian advisors do not seem to be equally accustomed to do so, with 87.5% of the respondents replying with a negative answer

A comparison of the data collected with those found within the academic resources in the sample also provides us with other interesting insights into the process that this paper aims to analyse. About valuation methodologies, as was easily predicted, the textbooks and trade books surveyed place great faith in the use of discounted cash flow as the primary methodology, but still mention the availability of trading and transaction comparables to perform a check. For the major part, the responses from the industry are consistent with the dictates of the literature, which nevertheless sometimes mentions the availability of other methodologies, to be used alongside the primary ones, which would merit the attention of financial analysts. An example is what is found in relation to estimating the before-tax cost of debt, where the books also recommend calculating the sum of the risk-free rate and the default spread, or a difference between the yield to maturity and the expected loss rate for the probability of default of the obligation. There are, moreover, points where the answers coincide perfectly, as in the case of target weights, preferred by both book authors and respondents over their book counterparts, or the risk-free rate, where the readings also cite a period of 10-30 years, consistent with what was stated earlier. In other cases, however, there may also be a situation of disagreement between the two samples: an example of this is the academic reference regarding the estimation of the equity risk premium, where the authors would prefer a calculation through historical excess returns or through the premium over treasuries, instead of using public resources.

[57] The periodically updated tables of country default spreads and risk premiums are available at: https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html

2022 v. 2013 v. 1998 Answers

In 2013, Brotherson, Eades, Harris, and Higgins published an update of the 1998 survey[58], with the aim of re-enquiring into the best practices of cost of capital estimation after all the economic changes of the first decade of the 21st century. To do so, the four researchers used the exact same sample selection criteria of the original paper, interviewing a list of firms selected from Fortune 2012's listing of Most Admired Companies and a selection of the most active M&A advisors by deal volume in the US for 2011 according to a Thomson's Securities Data Commission (SDC) database; along with this set of leading corporations and financial advisory firms, the authors inquired into the dictates of four best-selling, graduate-level textbooks on corporate finance, and consulted two primary trade books that provided enough information about the cost of capital estimation process. By asking the respondents a set of questions overlapping with the original one, the scholars found that:

i) The Discounted Cash Flow was again the most accepted valuation technique
ii) The Weighted Average Cost of Capital was *the dominant discount rate used in DCF analyses*
iii) Debt and equity weights were mostly based on market mixes of the two sources of financing
iv) The after-tax cost of debt was estimated through marginal pre-tax costs, along with marginal tax rates
v) The Capital Asset Pricing Model was the most adopted methodology used to estimate a company's cost of equity
vi) Betas were mostly drawn by published sources, with the option to observe data from a set of comparable companies to perform a benchmark check
vii) The choice of the risk-free rate should have been matched to the cash flows' time horizon, but the yield on US Treasuries of ten or more years was thought to be appropriate for the majority of investment projects, including corporate acquisitions
viii) The respondents showed equity risk premium ranges from 4% to 9%, with an average of 6%
ix) Corporations reported that some monitoring of their WACC should have been done at least annually, while advisors found the corporate WACC to be appropriate to value a multi-divisional company.

[58] See Brotherson W. T., Eades K. M., Harris R. S., Higgins R. C. (2013). Best Practices in Estimating the Cost of Capital: An Update.

In order to assess the findings of this latest study on the Italian market with the data it aims to update, this last paragraph provides the main observations that emerged after a comparison of the Italian advisors' answers with the ones arising from the original work of 1998 and its update. To do so, I extracted the American advisors' answers to the subset of questions that I had asked to their Italian counterparts; after a careful analysis of the main points of contact and the discrepancies that emerged from the comparison of the various responses, which can be observed in their entirety in the appendix, it can be seen that:

i) The Discounted Cash Flow methodology, and the consequent use of the WACC as a discount rate, were accepted as a relevant valuation tool in all the surveys; however, while 60% of the 2022 respondents consider the DCF as a primary tool, 80% of the 1998 ones adopted it as part of a combination also made with transaction and trading multiples. There is no mention about any possible hierarchy of valuation methodologies in the 2013 study, instead.

