INSTITUTO
UNIVERSITÁRIO
DE LISBOA

Equity Valuation: L'Oréal S.A.

Carolina Delca Carrapo

Master in Finance

Supervisor:
PhD Pedro Manuel de Sousa Leite Inácio, Assistant Professor
ISCTE Business School

November 2022

BUSINESS
SCHOOL

Department of Finance

Equity Valuation: L'Oréal S.A.

Carolina Delca Carrapo

Master in Finance

Supervisor:
PhD Pedro Manuel de Sousa Leite Inácio, Assistant Professor
ISCTE Business School

November 2022

Agradecimentos

Para começar, gostaria de agradecer à minha mãe, Maria de Jesus Delca, por todo o apoio que sempre me deu ao longo de todo o meu percurso académico, por todo o esforço que sempre fez para que eu tivesse a melhor educação e formação possíveis e por ter acompanhado de forma ativa todas as etapas da minha vida, mostrando sempre o amor e orgulho que tem por mim.

Em segundo lugar, queria agradecer ao meu namorado, Diogo Balula, por ter estado sempre a meu lado em todos os momentos da elaboração deste projeto. Esteve comigo sempre que precisei, teve sempre a palavra certa no momento certo, soube puxar-me para cima sempre que fui abaixo e nunca me deixou desistir. Agradeço-lhe por ter sempre acreditado em mim e nas minhas capacidades, mesmo quando eu própria não acreditava.

Agradeço também ao meu irmão, Rodrigo Santos. Ele foi, sem dúvida, uma das razões para eu ter levado este trabalho até ao fim, para lhe poder mostrar que, por muito grande que seja medo que temos dentro de nós, quando queremos muito e trabalhamos, nada nos pode impedir de alcançar aquilo que tanto desejamos.

Não posso também deixar de agradecer o apoio incondicional da minha família e da família do Diogo, ao meu avô, Francisco Delca, às minhas tias, Maria do Carmo Delca, Helena Delca, Ana Delca e Virgínia Almeida, ao meu padrasto, Paulo Santos, aos meus primos, Thomas Delca, Clara Beauchamp, Gil Correia, Anna Beauchamp e Francisco Correia, à mãe do Diogo, Celina Coutinho, ao padrasto do Diogo, José António Henriques, e ao pai do Diogo, Carlos Balula.

Quero também deixar um agradecimento especial aos meus amigos que sempre me apoiaram e deram força para concluir o meu mestrado: Francisca Vieira, José Pereira, Ana Claúdia Pinto, Fábio Henriques, Luís Moreira, Jéssica Matias, Pedro Pinto, Fátima Lamarosa, Mariana Nobre, Marta Gonçalves, Sofia Gonçalves, Mariana Vitória e Ana Cabecinhas.

Agradeço ainda aos professores do ISCTE com quem me fui cruzando durante a minha caminhada na instituição.

Por fim, não posso deixar de agradecer ao Dr. Frederico que me acompanhou durante a realização deste projeto. A sua ajuda foi crucial para aprender a lidar e gerir a ansiedade que a realização da tese gerava em mim.

Resumo

A L'Oréal, fundada por Eugéne Schueller em 1939, é a empresa líder no mercado de cosméticos. Com o propósito de "Criar a beleza que move o mundo" tem ganho, ao longo dos anos, a confiança dos consumidores ao procurar criar e oferecer produtos que se destaquem em termos de qualidade e eficácia.

A gestão da L'Oréal tem demonstrado a sua capacidade de gestão ao ultrapassar potenciais crises, como foi o caso da pandemia de COVID-19, altura na qual a L'Oréal reafirmou a sua posição como líder de vendas no mercado.

Este projeto de mestrado tem assim como intuito determinar o valor justo das ações da L'Oréal. No final, o resultado obtido consistirá numa afirmação para os investidores sobre se devem comprar, vender ou manter as ações da L'Oréal, baseando-se na potencial valorização ou desvalorização face ao preço de mercado.

Depois de analisarmos o que tem sido feito no mundo financeiro sobre as avaliações empresariais, aplicar-se-ão dois métodos na análise da L'Oréal. O Free Cash Flow to the Firm será o primeiro método a ser aplicado. De seguida, aplicaremos a Avaliação Relativa que nos irá possibilitar comparar os resultados obtidos nos dois métodos para chegarmos a uma recomendação final mais precisa.

A L'Oréal, empresa cotada na Euronext Paris, apresentava a 31 de dezembro de 2021 um valor por ação de 416,95 euros. Após a análise realizada, foi considerado que este preço estava subvalorizado, pelo que a nossa recomendação final é que os investidores comprem ações da L'Oréal.

Palavras-chave: Avaliação de Empresas; Cosméticos; L'Oréal; Método dos Fluxos de Caixa Descontados; Avaliação Relativa

JEL Classification: G30 (Corporate Finance and Governance: General); G32 (Corporate Finance and Governance: Value of Firms)

Abstract

L'Oréal, founded by Eugéne Schueller in 1939, is the leading company in the cosmetics market. With the purpose of "Creating the beauty that moves the world" it has, over the years, gained the trust of consumers by seeking to create and offer products that stand out in terms of quality and effectiveness.

L'Oréal's management has demonstrated its management skills by overcoming potential crises, as was the case with the COVID-19 pandemic, when L'Oréal reaffirmed its position as the sales leader in the market.

This master's project thus aims to determine the fair value of L'Oréal's shares. In the end, the result obtained will consist of a statement for investors on whether to buy, sell or hold L'Oréal's shares, based on the potential appreciation or devaluation in relation to the market price.

After reviewing what has been done in the financial world on corporate valuations, two methods will be applied in the analysis of L'Oréal. Free Cash Flow to the Firm will be the first method to be applied. Next, we will apply the Relative Valuation that will enable us to compare the results obtained in the two methods to arrive at a more precise final recommendation.

L'Oréal, a company listed on Euronext Paris, had a value per share of 416.95 euros on December 31, 2021. After the analysis performed, this price was found to be undervalued, so our final recommendation is that investors buy L'Oréal shares.

Keywords: Business Valuation; Cosmetics; L'Oréal; Discounted Cash Flow Method; Relative Valuation

JEL Classification: G30 (Corporate Finance and Governance: General); G32 (Corporate Finance and Governance: Value of Firms)

Table of Contents

Figure Index

Table Index

Annex Index

Glossary

APV: Adjusted Present Value

B2C: Business to Consumer

CAGR: Compound Annual Growth Rate

CAPEX: Capital Expenditures

CAPM: Capital Asset Pricing Model

COVID-19: Coronavirus disease

CPI: Consumer Price Index

CRP: Country Risk Premium

D&A: Depreciations & Amortizations

DCF: Discounted Cash-Flow

DDM: Dividend Discount Model

DIO: Day of Inventory Outstanding

DPO: Day of Payable Outstanding

DPS: Dividends per Share

DSO: Day of Sales Outstanding

EBIT: Earnings Before Interest and Taxes

EBITDA: Earnings Before Interest, Taxes, Depreciations and Amortizations

EPS: Earnings per Share

EQV: Equity Value

EU: European Union

EV: Enterprise Value

EVA: Economic Value Added

FCFF: Free Cash Flow to the Firm

FCFE: Free Cash Flow to Equity

GDP: Gross Domestic Product

IC: Invested Capital

IMF: The International Monetary Fund

MRP: Market Risk Premium

MVA: Market Value Added

NOPLAT: Net Operating Profit Less Adjusted Taxes

P/B: Price-to-Book Value

PE: Price-to-Earnings Ratio

PV: Present Value

ROA: Return on Assets

ROE: Return on Equity

ROIC: Return on Invested Capital

SAPMENA-SSA: South Asia Pacific, Middle East, and North Africa

S&P: Standard and Poor's

TGR: Terminal Growth Rate

TV: Terminal Value

USA: United States of America

WACC: Weighted Average Cost of Capital

WC: Working Capital

Introduction

The purpose of this master's thesis is to determine the equity value of L'Oréal S.A. Thus, what we propose is to help investors in their decision making about whether to invest in L'Oréal S.A. shares, and to do so we will determine the price of the company's shares on December 31, 2021.

L'Oréal S.A. is a public company based in France and listed on Euronext Paris. The company, which has well-known brands in its portfolio, is part of the cosmetics market and has 85.412 employees worldwide, of which 55% are women. Its business model is divided into 4 segments: Consumer Products, L'Oréal Luxe, Active Cosmetics and Professional Products. In 2021 L'Oréal, which has been growing over the last few years, recorded sales of 32,28 billion euros, with the two business segments that contributed most to this amount being L'Oréal Luxe and Consumer Products with 12.346,2 million euros and 12.233,5 million euros, respectively.

Unfortunately, the world that was still recovering from the pandemic of COVID-19 now faces an unstable economy and exponentially rising inflation rates. As a result, we will need to reflect in our valuation the possible effects of the pandemic on the company as well as be cautious regarding assumptions involving inflation rates.

First, we will proceed to the literature review in which we will analyze the different methodologies studied and applied by several authors over the years. This first chapter is essential in this project as it will allow a better understanding of the different methods, we can choose to evaluate L'Oréal's shares, allowing us to sensibly select the model(s) that best suit L'Oréal's valuation.

Afterwards we will analyze the cosmetics market where L'Oréal is inserted, as well as the possible impacts of the COVID-19 pandemic on it and analyze the current state of inflation that impacts the entire economy. Next, we will analyze L'Oréal, its history, its business segments, and its recent financial performance. Based on the information obtained in the first three chapters, we will proceed to define the assumptions and apply the selected methods to calculate the value of L'Oréal's shares.

Finally, we will present our results and the recommendations that result from them to fulfill the purpose presented at the beginning of this introduction, believing that the models we will choose and the assumptions we will make will provide the results that best reflect L'Oréal's share price.

CHAPTER 1

Literature Review

1.1. Introduction to Corporate Valuation

Damodaran (2006a) states that "valuation can be considered the heart of finance". Valuation is useful in a lot of areas, such like corporate finance and mergers and acquisitions' analysis. Valuation is useful in many areas of finance, such as portfolio management, acquisition analysis, and corporate finance (Damodaran, 2002). In addition, valuation has come to take a central role in resource allocation decisions in firms, with resource allocation being a major factor in a firm's success or failure. (Luehrman, 1997).

"Every asset, financial as well as real, has a value" (Damodaran, 2002). To accurately assess the true value of a company, it is important to first review what the literature says about the best methods for calculating that value. The calculated value tends to reflect, even somewhat subjectively, the expectations of future performance that the market places on each company (Mota *et al.*, 2012). However, while there is a consensus on the possibility of valuing a company, opinions do not conform on how to estimate the value itself, thus leading to the existence of various valuation methods based essentially on different assumptions (Damodaran, 2006b).