ii) With respect to the weighting factors, there is a consolidated consensus towards the use of target debt and equity levels, and for the preference of market weights instead of their book counterparts

iii) While marginal cost of new debt and current average are the two primary methodologies to estimate the before-tax cost of debt in 2022 and 1998, the 2013 survey focuses on the yield to maturity[59] as a primary proxy. Specifically, 55% of the advisors reported to use the current yield to maturity, while 45% preferred the one on new debt

iv) A consolidated consensus also characterizes the adoption of the Capital Asset Pricing Model as a method to estimate a firm's cost of equity. Notwithstanding this, the 2013 and 1998 surveys showed a larger acceptance for some traditional, non-adjusted versions of the CAPM

v) Regarding the risk-free targeting, 1998 answers show a preference for 10 to 30-year US treasuries and the majority of 2013 ones report a 10-year maturity; Italian financial advisors interviewed in 2022 recorded a 90% acceptance for 5 to 20-year maturities, instead[60]

[59] For an in-depth discussion of the yield to maturity as a method to estimate a firm's cost of dept, readers are referred to the first chapter of this work, in the *Cost of Debt* paragraph

[60] In noting the difference between these values, it is necessary to consider the significant geographical and temporal differences in the samples analysed

vi) An important level of heterogeneity can be detected in the listed methodologies for estimating the equity risk premium. Alongside the sources already mentioned in the Italian market survey, in fact, the responses obtained in 2013 also mention Ibbotson Associates as a source of historical data, or the adoption of a forward-looking dividend discount model. The responses obtained in the 1998 study, on the other hand, report a 60% acceptance of fixed rates ranging from 5% to 7.4%.

vii) Finally, while valuing the parts reported to be the most common way to correctly calculate the value of a multidivisional corporation according to 1998 and 2022 surveys, 2013 respondents cited the fact that an overall enterprise valuation could have been accurate in most cases, except when the size of the firm, the amount of risk, or other factors require a more in-depth consideration

Once again, even a comparison of pools of industry experts so distant from each other, both temporally and geographically, offers us confirmation of the high level of personal responsibility that characterises the process of estimating the cost of capital in a transaction as complex as a corporate acquisition. Finally, in this last focus, we note a broad acceptance of the main guidelines of the process, such as the primary importance of Discounted Cash Flow and WACC as its hurdle rate. Nevertheless, a consensus for common estimation practices of the inputs required for these methodologies is still a long way off, probably due to the very nature of the process.

CONCLUSION

At the end of the survey experience, the need for an ongoing dialogue between academic research and financial industry professionals finds new confirmation, as the numerous observations collected certainly provide important food for thought for both categories mentioned. Compared to expectations, the interview process registered an extraordinarily strong acceptance, by virtue of the 63% response rate recorded by this study. In fact, when compared to its major predecessors, this survey far exceeds the 20% cited by Bruner, Eades, Harris, and Higgins for closed-ended surveys prior to theirs, and even more if tied with the 11% reported by Gitman and Vandenberg's e-mail questionnaire.

Behind such an engaged participation is a combination of several factors that made the interview particularly usable for the audience, while retaining the appropriate rigour that such work requires. First, the advent of easily accessible and widely used web-based platforms has facilitated the work of interviewers and respondents: the possibility of answering a questionnaire enabled via a link is certainly more immediate than the traditional process of filling it in via e-mail or mail. Secondly, financial professionals were guaranteed total anonymity of their contributions, attested by the promise not to reveal insights into the origin of individual answers. Finally, it is important to denote how the seniority of the respondents, one of the real points of innovation compared to previous works, brought a growing interest in the survey and offered new and interesting insights. Compared to the managerial or senior figures who took part in Bruner et al.'s survey, more junior figures took part in this study, mostly at the Analyst and Associate levels. The main explanation behind this choice lies in the desire to confront the professionals who most of all must deal with the modelling work of financial advisors on a daily basis. This choice, moreover, positively influenced the ease of response collection: if, in fact, the clear gap in resources compared to those of a group of experienced professors and academics might have led one to think that a university student would have had less chance of succeeding in such a job, in reality, the respondents took the opportunity to participate in the request very positively. Underlying this participation is certainly the proximity in terms of age of surveyors and respondents, but also a noted curiosity towards the openness of academic courses to industry insights.

Regarding the main trends of the financial analysts interviewed, one can once again discern a dual trend in the valuation methodologies adopted by them. On the one hand, the survey gives us a picture of great cohesion regarding the main dictates of valuation, even when

observing the answers of advisors so different in size, revenues, and geographical origin. Within the observed sample, there is cross-acceptance for the adoption of the Discounted Cash Flow and the WACC as its discount rate, and for the use of the CAPM as a mean to estimate a company's cost of equity. In addition, a preference for the use of market weights instead of its book counterparts, and for the valuation by parts of multi-divisional companies, is noted as already reported. However, there is still little consensus for what concerns the main estimates required in the calculation of the WACC, such as the before-tax cost of debt, the risk-free rate, and the equity risk premium, both in terms of the methodologies adopted and the results obtained from these. Specifically, there is a high degree of flexibility in the practices adopted by Italian advisors, who try their best to tailor their services to best match those of clients who highly value direct confrontation with the advisor. In an opposite way, foreign advisory firms located in the Italian territory seem to trust more their own corporate dictates, probably backed by long-established models and training programs. The robust infrastructure that characterizes 'bulge-bracket' investment banks compared to their independent counterparts is also suggested by the greater preference toward self-calculation of some estimates instead of the adoption of published resources. What we can observe, ultimately, is that being able to rely on dedicated and quality capital markets research teams certainly makes it easier to carry out those complexities that characterize ‘mega-deals’, but it imposes a constant maintenance of a less useful-and potentially too costly-infrastructure for SMEs, which may find boutique firms a more apt partner for mid-market transactions.

Finally, as this study comes to its end, we are able to observe the goal of this work by presenting the *Best Practices for Estimating the Cost of Capital* for Italy-based Financial Advisors:

i) Weights should be based on target, market-value mixes of equity and debt
ii) Pre-tax cost of debt should be estimated from marginal costs of new debt
iii) The CAPM or an adjusted version of it should be used to estimate the cost of equity
iv) Betas shall be drawn from the available published sources
v) Although risk-free rates should always be matched to the tenor of the acquisition project, a 5 to 20-year period maturity is broadly accepted as an industry standard
vi) The choice of the correct equity risk premium still remains a controversial one: besides that, the reliance on published sources like Professor Damodaran’s table is the most popular answer among financial professionals
vii) In presence of multidivisional companies, valuation by parts should be preferred to the mere adoption of the corporate WACC for an enterprise-wide valuation

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APPENDIX

Table 1 – 2022 Answers by Group

	Question	Financial Advisors Italian, American, & other foreign firms 2022	Textbooks/Tradebooks 2022
1	Is the DCF (or "Discounted cash flow") the primary tool that your firm uses as a technique to value a firm and/or possible investment opportunities?	60% Yes 40% No, it is a secondary tool 0 No, it is not used	100% Yes
2	Is any form of Cost of Capital used as a discount rate in your DCF analysis?	70% Yes, always 25% Yes, but only sometimes 5% No	100% Yes
3	In the process of computing a project's cost of capital, do you combine the costs of debt and equity to determine the WACC (or "Weighted average cost of capital")?	80% Yes, always 20% Yes, but only sometimes 0% No	100% Yes
4	Which weighting factors do you use?	75% Target Debt/Equity 25% Current Debt/Equity	100% Target Debt/Equity
4.1	Which weighting factors do you use? (continued)	90% Market weights 10% Book weights	75% Market weights 25% It depends on the situation
5	How do you estimate your before tax cost of debt?	40% Marginal cost 35% Current average 25% Other	25% Marginal cost 25% Current average 50% Other (including: risk free + default spread; Yield to maturity - P(default) x E[loss rate]
6	How do you estimate your cost of equity?	50% CAPM 50% A modified or adjusted version of the CAPM	100% CAPM Other methodologies such as the DDM are used as a check possibility
7	Is your (or your firm's) approach consistent with the conventional CAPM version of the cost of equity? (i.e a combination of the risk-free rate, a beta factor, and a market risk premium)	100% Yes 0% No	100% Yes
8	Which bond maturity do you choose in the process of targeting the correct risk-free rate?	40% 5-10 years 50% 10-20 years 10% It depends	75% Long-term (10-30 years) 25% It depends on the cash flows' time horizon
9	What do you use as your beta factor?	60% Published source 40% Self calculated 0% Other	100% Mention published sources (e.g. Bloomberg) 25% Suggest the adoption of the industry beta unless there is a consensus that the company's one should differ
10	What do you use as your market risk premium?	10% Arithmetic mean 10% Premium over treasuries 15% An average of historical and implied value(s) 35% Prof. Damodaran's table 25% Some other fixed rate 5% It depends	75% Historical excess returns 25% Premium over treasuries The availabliity of published sources (e.g Bloomberg) is also mentioned
11	Do you make any further adjustment(s) to reflect the risk of any individual investment opportunities?	20% Yes, always 75% Yes, but only sometimes 5% No	50% Yes for more risky or less risky ventures 50% No explicit mention
12	What methods do you use to estimate the terminal value (or "TV")?*	10% Exit multiples only 30% Multiples and Perpetuity DCF model 45% It depends 15% N/A	100% Recommend Perpetuity DCF model 50% Mention Exit multiples as an alternative
13	Do you make any adjustments to the risk premium for changes in the market conditions?	20% Yes 5% No 75% It depends	100% No explicit mention
14	In valuing a multi-divisional firm, do you aggregate the value(s) of the individual divisions or just value the company as a whole?	75% Value the parts 25% Value the company as a whole	75% Value the parts 25% No explicit mention