When choosing the valuation method to be used to estimate the value of a given company, one must take into consideration the economic environment and the industry in which it operates, as well as the business of the company itself. There is also the possibility that, in the absence of a method that can be considered as ideal for a given company, the choice falls on more than one valuation method, so that the value obtained is as close as possible to reality.

According to Damodaran (2002) there are three essential approaches to business valuation. The first, Discounted Cash-Flow relates the value of the firm to the value of expected future cash flows discounted to the present time. The second, relative valuation, calculates the value of the firm based on the value of companies considered comparable based on common factors such as earnings and sales. Finally, the third method is contingent claim valuation, which measures the value of the company using option pricing models that share option characteristics with the company under review.

1.2. Discounted Cash-Flow Method

Through the Discounted Cash-Flow (DCF) method , the value of a given company is estimated by discounting the present value of its future cash flows at a discount rate that is relevant and reflects the risk of those cash flows, that is, it is expected that a higher cash flow stream will also mean a higher company value.

According to Damodaran (2006b) there are three biggest approaches to classify DCF methods. The first is based on differentiating the value of a business as a going concern and the value of a business as a collection of assets. The second approach makes a distinction between valuing the equity of a business of valuing the business itself. Finally, the third is calculated on the excess returns and the adjusted present value.

In short, Free Cash Flow to the Firm (FCFF) method values the company itself while Free Cash Flow to Equity (FCFE) method values the company's equity. Finally, the third method, Adjusted Present Value (APV), values the company itself while removing the value of the debt.

1.2.1. Free Cash-Flow to the Firm

In the firm approach of the DCF model the value of the company is obtained by using the Free Cash-Flow to the Firm discounted at the weighted average cost of capital (WACC) to, firstly, compute the Enterprise Value (EV) and then calculate the Equity Value (EQV), which is the main goal (Damodaran, 2006).

The first step to value a company using a DCF method is to compute the Future Cash-Flows for the next five to ten years (Steiger, 2008). The FCFF represents the amount in the operating cash flow after deducting taxes, working capital (WC) differences and investments directly linked to the company's operating activity, (Hayes, 2020). FCFF general formula is as follows:

$$FCFF = EBIT\ (1 - t_c)\ + Depreciations\ and\ Amortizations - CAPEX\ \mp \Delta WC \quad [1]$$

Being,

- EBIT – Earnings Before Interest and Taxes;
- t_c – Corporate tax rate;
- CAPEX – Capital Expenditures;
- ΔWC – Changes in Working Capital.

Before estimating EV, it is necessary to find the correct discount rate which, being the DCF method, is the Weighted Average Cost of Capital. WACC is the minimum rate required by the investors for investing the company reason why it is the most appropriate discount rate to the DCF methods (Koller *et al.*, 2015). WACC's formula is computed as follows:

$$WACC = r_E \times \frac{E}{(E+D)} + r_D \times \frac{D}{(E+D)} \times (1 - t_c) \quad [2]$$

Where:

- r_E – Cost of equity – required rate of return by equity holders;
- E – Market value of the firm's equity;
- (E+D) – Total market value of the firm's financing;
- r_D – Cost of debt – required rate of return by debt holders;
- D – Market value of the firm's debt.

1.2.1.1. Cost of Equity

The cost of equity is the most difficult WACC parameter to estimate. According to Damodaran (2006b), the difficulty of estimating cost of equity relies on it being an implicit cost which cannot be observed in a direct way. The second reason for this difficulty is that the expected rate of return may not be the same for different investors along the same company.

The cost of equity is therefore estimate in two steps. The first step is to estimate the expected rate of return for the entire stock market. Then, the second step is to compute the risk of the company. For that we can use one of three methods, Capital Asset Pricing Model (CAPM) and Fama-French three-factor model (Koller *et al.*, 2015) and Arbitrage Pricing Model (Damodaran, 2006b). CAPM is the most common method used (Larrabee & Voss, 2013), reason why this is the method chosen to compute the cost of equity.

CAPM was created to hold in equilibrium if all assumption is met, i.e., supply equals demand, if all assumptions are met. These assumptions include: (i) investors are averse to risk, (ii) investors make their investment decisions based on the mean and variance of returns of the total portfolio owned, and (iii) investors access the risk of an asset in terms of its contribution to the systematic risk of their total portfolio (Pinto *et. al.*, 2010).

CAPM formula is as follows:

$$r_E = r_f + \beta_L(r_M - r_f) \quad [3]$$

Being:

- r_f – Risk-free rate;

- β_L – Company's levered beta;
- $(r_M - r_f)$ – Market risk premium.

1.2.1.1.1. Risk-Free Rate

Damodaran (2006b), defines a risk-free asset as "one where the investor knows the expected return with certainty". Therefore, to consider a given investment or company as risk-free it must meet two requirements, the absence of default risk and certainty regarding reinvestment rates.

The risk-free rate is used not only to obtain the cost of equity but also the cost of debt. In both cases, an increase in the risk-free rate would result in an increase of the discount rates and a subsequent decrease in the present value of the company's cash flows (Damodaran, 2008).

For developed markets, if the valuation is being performed in the long-term then the risk-free rate should be the government bond rate also in the long run. On the other hand, if the valuation analysis is performed in the short-term, the risk-free rate used may be the short-term government security rate (Damodaran, 2002). According to Koller *et al.* (2015) if the valuation is being performed over United States-based companies the 10-year zero coupon government bonds should be used as risk-free rate.

1.2.1.1.2. Beta

Steiger (2008) defined beta as "an empirical determined input factor that is also based on the company's historical level of leverage, because higher leverage ratios increase the shareholder's risk". In its turn, Damodaran (2002) describes beta as "the covariance of the asset divided by the variance of the market portfolio, measures the risk added on by an investment to the market portfolio".

The company's beta measures its systematic risk i.e., it measures the sensitivity of its returns to the returns of the market's portfolio of risky assets. Betas' estimation is of high importance for a correct computation of the discount rate. However, since betas are only disclaimed for publicly traded companies, for private companies' valuations, beta must be estimated (Larrabee & Voss, 2013). In addition, often when it comes to evaluating a private company, there is not much information available that allows us to estimate the beta correctly. Therefore, a peer group with companies like the one under analysis should be established to calculate a median unlevered beta that allows for a more accurate estimation of the beta of the evaluated company.

1.2.1.1.3. Market Risk Premium

The market risk premium, the difference between the market's expected return (r_M) and the risk-free rate (r_f), is the rate investors demand related to the risk they take by holding to the

market portfolio. Larrabee and Voss (2013) stated that "if a particular common stock's market risk is the same risk of the market as a whole, then the compensation for that stock's market is the market risk premium".

If there is a consensus among the authors on the definition of market risk premium the same does not apply to the models to measure it. According to Damodaran (2021), there are three approaches to consider regarding the measurement of the market risk premium, survey premium, historical premium, and implied premiums. The first approach starts from the logical idea that, if the market risk premium is what investors require for investing in each company, then this value can be estimated by asking investors what rate they expect to receive in return. This approach implies investigating in the existing literature previously made questionnaires that allow to understand which value is the closest to the market reality. The second approach, the most common of the three, involves computing the returns earned on stocks for an extended period of time and then comparing with the actual returns earned on risk-free securities. The historical risk premium is thus the difference, on an annual basis, between the two returns. The last approach requires estimating a premium regarding future values, by using the current market prices for stocks together with the expected cash flows.

1.2.1.2. Cost of Debt

The last component of WACC is the cost of debt, that as Steiger (2008) states "is the interest rate that a company has to pay on its outstanding debt". The cost of debt is calculated using the risk-free rate and the default risk. Therefore, if the latter increases, the default spread associated with it raises, increasing in turn the total cost of debt. The cost of debt is then calculated as follows:

$$r_D = r_f + Default\ Spread \qquad [4]$$

The risk of default depends exclusively on two factors (Damodaran, 2006b). First, it depends on the company's ability to generate cash flows from its operations. If the company can generate cash flows greater than its financial obligations, then it has a low risk of default and vice versa. The second factor is related to the high or low volatility of the cash flows generated by the firm i.e., the less stable the cash flows generated, the higher the default risk associated with it.

According with Damodaran (2002), there are three methods to estimate the cost of debt. The first and simplest method to calculate the cost of debt is through the market price of the company's bonds, as well as the associated coupon and maturity. However, this method can only be applied if the company holds long-term bonds that circulate heavily in the bond market. The second method emerges as an alternative to the first, making it possible to estimate the cost of debt for firms that, despite having bonds issued, do not trade on a regular basis, thus being excluded from the previous method. Thus, to estimate the cost of debt of these firms one can resort to the ratings assigned to them by agencies such as Standard & Poor's and Moody's, as well as the default spreads associated with those ratings. The third and last method is ideal for calculating the cost of debt for firms that, because they are small or private, may not have an assigned rating. This method has two possible approaches, the first of which is to evaluate the recent history of the company with respect to loans contracted to understand what default spreads were charged by financial institutions and use them as default risk spread. The second approach, more alternative and called synthetic rating, is related to the estimation of a rating and respective default spread using classified companies belonging to the same sector of activity of the company under analysis. To do this, certain financial ratios are calculated for the classified companies, and then the ratios of the company under analysis are calculated and compared with those previously determined to estimate the appropriate default spread.

1.2.1.3. Enterprise Value

In the FCFF approach of the DCF method, the present value of cash flows corresponds to the Enterprise Value (EV). Therefore, having the FCFF, the EV is then calculated by discounting the future cash flows generated by the firm at the WACC. For the first 3 to 5 years, the time required to stabilize the growth of cash flows, the FCFF for each year is used. Then, to assume continuity of the firm over an infinite time horizon, the Terminal Value (TV) is calculated, assuming a constant annual growth rate for the cash flows generated. EV is then computed as follows:

$$EV = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1+WACC)^t} + \frac{TV_n}{(1+WACC)^n} \quad [5]$$

Where:

- $FCFF_t$ – Free Cash-Flow to the Firm in the time period *t*, period=1 to *n*;
- TV_n – Terminal Value at the end of the time period *n*.

1.2.1.3.1. Terminal Value

Terminal Value (TV) is the cumulative discounted value of future cash flows that occur after the 3 to 5 years covered by the analysis period. When calculating the TV, it is assumed that the firm's cash flows have a constant and perpetual growth rate after the period contained in the analysis. Thus, to calculate TV it is necessary to calculate the WACC but also to estimate the growth rate. According to Steiger (2008) this rate should be between 0% and 5% since the economy always develops positively in the long run and a rate higher than 5% is also not sustainable in the long run. So, TV is computed as follows:

$$TV_n = \frac{FCFF_{n+1}}{WACC - g} \quad [6]$$

Being:

- g – Growth rate.

Since calculating the TV gives the future cash flows discounted perpetually into the future, to obtain the EV, the TV must again be discounted to present value using the WACC. Therefore, EV is computed as follows:

$$EV = \frac{FCFF_1}{(1+WACC)^1} + \frac{FCFF_2}{(1+WACC)^2} + \frac{FCFF_3}{(1+WACC)^3} + \ldots + \frac{\frac{FCFF_{n+1}}{WACC - g}}{(1+WACC)^n} \quad [7]$$

1.2.1.4. Equity Value

The Equity Value (EQV), which represents the value the company has for shareholders after any debts have been paid off, is calculated by adding to the EV the value of non-operating assets and removing the value of financial debt as well as the value of non-operating liabilities.

$$EQV = EV + Non\ Operating\ Assets - Net\ Debt - Minority\ Interests \quad [8]$$

The non-operating assets item should include all assets that are held by the company but not used in its operating activity, thus not having any reflection on the current or future value of the company such as excess cash and real estate properties that are not used in the business. Damodaran (2002) give as examples of non-operating assets cash and near-cash investments, investments in other firms' equities and bonds, holdings in other firms and assets own by the company that are not expected to generate cash-flows, even if they have value.

In turn, net debt refers specifically to the remains after debts have been paid showing if the company does have liquidity that allows them to accomplish their debt payments.

Finally, minority interests refer to ownership or interests in less than 50% of a specific company.

Once calculated, EQV of listed companies can also be used to obtain the fair price per share (Steiger, 2008). To do this, the EQV must be divided by the number of outstanding shares.

1.2.2. Free Cash-Flow to Equity

The Free Cash-Flow to Equity approach of the DCF method is not very different from the FCFF approach. The main difference between both approaches is that FCFE does not value the assets of the company's business (Larrabee & Voss, 2013). Instead, as seen above, the FCFE approach evaluates the company's equity, i.e., it uses the cash flows remaining to shareholders after deducting all operating expenses, interest, reinvestment requirements and debt payments.

According to Larrabee and Voss (2013), FCFE general formula is as follows:

$$FCFE = Net\ Income + Depreciations\ and\ Amortizations - CAPEX \mp \Delta\, WC + New\ Debt\ Issued - Principal\ Repayments \quad [9]$$

Since FCFE already represent the cash flows available to shareholders, there is no need to calculate the EV and it is possible to obtain the EQV directly.

As such, the EQV is calculated as follows:

$$EQV = \sum_{t=1}^{t=n} \frac{FCFE_t}{(1+r_E)^t} + \frac{TV_n}{(1+r_E)^n} \quad [10]$$

Where:

- $FCFE_t$ – Free Cash-Flow to Equity in the time period *t*, period=1 to *n*;

Knowing that,

$$TV_n = \frac{FCFE_{n+1}}{r_E - g} \quad [11]$$

Thus,

$$EQV = \frac{FCFE_1}{(1+r_E)^1} + \frac{FCFE_2}{(1+r_E)^2} + \frac{FCFE_3}{(1+r_E)^3} + \ldots + \frac{\frac{FCFE_{n+1}}{r_E - g}}{(1+r_E)^n} \quad [12]$$

Since FCFE already represent the cash flows available to shareholders, there is no need to calculate the EV and it is possible to obtain the EQV directly. As in the FCFF approach, in the FCFE approach the company's price per share can be obtained by dividing the EQV by the number of outstanding shares.

1.2.3. Adjusted Present Value

Adjusted Present Value is a two-part method. First, the equity of the firm is valued, assuming that this is the firm's only source of financing. The second part is to account for the net value of debt, since it considers the costs of borrowing, namely the expected cost of bankruptcy, but also the benefits that arise from it, the tax shields being the principal (Damodaran, 2002). So, the general formula of APV is as follows:

$$APV = V^U + PV(Tax\ Shields) - PV(Expected\ Costs\ of\ Bankruptcy) \quad [13]$$

Being:

- V^U – Value of Unlevered Firm.

This method, considering the assumptions of the first stage, uses for the valuation of equity the unlevered cost of capital instead of WACC. This difference presents itself as a favorable point for some authors who consider the WACC obsolete, such as Luehrman (1997) who also finds the APV to be a more versatile and reliable method when compared to the DCF.

The first step in obtaining the APV is to calculate the unlevered value of the firm. According to Damodaran (2002) this value is calculated as follows:

$$V^U = \frac{FCFF_0(1+g)}{r_U - g} \quad [14]$$

Where:

- $FCFF_0$ – Current after-tax operating cash-flow to the firm;
- r_U – Unlevered cost of equity.

To calculate the unlevered cost of equity one can, use the CAPM, as follows:

$$r_U = r_f + \beta_U(r_M - r_f) \quad [15]$$

Where:

- β_U – Company's unlevered beta.

The second step in the APV method is the calculation of the tax benefit expected to be received as a function of the level of debt, discounted to the present time. This benefit is calculated based on the company's marginal tax rate, which is assumed to be constant over time, and discounted at the cost of debt (Damodaran, 2002). The general formula for the present value of the tax benefit is as follows:

$$PV\ Tax\ Shield_t = \sum_{t=1}^{n} \frac{r_D \times D \times t_c}{(1 + r_D)^t} \quad [16]$$

The third and last step is to calculate the cost of bankruptcy which is the most difficult component of the APV to estimate since none of its inputs, probability of default and bankruptcy costs, can be directly obtained and must be estimated. Its general formula is as follows:

$$PVExpected\ Costs\ of\ Bankruptcy = \pi_a \times BC \quad [17]$$

Being:

- π_a – Probability of bankruptcy;
- BC – Bankruptcy costs.

According to Damodaran (2002), the probability of default can be estimated with two different approaches. The first is to estimate a rating for bonds and use empirical estimates of probabilities of default for each rating. The second approach refers to the use of statistics to estimate the probability of default based on the characteristics of the firm. In turn, bankruptcy costs can be estimated from research and studies on the subject.

1.2.4. Dividend Discount Model

The Dividend Discount Model (DDM) is considered the simplest model to evaluate a company, since when an investor invests in the company the cash flow he expects to receive is precisely the dividends (Damodaran, 2002). DDM evaluates the company through the present value of the dividends that will be paid as shareholders of the company. Therefore, this model is based on the premise that the return that shareholders will receive is the dividends paid by the company.

There are several approaches to this method, however the general formula is as follows:

$$V_0 = \sum \frac{E(DPS_t)}{(1 + r_E)^t} \quad [18]$$

Being:

- V_0 – Current stock value;
- $E(DPS_t)$– Expected dividends per share.

However, since it is not possible to estimate dividends in perpetuity, several models have emerged to overcome this disadvantage. The simplest model, the Gordan Growth Model, is premised on valuing stocks assuming the company is stable, pays dividends and that its dividends will grow infinitely at a constant growth rate. This model, although simple, can lead to errors in the results, caused especially by the sensitivity of the growth rate, with better performance in companies whose growth rate is comparable or lower than the economy's and that have, at the same time, dividend payment policies regarding the future (Damodaran, 2002). Gordan Growth Model is computed as follows:

$$V_0 = \frac{D_1}{(r_E - g)} \quad [19]$$

Being:

- D_1– Expected dividend payable at the next period.

However, it is also possible to assume that dividends will grow at a steady rate but not immediately but in the future, this approach is called Two-Stage DDM, and works well for companies that are expected to have low or negative growth rates for a few years and then recover to a stable growth rate thereafter. In this case, the dividends for the first years are foreseen, starting to show a constant growth rate from year n, as shown in the following equation:

$$V_0 = \frac{D_1}{(r_E - g)^1} + \frac{D_2}{(r_E - g)^2} + \frac{D_3}{(r_E - g)^3} + \frac{\frac{D_n}{(r_E - g)}}{(1 + r_E)^{(n-1)}} \quad [20]$$

There are also other models such as the H Model for valuing growth and the Three-Stage DDM. The first, presented in 1984 by Fuller and Hsia, is a two-stage model in which in the first stage the growth rate decreases linearly until reaching the second stage in which it remains constant over time. The second one goes through a first stage of high and stable growth over time, moving to the second stage where the growth rate decreases until reaching the third stage which corresponds to a normal growth rate and also stable over time.

1.2.5. Economic Value Added

"Economic value added (EVA) is a commercial implementation of the residual income concept" (Pinto *et al.*, 2010). EVA method aims to calculate the real economic profit of a

company for its shareholders by evaluating it based on the difference between its operating profitability and the cost of capital invested (Chen, 2020).

EVA is another name that can be given to the economic profit of the company, and to estimate it requires three elements, the calculation of the operating profit of the company, the calculation of the cost of capital and the comparison between the first two, and the difference between them is the EVA (Larrabee & Voss, 2013). Therefore, the formula for EVA is as follows:

$$EVA = NOPLAT - (WACC \times Invested\ Capital) \quad [21]$$

Knowing that:

$$ROIC = \frac{NOPLAT}{Invested\ Capital} \quad [22]$$

So, EVA can also be represented as follows:

$$EVA = (ROIC - WACC) \times Invested\ Capital \quad [23]$$

Related to EVA is Market Value Added (MVA), with the main difference between the two being that the latter incorporates market values in its calculations (Larrabee & Voss, 2013). The formula for the MVA is as follows:

$$MVA = \sum_{t=1}^{n} \frac{EVA_t}{(1 + WACC)^t} \quad [24]$$

So, in this method EV and EQV are computed as follows:

$$EV = MVA + Invested\ Capital \quad [25]$$

$$EQV = EV + Non\ Operating\ Assets - Net\ Debt - Minority\ Interests \quad [26]$$

1.3. Relative Valuation

Multiple's valuation represents the market value of a company in relation to a given multiple, which is usually a ratio. Thus, the valuation is made based on the price that similar assets (peer group) have in the market, and these assets must belong to the same industry and present risk and growth potential also similar to the company to be evaluated (Damodaran, 2006b).

According to Damodaran (2006b), the first step to evaluate a company making use of multiples is to find assets quoted by the market that are like the one being evaluated. Then, making use of common variables, it is necessary to standardize the prices to be compared to ensure a fair comparison between assets that may vary in size or units. Finally, the existing differences between the assets in question that already have their standardized values should be adjusted.