Table 2 – 2022 Financial Advisors' Answers by Country of Origin

	Question	Answers	Financial Advisors		
			Italian Firms	American Firms	European Firms
1	Is the DCF (or "Discounted cash flow") the primary tool that your firm uses as a technique to value a firm and/or possible investment opportunities?	Yes No, it is a secondary tool No, it is not used	50% 50% 0	75% 25% 0	62.5% 27.5% 0
2	Is any form of Cost of Capital used as a discount rate in your DCF analysis?	Yes, always Yes, but only sometimes No	87.5% 12.5% 0	75.0% 25.0% 0	50% 37.5% 12.5%
3	In the process of computing a project's cost of capital, do you combine the costs of debt and equity to determine the WACC (or "Weighted average cost of capital")?	Yes, always Yes, but only sometimes No	87.5% 12.5% 0	50% 50% 0	87.5% 12.5% 0
4	Which weighting factors do you use?	Target Debt/Equity Current Debt/Equity	62.5% 37.5%	50% 50%	100% 0
4.1	Which weighting factors do you use? (continued)	Market weights Book weights	87.5% 12.5%	100% 0	87.5% 12.5%
5	How do you estimate your before tax cost of debt?	Marginal cost Current average Other	25% 50% 25%	50% 50% 0	50% 12.5% 37.5%
6	How do you estimate your cost of equity?	CAPM A modified or adjusted version of the CAPM	62.5% 37.5%	25.0% 75.0%	50% 50%
7	Is your (or your firm's) approach consistent with the conventional CAPM version of the cost of equity? (i.e a combination of the risk-free rate, a beta factor, and a market risk premium)	Yes No	100% 0	100% 0	100% 0
8	Which bond maturity do you choose in the process of targeting the correct risk-free rate?	5-10 years 10-20 years It depends	25% 63% 12%	25% 75% 0	62.5% 25% 12.5%
9	What do you use as your beta factor?	Published source Self calculated Other	87.5% 12.5% 0	50% 50% 0	37.5% 62.5% 0
10	What do you use as your market risk premium?	Arithmetic mean Premium over treasuries An average of historical and implied value(s) Prof. Damodaran's table Some other fixed rate It depends	0 12.5% 25% 25% 37.5% 0	0 25% 25% 25% 25% 0	25% 0 0 50% 12.5% 12.5%
11	Do you make any further adjustment(s) to reflect the risk of any individual investment opportunities?	Yes, always Yes, but only sometimes No	25% 75% 0	25% 50% 25%	12.5% 87.5% 0
12	What methods do you use to estimate the terminal value (or "TV")?*	Exit multiples only Multiples and Perpetuity DCF model It depends N/A	25% 37.5% 37.5% 0	0 25% 25% 50%	0 25% 62.5% 12.5%
13	Do you make any adjustments to the risk premium for changes in the market conditions?	Yes No It depends	12.5% 87.5% 0	50% 0 50%	25% 12.5% 62.5%
14	In valuing a multi-divisional firm, do you aggregate the value(s) of the individual divisions or just value the company as a whole?	Value the parts Value the company as a whole	62.5% 37.5%	75% 25%	87.5% 12.5%