There are several categories of multiples, such as income-based multiples, which include the Price-to-Earnings ratio (PE Ratio), and those more linked to the value of the company such as the EV/EBITDA, the EV/EBIT, and the EV/NOPLAT ratios. There are also multiples that are based on the book value, such as the Price-to-Book value (P/B) and the EV/IC ratios. In its turn, the Price-to-Sales and EV/Sales ratios are multiples which base their value on revenues. Finally, and not so common, are multiples based on non-financial specificities of the industry concerned i.e., industry-specific multiples.

1.4. Contingent Claim Valuation

In recent years, and contrary to what has happened with DCF and relative valuation methods, studies have been developed to create more option pricing models that are able to value any asset that presents option characteristics (Damodaran, 2006b). These types of approaches are useful especially "for cases in which someone does not have a 100 percent claim on the cash flows of an asset" (Larrabee & Voss, 2013).

According to Damodaran (2002) a contingent claim pays off but only under certain circumstances, namely when the value of the underlying asset is higher than the price of a call option or lower than the price of a put option.

CHAPTER 2

Market Overview

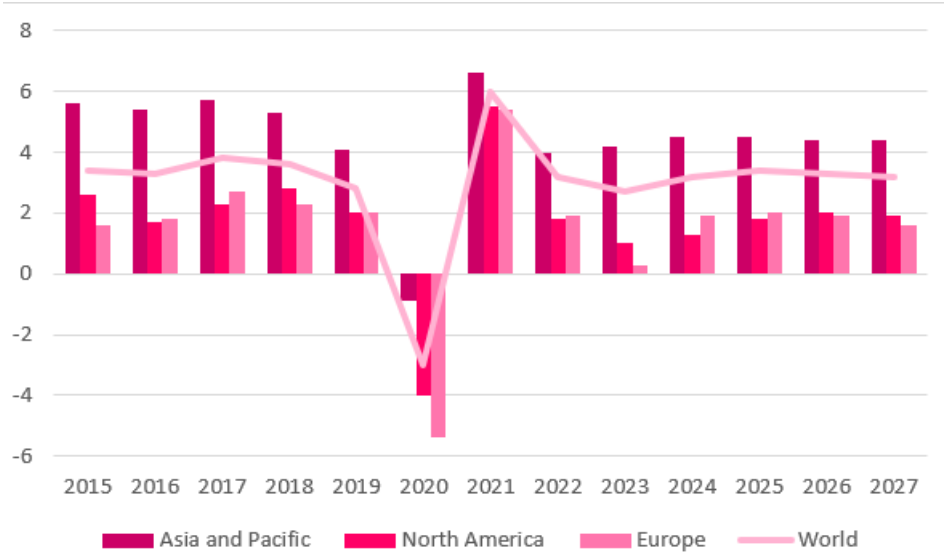
2.1. Macroeconomic Overview

2.1.1. Gross Domestic Product

GDP measures the value added that is created from the production of goods and services in each country or region. Thus, it is a measurement of the income obtained from such production i.e., the total amount spent on goods and services, disregarding imports. GDP is considered the most common and important indicator for tracking the economic activity of a country or region.

In the graph below (figure 1) is represented the real GDP growth for the 3 main geographical areas where L'Oréal is represented[1], as well as for the whole world.

Figure 1. Real GDP Growth. *IMF World Economic Outlook, April 2022.*



Analyzing the chart above, the annual percentage change in the GDP of the Asia and Pacific region kept values between 5,3% and 5,7%, decreasing in 2019 and even having negative variation in 2020. The same is observed in North America and Europe, with the latter reaching -5,4% in 2020. From the graph one can see that the global economy shows the same trend as the regions already mentioned.

[1] Source: L´Oréal. 2022. *2021 Annual Report.*

This sharp decrease in the annual percentage change in GDP in 2020 is essentially due to the worldwide pandemic caused by COVID-19. The pandemic proved to have implications not only on the health of the populations but also on the world economy, due to the restrictive measures imposed by governments to combat COVID-19, which in many cases meant closing business establishments.

Although the year 2020 presents itself as an extremely negative year, it is also considered an atypical year. Thus, the forecasts for the following years are quite optimistic with an exponential growth in 2021, with percentages around 5,4% (Europe), 5,5% (North America) and 6,6% (Asia Pacific).

In 2022, and as the invasion of Ukraine by Russia is expected to extend in time, the impact that this situation has had on the GDP is already evident. This war that settled on European territory made the countries of the European Union (EU) to increase their spending on security, as well as rethink their entire energy system, since much of this system came from Russia. This whole situation impacted the budgets of the EU countries and, as a result, the GDP.

For Europe, the expectations for GDP growth in 2023 are even weaker than in 2022, but it is expected to recover in 2024, and thereafter to stabilize at around 1.9%.

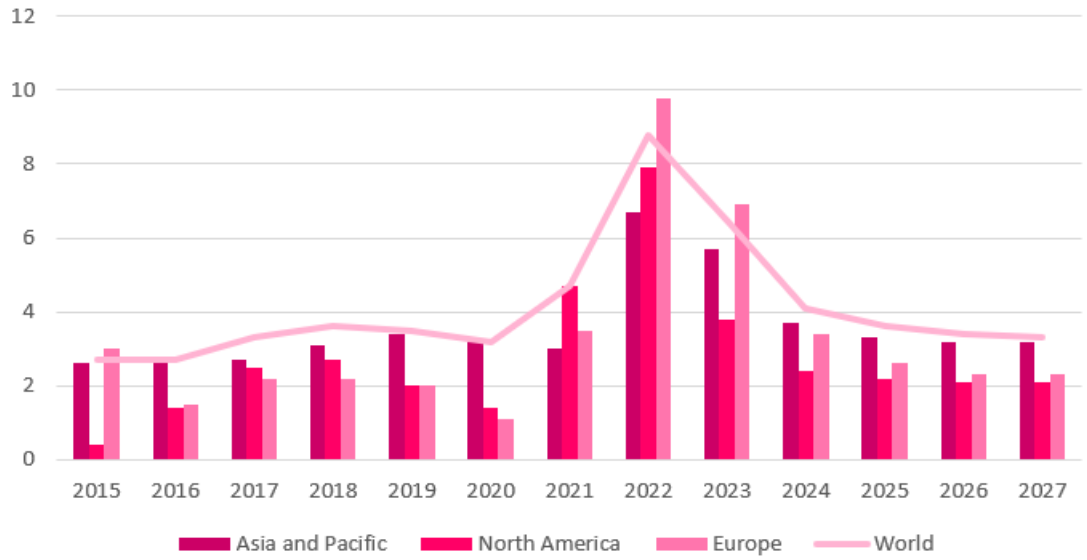
2.1.2. Inflation Rate

Inflation relates to an overall increase in the Consumer Price Index. In turn, the CPI is the weighted average price for different goods. The basket of goods that constitute the index depend on the goods that are considered to represent a common consumer basket according to the population's consumption habits, and thus vary from country to country. Finally, the annual inflation rate refers to the variation of the CPI, in percentage terms, compared to the same month of the previous year.

In the graph below (figure 2) is represented the inflation rate for the 3 main geographical areas where L'Oréal is represented[2], as well as for the whole world.

[2] Source: L´Oréal. 2022. *2021 Annual Report.*

Figure 2. Inflation Rate. *IMF World Economic Outlook, April 2022.*



The huge inflation felt around the world in 2022 limits the purchasing capacity of consumers who see price increases far outstripping increases in their incomes[3]. This is mainly due to problems in the energy supply chains, as well as disturbances in energy prices caused by the war in Ukraine.

Energy prices increased by 42% in June 2022, resulting in a 4,2-percentage point addition to headline inflation, with this being the major driver for the exponential increase that is occurring at inflation level. This increase has been felt around the world, but mainly in Europe where the Member States of the European Union (EU) have been imposing several sanctions on Russia for the invasion of Ukraine, thus forcing a complete review of the EU's energy policy to reduce the dependence that these countries have on Russian energy. However, this war did not only have an impact on the energy level since food inflation also suffered a significant increase as both countries involved in the war are major producers and exporters of agricultural products.

Inflation reached 8,6% in the United States of America (USA) in June 2022, the highest value in the last 40 years. The European Union, for its part, was experiencing inflation of 10,9% in September 2022[4]. This has led the world's main central banks, such as the Federal Reserve in the USA and the European Central Bank, to raise the interest rates to slow down economic expansion and to control inflation.

[3] Source: Euromonitor International from national statistics. 2022. *Global Inflation Tracker Q3 2022: Inflation May Have Peaked but Energy Prices Continue to Cause Headwinds.*
[4] Source: EPRS | European Parliamentary Research Service. 2022. *Inflation explained: What lies behind and what is ahead?*

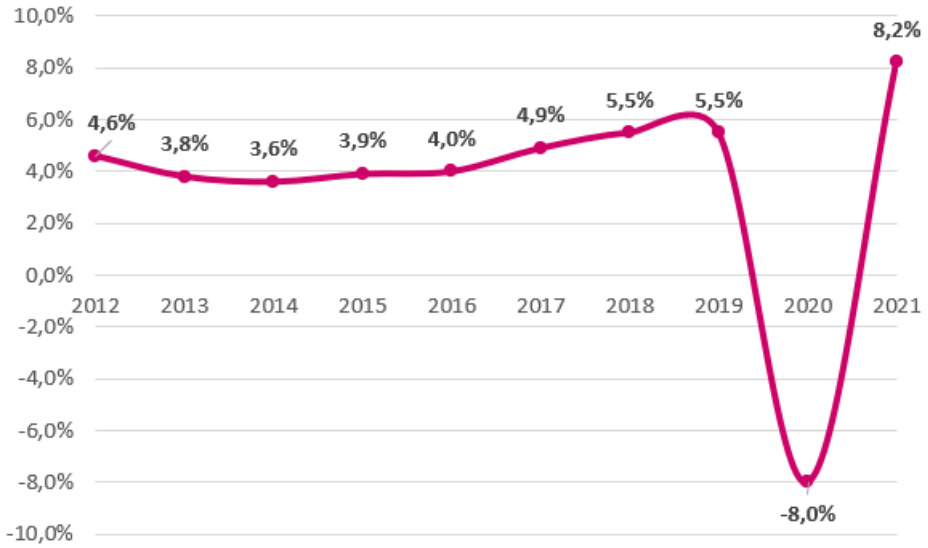
Thus, the forecasts indicate that, with the continued growth of energy prices, inflation will remain high in 2023, especially in countries that depend more on energy imports from Russia, such as Germany, Spain, and Italy[5]. However, several asset markets in the world, due to the monetary policies implemented by central banks, estimate that the economic reception will be modest and that in 2023 it will be possible to return to a more favorable monetary policy. We can observe that the forecasts (figure 2) point to the same, that is, they show a high inflation in 2023 but that, despite this, is much more favorable than in 2022.

2.2. Industry Overview

2.2.1. Cosmetics Market

The cosmetics market, estimated at more than 228 billion euros[6], is considered robust which is why it has survived well and with resilience the current global crisis caused by the pandemic COVID-19. Due to the supply crisis that was experienced during the year 2020 caused by the pandemic, the cosmetics market showed a negative growth of -8%, as can be seen in the figure below (figure 3).

Figure 3. Cosmetics Market Growth. *L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects, 2022.*



[5] Source: World Economic Forum. 2022. *Inflation's paradigm shift, explained.*
[6] Source: L'Oréal. 2022. *L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects.*

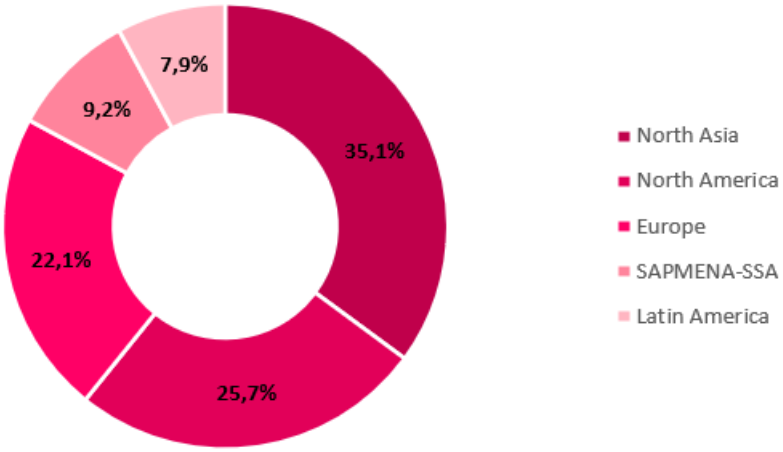
The pandemic also had impacts on the cosmetics market, as could be observed, with sales being much lower when compared to previous years. However, it was found that the market responded quite positively to the constrains generated by the pandemic, in many cases going on to manufacture hand sanitizers and cleansers, as well as offering completely free beauty services to individuals who were fighting the pandemic on the front lines[7]. Also, the reopening of stores and the growth of eCommerce helped the market to recovery from the damages caused by the pandemic. Thus, and despite the negative growth rate in 2020, the market exponentially recovered in 2021 presenting a growth of 8,2%. Also, it is expected for the market to reach 667.6 billion euros ($784.6 billion) by 2025[8]. This potential growth is stimulated by the predicted rise of the upper middle class, the increase in the number of elderly people, and the growth of the urban population.

This market, clearly oriented towards innovation with consumers extremely concerned with the quality of the products, as well as with their performance and above all with the results that the consumer perceives when using each of the products, has as major players, with more than 50% of the market L'Oréal (31,95 billion dollars in sales) and Unilever (22,17 billion dollars in sales)[9]. Completing the top 5 biggest players in the cosmetics market are Esteé Lauder, Procter & Gamble and Shiseido with 14,2, 14 and 8,39 billion dollars in sales, respectively.

In terms of geographic areas (figure 4), the regions of North Asia and North America dominate the cosmetics market with market shares of 35,1% and 25,7%, respectively. In third place and with an equally significant share is Europe with 22,1%. On the other hand, the SAPMENA-SSA (South Asia Pacific, Middle East, and North Africa) and Latin America regions are the least dominant in the market with only 9,2% and 7,9%, respectively.

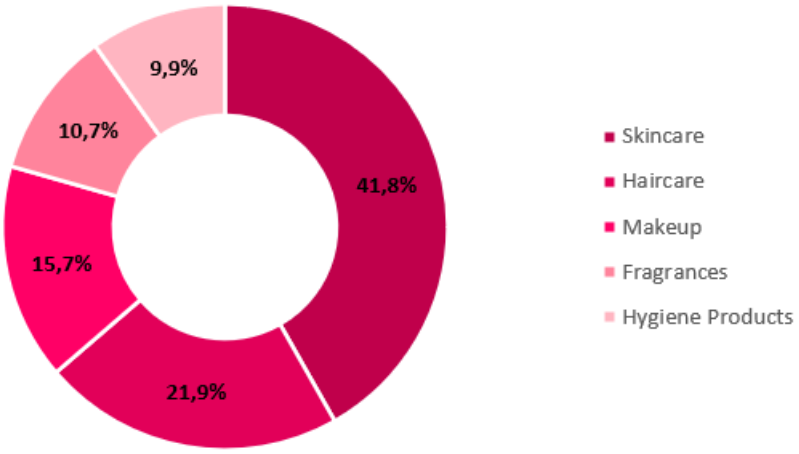
[7] Source: McKinsey & Company. 2020. *How COVID-19 is changing the world of beauty.*
[8] Source: Common Thread Collective. 2022. *2022 Beauty Industry Trends & Cosmetics Marketing: Statistics and Strategies for Your Ecommerce Growth.*
[9] Source: WWD. 2022. *Beauty Inc Unveils Top 100 Global Beauty Manufacturers.*

Figure 4. Market Breakdown by Geographic Areas. *L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects, 2022.*



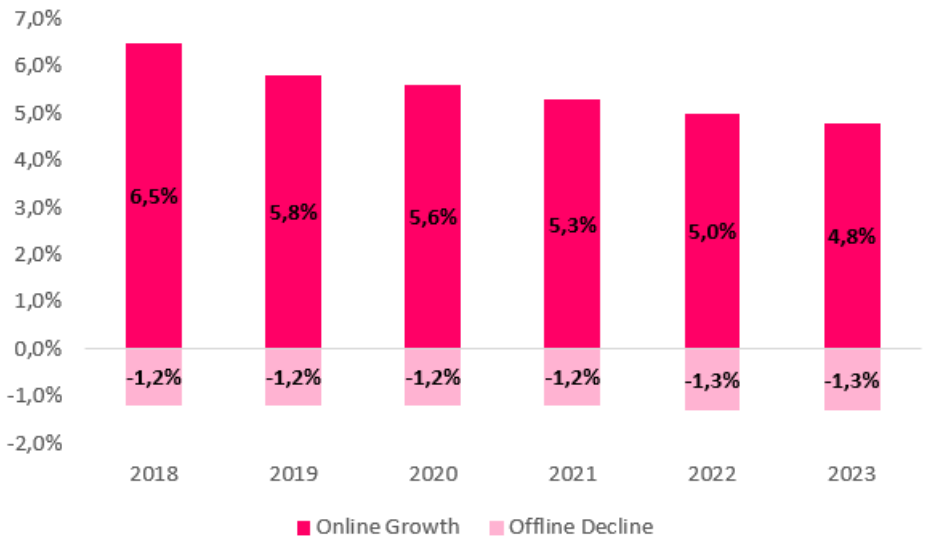
In terms of business segments (figure 5), the skincare segment alone accounts for 41,8% of the cosmetics market. Then comes the haircare segment with 21,9% of the market, which means that together with the skincare segment it makes up more than half of the entire cosmetics market. On the opposite side are the fragrances and hygiene products segments with 10,7% and 9,9% each.

Figure 5. Market Breakdown by Business Segments. *L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects, 2022.*



At last, it is important to talk about eCommerce, which has followed a growing trend in recent years.

Figure 6. Online vs. Offline Sales Channels. *2022 Beauty Industry Trends & Cosmetics Marketing: Statistics and Strategies for Your Ecommerce Growth, 2022.*



As can be seen in the figure above (figure 6), offline channel has declined by 1,2% and 1,3% since 2018 and the trend is expected to continue in the coming years. In turn, and in a contrary trend, online has grown tremendously in recent years, having the highest growth rate in 2018. Despite continuing to show growth rates, which are expected to continue in the future, the rate has been slightly decreasing over the years with 6.5% in 2018 and an expected rate of 4.8% in 2023.

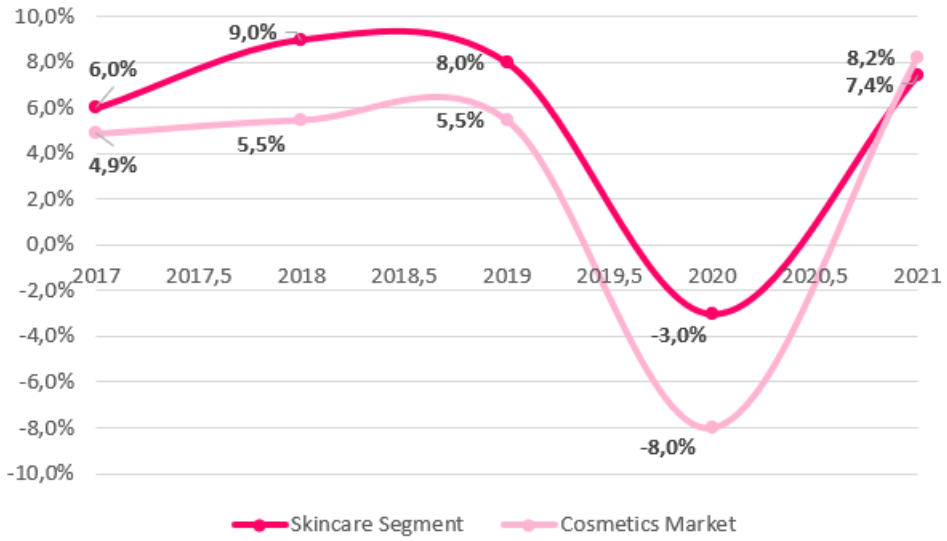
2.2.1.1. Skincare Segment

Skincare products are those that relieve and improve the conditions of the skin to improve its appearance. These products can be available in many forms such as facial skincare (creams, serums, masks, among others), facial cleansers, body care and sun protection[10]. This segment is the one with the largest share in the cosmetics market, making up 41,8% of the total market.

[10] Source: L'Oréal. 2022. *L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects.*

Skincare segment, which is valued at, approximately, 126 billion euros ($130,5 billion)[11], along with the cosmetics market showed a growth rate of 7,4% in 2021, as is shown in the graph that follows (figure 7) making a recovery from the negative growth rate of -3% presented in 2020. Also, the segment is estimated to grow at a compound annual growth rate (CAGR) of 4.69% from 2022 to 2030. The COVID-19 pandemic negatively impacted the economy in 2020, since it influenced consumers' spending habits and purchase decisions, leading to a slight decline in the market growth for cosmetics and, albeit to a lesser extent, for skincare, leading to the sharp decrease felt in the market in 2020.