Table 3 – 2022 v. 2013 v. 1998 Financial Advisors' Answers

	Question	Financial Advisors		
		2022	2013	1998
1	Is the DCF (or "Discounted cash flow") the primary tool that your firm uses as a technique to value a firm and/or possible investment opportunities?	60% Yes 40% No, it is a secondary tool 0 No, it is not used	100% Adopt DCF as a valuation technique, no mention about its importance as a primary or secondary tool	10% DCF is a primary tool 10% DCF is used mainly as a check 80% Weight DCF, comparable transactions, and trading multiples depending on purpose and type of the analysis
2	Is any form of Cost of Capital used as a discount rate in your DCF analysis?	70% Yes, always 25% Yes, but only sometimes 5% No	100% Yes	100% Yes
3	In the process of computing a project's cost of capital, do you combine the costs of debt and equity to determine the WACC (or "Weighted average cost of capital")?	80% Yes, always 20% Yes, but only sometimes 0 No	100% Yes	100% Yes
4	Which weighting factors do you use?	75% Target Debt/Equity 25% Current Debt/Equity	73% Target Debt/Equity 27% Current Debt/Equity	90% Target Debt/Equity 10% Current Debt/Equity
4.1	Which weighting factors do you use? (continued)	90% Market weights 10% Book weights	100% Market value of Equity and Debt	90% Market weights 10% Book weights
5	How do you estimate your before tax cost of debt?	40% Marginal cost 35% Current average 25% Other	55% Current yield to maturity 45% New debt yield to maturity	60% Marginal cost 40% Current average
6	How do you estimate your cost of equity?	50% CAPM 50% A modified or adjusted version of the CAPM	100% CAPM	80% CAPM 20% Other (including a modified or adjusted version of the CAPM
7	Is your (or your firm's) approach consistent with the conventional CAPM version of the cost of equity? (i.e a combination of the risk-free rate, a beta factor, and a market risk premium)	100% Yes 0 No	100% Yes	90% Yes 10% N/A
8	Which bond maturity do you choose in the process of targeting the correct risk-free rate?	40% 5-10 years 50% 10-20 years 10% It depends	73% 10 years 18% 20 years 9% 30 years	10% 90 days 10% 5-10 years 30% 10-30 years 40% 30 years 10% N/A
9	What do you use as your beta factor?	60% Published source 40% Self calculated	73% Fundamental beta from Barra 44% Beta from Bloomberg 18% Self-calculated historical beta or other published source	30% Fundamental beta (e.g Barra) 40% Published source 20% Self calculated 10% N/A
10	What do you use as your market risk premium?	10% Arithmetic mean 10% Premium over treasuries 15% An average of historical and implied value(s) 30% Prof. Damodaran's table 25% Some other fixed rate 5% It depends	73% Historical data - Ibbotson 18% Forward-looking DDM 9% Use a "range": No specific methodology reported	10% Fixed rate of 5.0% 50% Fixed rate of 7.0-7.4% 10% LT arithmetic mean 10% Both LT arithmetic and geometric mean 10% Spread above treasuries 10% N/A
11	Do you make any further adjustment(s) to reflect the risk of any individual investment opportunities?	20% Yes, always 75% Yes, but only sometimes 5% No	91% Yes/As appropriate 9% No	N/A Not asked
12	What methods do you use to estimate the terminal value (or "TV")?*	10% Exit multiples only 30% Multiples and Perpetuity DCF model 45% It depends 15% N/A	100% Multiples and Perpetuity DCF model	30% Exit multiples only 70% Multiples and Perpetuity DCF model
13	Do you make any adjustments to the risk premium for changes in the market conditions?	25% Yes 5% No 75% It depends	N/A Not asked	30% Yes 50% No 20% Rarely
14	In valuing a multi-divisional firm, do you aggregate the value(s) of the individual divisions or just value the company as a whole?	75% Value the parts 25% Value the company as a whole	100% Usually value the company as a whole, but still value the parts if size, risk, or other factors merit the consideration	100% Value the parts