Figure 7. Skincare Segment Growth vs. Cosmetics Market Growth. *L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects, 2022.*



Furthermore, it can be seen in the chart (figure 7) that in 2021 the skincare segment had a lower growth rate than the cosmetics market. However, from 2017 until 2020 the skincare segment achieves considerable growth, exceeding in those same year the growth of the total market, peaking in 2018 with a growth rate of 9% versus the 5.5% of the market.

[11] Source: Grand View Research. 2022. *Skin Care Products Market Size, Share & Trends Analysis Report By Product (Face Creams & Moisturizers, Shaving Lotions & Creams), By Gender, By Distribution Channel, By Region, And Segment Forecasts, 2022 - 2030.*

In the last five years, overall, the skincare segment has been growing at a much faster rate than the overall market or any other segment of the industry. This growth is linked to trends such as the growing desire to own health-promoting and self-care products, the increased interest in the power that regimens and routines promote on skin health, and the possibilities that new technologies bring to simplify the choices that consumers make regarding skincare products as well as in interacting with brands[12]. In addition, the growing interest and concern that consumers have for their skin leads them to seek out products that previously did not particularly appeal to them. The effects that pollution, sun, and daily stress cause and that also have many implications on the skin, namely on its quality and aging, is also one of the factors that lead to this growing increase in interest in skincare and consequently to its growth in terms of sales.

The popularity of skincare products, changes in the lifestyle habits of the population as well as the growth in purchasing power has driven and is expected to help the development of this segment in the future. Moreover, considering the growth of the segment and its future potential there has been a large investment in the development of new products by brands operating in the market, implying an increase in the number of new product launches which, in turn, will contribute to an increasing development of the segment[13].

Additionally, one of the major growth drivers of this segment is the increase in the younger population, specifically Generation Z, which represents about 39,1% of the world's total population[11]. This generation, in search of brands that align with their values and influenced by online advertising, particularly in social media, has shown a concern for purchasing skincare products, which has been one of the main drivers of this segment's growth.

[12] Source: Automat. 2021. *Why Is The Skincare Market Growing At Such Breakneck Speed?*
[13] Source: Fortune Business Insights. 2021. *Skincare Market Size, Research, Share & Global Trends | 5.24% Compound Annual Growth Rate Forecast till 2026.*
[11] Source: Zion Market Research. 2022. *Insights on Global Skin Care Products Market Size & Share Projected to Hit at USD 1719.1 Million and Rise at a CAGR of 11.1% By 2028: Industry Trends, Demand, Value, Analysis & Forecast Report | Zion Market Research.*

CHAPTER 3

Company Overview

3.1. Profile

L'Oréal S.A. is a company of French origin, where its headquarters are also located, which sells specifically in France while acting as a holding company for the entire L'Oréal Group, providing it with the strategy and technical and scientific coordination by which the Group must be guided. The subsidiaries, which together with L'Oréal S.A. form the L'Oréal Group, carry out commercial activities in their country or region.

The company, the world leader in cosmetics, has four divisions, each guided by a specific vision of beauty, a universe of consumers, and distribution channels. Their purpose "Create the beauty that moves the world" is to show the world that they are a highly responsible, inclusive, and caring company. This is also demonstrated by their mission, "Beauty for all", which inspires teams around the world to create and offer the best cosmetic products in terms of quality, responsibility, effectiveness, and safety, to both women and men around the world to meet their needs according to their wishes and considering the great diversity that exists.

L'Oréal has 85,412 employees, with 55% of the company's key roles being occupied by women. This is one of the reasons why L'Oréal was recognized for the 12th time by the Ethisphere Institute as one of the most ethical companies in the world. Bloomberg also recognized L'Oréal, for the 5th time, as one of the most advanced companies in its area regarding gender equality.

Although the cosmetics market has suffered a large decrease in its sales due to the whole crisis generated by the pandemic of COVID-19, L'Oréal has reconfirmed its position as the world's leading cosmetics group. Present in over 150 countries, Europe region has the greatest weight in L'Oréal's sales, 31,5%, followed by North Asia and North America, with 30,5% and 25,3%, respectively.

L’Oréal has presented, in 2021, a net profit that amounted to €4.597,1 million and sales amounting to €29,87 billion. Of the total sales recorded in 2021, €9,3 billion relate to sales through the digital channel, a channel that has seen a growth of 26% compared to 2020. The company is listed on the Euronext Paris market and integrates CAC 40, a stock market index that gathers the 40 largest companies listed in France, having a market cap of 232,5 billion[14].

3.2. History

At the beginning of the 20th century, more precisely in 1909, a young French chemist named Eugène Schueller formulated a hair dye that he later manufactured and sold to hairdressers in Paris, which he named L'Auréale in allusion to the warm tones that women wanted to obtain with coloring, something that was a trend at the time. Thus, Eugène founded the company that would later form the L'Oréal Group and whose guiding principles for research and innovation in beauty are still part of the DNA of L'Oréal, the official name of the company since 1939.

Eugène's daughter Liliane was born in 1922 and at the age of 15 began her journey at L'Oréal as an apprentice, labeling bottles and stirring products. Eugène dies in 1957, thus leading Liliane, then 35 years old, to inherit L'Oréal, being part of the Board of Directors until 1995, then taking on the role of Director of the Board until 2012. It was precisely from 1957 until 1983 that the formative years of "Le Grand L'Oréal" took place, marked by exponential growth during which, largely on the initiative of Chairman François Dalle, the L'Oréal Group began to expand internationally through the strategic acquisition of certain brands, like Garnier, Lancôme, Biotherm e Vichy. It is also during this period that some of the company's most emblematic products appear, such as Elnett hair spray, the Majirel coloring system, and Kerastase products.

The years 1984 to 1987 are years marked by a great growth that derived, essentially, from the investments made by the Group in the research area. This change in the Group's paradigm was due in part to the change of Chairman, with Charles Zviak, considered by many to be a pioneer in the areas of research and development, taking over from François Dalle. In addition, this period is also marked by the launch of iconic brand products that helped strengthen L'Oréal's brand image at the time such as Lancôme's Niosôme, a cream with an anti-aging system.

[14] As of 31 December 2021.

From 1988 to 2005, and during Lindsey Owen-Jones' time as head of the L'Oréal Group, the Group became the world leader in cosmetics. This was achieved through L'Oréal's own brands as well as acquisitions, such as La Roche-Posay, Redken, Maybelline, Kiehl's and SkinCeuticals.

L'Oréal, which started its activity with hair color products, has today several brands and thousands of products ranging from hair products, skin and body care, makeup and even perfumes, which are spread through various distribution channels. In the last 15 years it has grown even more through the acquisition of companies such as Yves Saint Laurent, Urban Decay, Carita, Decléor, NYX Professional Makeup, Atelier Cologne, IT Cosmetics, CeraVe, Azzaro, among others. Today, under Nicolas Hieronimus (Chief Executive Officer), L'Oréal is committed not only to business, through acquisitions, but also to ethical and social responsibility initiatives in pursuit of sustainable development for everyone.

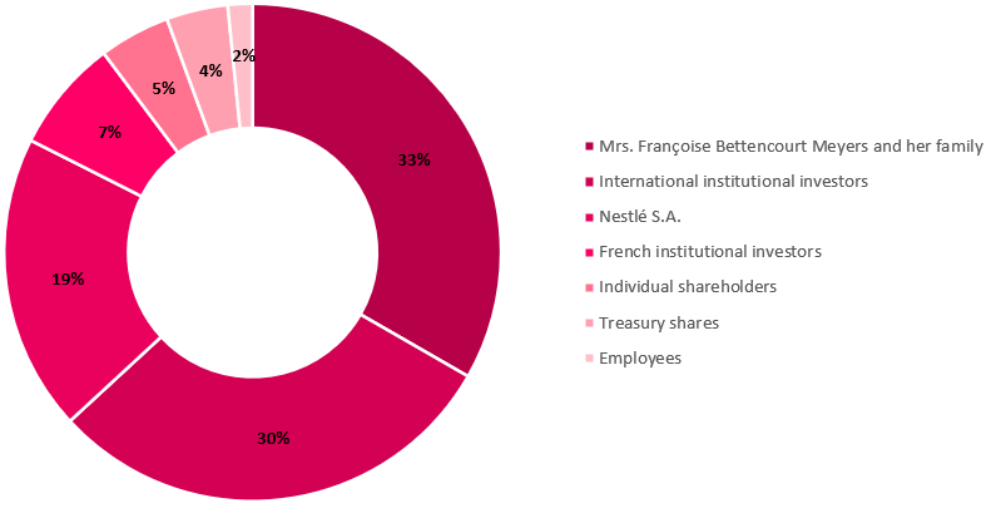
3.3. Shareholder Structure

As of December 31, 2021, L'Oréal's share capital consisted of a total of 557.672.360 shares.

The largest shareholder of the company with 33,30% is Mrs. Françoise Bettencourt Meyers and her family, consisting of Mr. Jean-Pierre Meyers, Mr. Jean-Victor Meyers, and Mr. Nicolas Meyers, along with Téthys SAS.

The other shares are held by International institutional investors, 29,84%, by Nestlé S.A., 19,30%, by French institutional investors, 7,34%, by Individual shareholders, 4,62%, by Treasury shares, 4,00%, and by Employees, 1,60%.

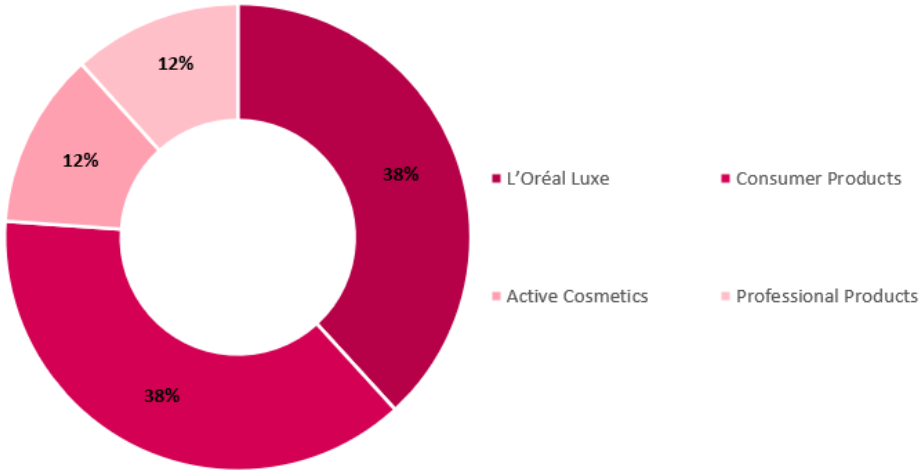
Figure 8. L'Oréal's Shareholder Structure as of 31 December 2021. *L'Oréal 2021 Universal Registration Document, 2022.*



3.4. Business Areas

L'Oréal's business areas are made up of four divisions and the support functions. Within the divisions, the two that have the greatest weight in the company's sales are L'Oréal Luxe with 38,2% and Consumer Products with 37,9%, as it can be seen in the figure below.

Figure 9. Breakdown of Sales by Divisions. *L'Oréal 2021 Universal Registration Document, 2022.*



3.4.1. Consumer Products

The Consumer Products business area, which includes brands such as L'Oréal Paris, Garnier, Maybelline New York, and NYX Professional Makeup has as main goal guarantee everyone accesses to the best products in the beauty world.

Consumer Products division had a sales variation of 5,6% compared to the previous period, having increased its market share by 2021, especially in countries like the United States of America, India, Brazil, Mexico, and Indonesia. This growth is mainly due to the high development and expansion of e-commerce.

All segments of this area contributed positively to this growth. In makeup, Maybelline's Sky High eyelash mascara went viral on the Internet, especially on the social network TikTok, to the point of becoming the brand's most successful launch. In haircare and skincare, we highlight, respectively, the launch of Dream Lengths Wonder Water by Elsève and Garnier's successful serum, Vitamin C Serum. It is worth noting that this growth is also due to the creation of successful partnerships such as the one between NYX Professional Makeup brand and one of the most successful Netflix series, La Casa de Papel (Money Heist).

L'Oréal has thus reinforced in 2021 its position in this business area with sales that exceed 6 billion euros.

3.4.2. L'Oréal Luxe

L'Oréal Luxe aims to provide consumers with high quality products and experiences, which is why it has a portfolio of prestigious and iconic brands such as Lancôme, Yves Saint Laurent Beauté, Giorgio Armani Beauty, Urban Decay and Prada.

This business area also showed great growth of 20,9% in sales compared to the previous period. With the closure of many points of sale due to the COVID-19 pandemic and the restrictions imposed, investment was made in e-commerce, especially B2C (Business to Consumer) had seen a decrease in 2020, now recovering in 2021 to levels like the ones reported before the pandemic, becoming the largest division of the group, in terms of sales.

The area's strong growth is mainly due to the skincare brands Lancôme Absolue and Helena Rubinstein, as well as anti-aging products such as Kiehl's Retinol Skin-Renewing Daily Micro-Dose Serum. The company also stood out in the fragrance segment due to the strength of iconic products such as Libre by Yves Saint Laurent and successful launches such as Alien Goddess by Mugler and Luna Rossa Ocean by Prada.

Although the area has strengthened its position in all geographic areas, it is worth highlighting the growth in market share obtained in North Asia, and its performance in Europe.

3.4.3. Professional Products

The Professional Products business area, in existence for more than 100 years, aims to help beauty professionals by providing them with products and expertise. To continue providing solutions tailored to each professional, it has a portfolio of excellent brands, including brands such as L'Oréal Profissionnel, Kérastase and Redken.

The area showed a strong increase of 24,8% in sales, thus gaining historic market shares in all the geographical areas where the company operates. This growth was due not only to an increase in investment in the e-commerce channel but also to maintaining its strong presence in salons thus allowing the maintenance of its physical sales. In this area the haircare segment stands out, which showed a great evolution due to products that proved to be a success such as Curl Manifesto by Kérastase, Metal Detox by L'Oréal

Professionnel and the Acidic Bonding Concentrate by Redken. It should also be noted that the hair color segment had a great recovery this year, also contributing to the growth of the area due to products such as Shades EQ by Redken and Dialight by L'Oréal Professionnel.

3.4.4. Active Cosmetics

The business area of L'Oréal that aims to help consumers in the search for a beautiful and healthy skin is Active Cosmetics. For this, it has a portfolio of complementary brands that intend to follow emerging trends in skincare, as well as the recommendations of health professionals. This portfolio includes brands such as Vichy, La Roche-Posay, CeraVe and SkinCeuticals.

This was the L'Oréal business area that showed the highest sales growth of 31,8% over the previous year. These numbers allowed the area to reach its highest growth in more than 20 years. This growth is due to two crucial factors, the relationship that the brands in the L'Oréal portfolio have developed with healthcare professionals and the growing concern that consumers have been showing towards health and, consequently, towards skincare. E-commerce plays a leading role in the growth of the area, together with online (digital activation) and physical (in-store initiatives) communication initiatives.

The brands that stood out, strongly contributing to the growth of the area were CeraVe, La Roche-Posay and SkinCeuticals, as they are recommended by health professionals, being simultaneously allied with the expectations and aspirations of consumers. CeraVe stands out, being considered one of the top five brands of dermo cosmetics, because of strong growth in the United States and highly promising expectations in the rest of the world.

3.4.5. Support Functions

At L'Oréal there are seven non-core business areas, called support areas.

Research, Innovation and Technology is the department responsible for carrying out advanced and applied research and technologies. This department has scientists working in laboratories and test rooms who, even during the pandemic, mobilized allowing L'Oréal to continue to develop its portfolio of innovations.

The Digital and Marketing department’s main objective is to accelerate L'Oréal's digital transformation. This process involves helping the teams of the various brands to build closer, interactive, and personalized relationships with their consumers. The second objective of this area is to ensure that the remaining teams are making the best use of the business opportunities that digital can offer them as a distribution channel.

The department responsible for packaging design, sourcing, production, and information systems is the Operations department. Its main objective is to ensure to consumers that L'Oréal comply with quality, safety, and protection standards, as well as the applicable standards in terms of social and environmental responsibility.

The Human Relations department is responsible for all activities involving L'Oréal employees, namely recruitment and selection and training and development.

L'Oréal's financial policy is the responsibility of the Administration and Finance department. This department is also responsible for managing the consolidation process, acquisitions, legal and tax coordination, financial reporting, among others.

All L'Oréal communication is the responsibility of the Corporate Affairs and Engagement department.

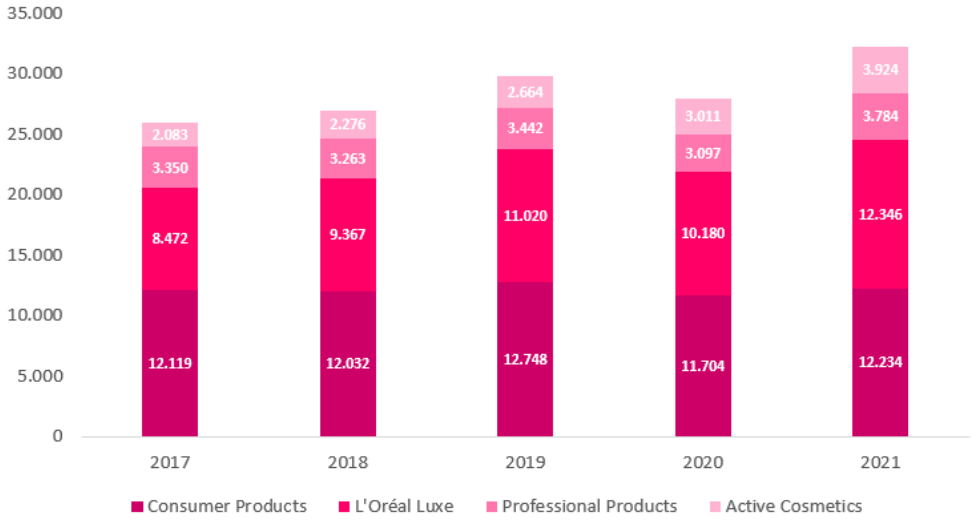
Finally, the Corporate Social Responsibility department is responsible for the environmental and social policies implemented at L'Oréal. This department is also in charge of all charitable actions and public engagement projects.

3.5. Financial Analysis

3.5.1. Profitability

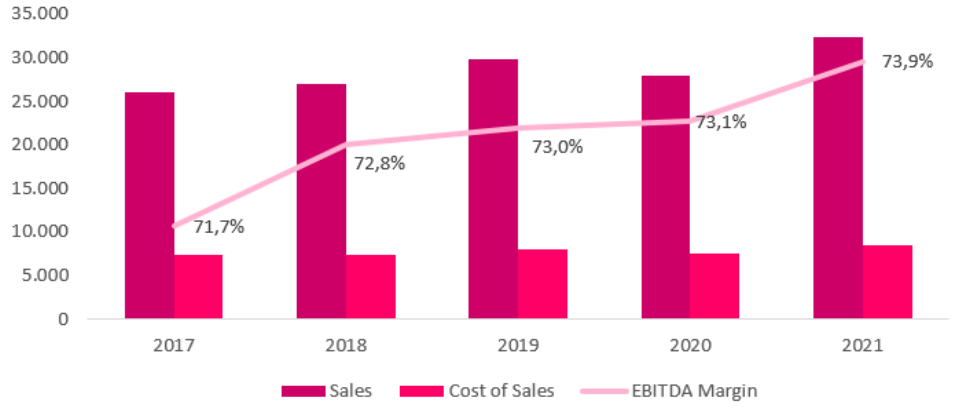
Looking at figure 10 it is possible to see that between 2017 and 2021 there was a 24% growth in sales. This variation was mainly driven by growth in the Active Cosmetics division followed by the L'Oréal Luxe division which grew by 88% and 46% respectively over the same period. Despite lower both Professional Products division and Consumer Products division showed increases of 13% and 1%, respectively, over the years 2017 and 2021.

Figure 10. Breakdown of Sales by Divisions (in million €). *L'Oréal Universal Registration Document.*



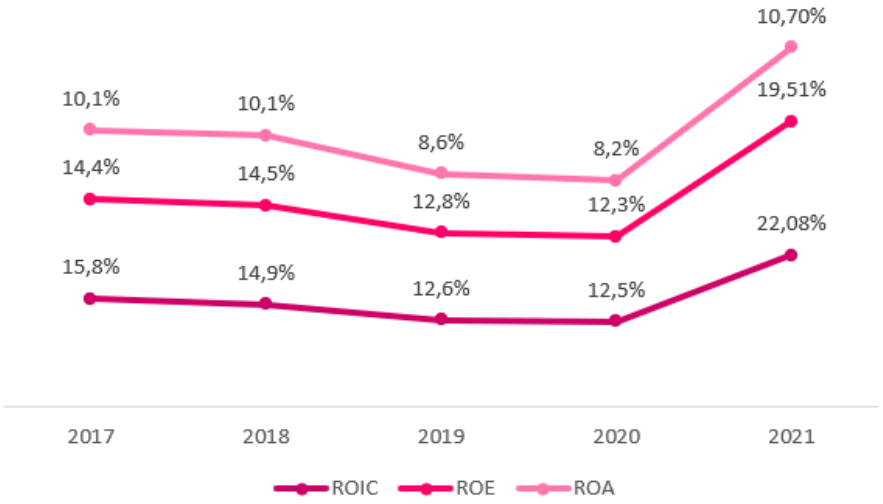
L'Oréal's EBITDA margin presents an average of 72,9% between the years under analysis. As can be seen in figure 11, EBITDA margin has been growing over the years, presenting in 2021 the amount of 73,9%, which is above of the average of 72,9%. Compared to 2020, it can be observed that there was a significant increase in sales, at the same time as there was also an increase in the cost of those same sales, which allowed the EBITDA margin to slightly grow.

Figure 11. Sales, Cost of Sales, and EBITDA Margin (in million €). *L'Oréal Universal Registration Document.*



In figure 12, all three return ratios analyzed show an increase between the years under review. The ROIC increased from 15,8% to 22,08% between the years under analysis, which indicates that the company has been showing more ease in generating income with its invested capital.

Figure 12. Return Ratios. *L'Oréal Universal Registration.*

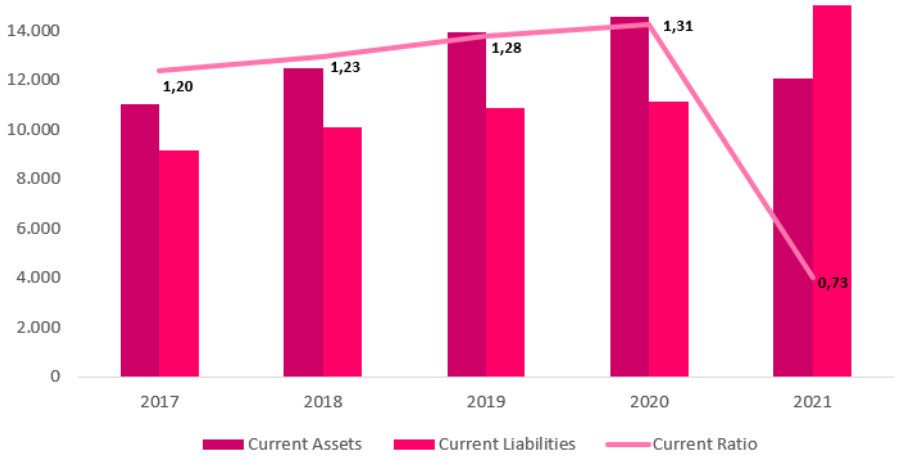


In its turn, ROE and ROA have been increase, especially between the years 2020 and 2021, meaning that the company has more ability to generate income from its equity and assets, respectively. The biggest peak between these years is exactly due to an decrease in equity or assets that was accompanied by a substantially increase in Net Income, rather than a decrease.

3.5.2. Liquidity

The ratio analyzed, in figure 13, is the current ratio and allows to measure a company's ability to pay its short-term obligations with its short-term assets. To this extent, the higher the ratio, the better the company's liquidity position. By observing the image, it is possible to understand that the current ratio has been growing since 2017, showing a decrease in 2021of an amount of 0,73, i.e., the company has less short-term assets than short-term liabilities.

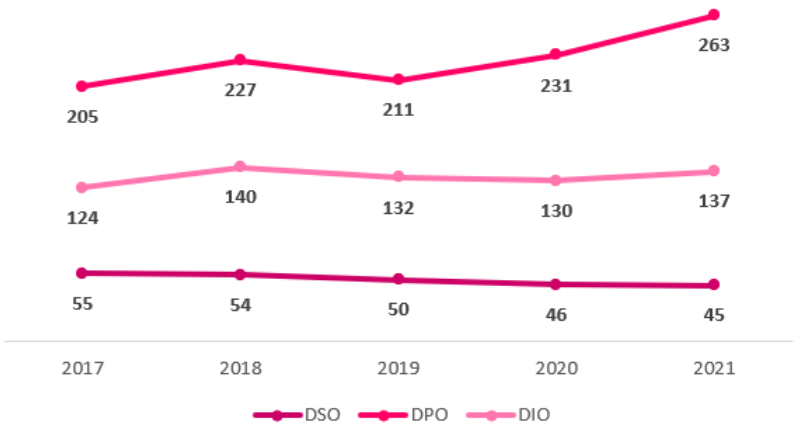
Figure 13. Current Ratio. *L'Oréal Universal Registration. Own Estimates*



Day of Sales Outstanding (DSO) and Day of Inventory Outstanding (DIO) have remained stable between 2017 and 2021, as shown in the table below. The DSO, in addition to having a relative stable average of 50 days, has been decreasing in its receivables over the years. This means that L'Oréal is managing to ensure good and efficient collection of its credit sales. Therefore, since the period that customer receivables remain on the balance sheet is short, this is a good indicator of liquidity.

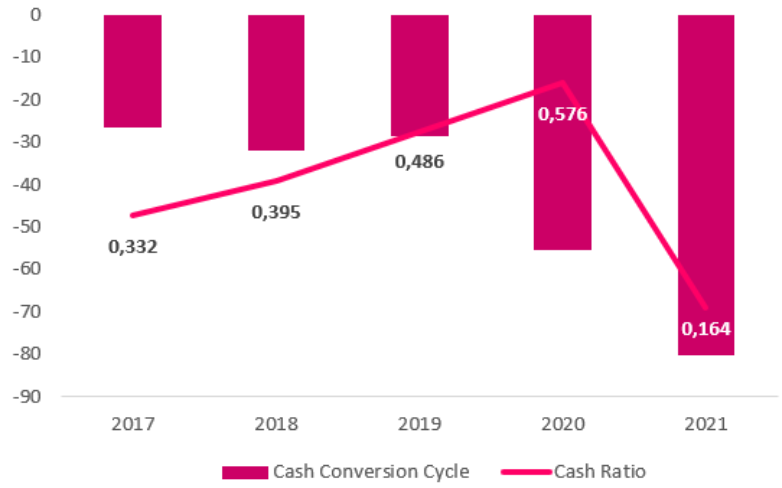
In the case of Day of Payable Outstanding (DPO), it has been growing, showing a slightly steeper increase from 211 to 263 between the years 2019 and 2021, respectively. This means that L'Oréal, with its average DPO of 227, has a high bargaining leverage towards its suppliers. This is also a good liquidity indicator because having a higher payment term to suppliers means that the company has more cash available for short-term investments.

Figure 14. DSO, DPO and DIO. *L'Oréal Universal Registration. Own Estimations.*



We can also look at L'Oréal's Cash Conversion Cycle, which has not only always been negative in the years under review but has also decreased a lot in the last year, from -27 days in 2017 to -80 days in 2021. This means that inventories are being sold before the company pays its suppliers for them, i.e., suppliers are, in a sense, financing L'Oréal's business activities. On the other hand, the cash ratio, being below 1, which happens in all years under analysis, with special emphasis on the large decrease in 2021, means that current liabilities are higher than the amount of cash. Although at first glance this may seem like a bad indicator, this may not be the case due to the efficient inventory management that L'Oréal presents, as well as the short credit terms granted to customers.

Figure 15. Cash Conversion Cycle and Cash Ratio. *L'Oréal Universal Registration. Own Estimations.*



3.5.3. Dividend's Policy

In table 1 below we have compiled information about L'Oréal's dividends, namely dividends paid, earnings per shares (EPS), dividends per share (DPS), dividends payout ratio and retention ratio.

We can conclude from the table that L'Oréal has been offering its shareholders an attractive but also sustainable dividend policy, with the Dividend Payout Ratio (DPS/EPS) averaging 53,34% per year. The Retention Ratio, meanwhile, averages 46,66% between 2017 and 2021, meaning that L'Oréal has been retaining nearly half of its earnings each year as retained earnings, distributing the remaining to its shareholders.

Table 1. L'Oréal Dividend's Policy. *L'Oréal Universal Registration, Own Estimates.*

	2017	2018	2019	2020	2021
Shares Outstanding (in million)	559,75	559,63	558,12	559,87	535,41
Dividends Paid (in million €)	1.870,70 €	2.061,40 €	2.221,10 €	2.190,60 €	2.352,10 €
Earnings per Share	6,65 €	7,08 €	7,74 €	7,30 €	8,82 €
Dividends per Share	3,55 €	3,85 €	3,85 €	4,00 €	4,80 €
Dividend Payout Ratio	53,38%	54,38%	49,74%	54,79%	54,42%
Retention Ratio	46,62%	45,62%	50,26%	45,21%	45,58%

L'Oréal pays dividends annually in the month of April. Between 2017 and 2021 dividends have been paid between 1.870,70 and €2.352,10 million euros, averaging €2.139,18 million. It should be noted that the number of dividends paid has been growing since 2017, an increase mostly explained by the increase in results, since the Dividends Payout Ratio has remained constant (around 54%) except for 2019.

CHAPTER 4

Valuation

We will value L'Oréal in two different ways. First, we will value the company using the FCFF model discounted by the WACC, since it is one of the most instituted methods. To do this, we will use a 5-year time horizon (2022 - 2026), then assume a terminal growth rate. Afterwards, we will perform a sensitivity analysis to understand the impact that the assumptions we will henceforth define, namely the WACC and the terminal rate, have on the results we will obtain. Finally, to complement and compare the former, we will perform a relative analysis using a benchmark of similar companies.

4.1. Valuation Assumptions

As mentioned before, to be able to evaluate a company it is essential to define certain assumptions that must, despite being subjective, be coherent and pertinent to L'Oréal's industry. In the following pages, the assumptions on which the evaluation that makes up this thesis is based will be defined.

4.1.1. Revenue

Based on Statista's projections for the worldwide cosmetics market, L'Oréal's revenue is expected to continue to increase, growing steadily at around 5.5% from 2024 on.

Table 2. Revenue Growth Rate Projections for Cosmetics Market Worldwide. *Statista.*

	2022	2023	2024	2025	2026
Revenue Growth	24,47%	10,94%	5,43%	5,50%	5,66%

Based on the growth rates of the cosmetics market for the coming years, we use L'Oréal's revenues in the year 2021 to forecast future revenues, as shown in the table below.

Table 3. L'Oréal's Revenue Projections. *L'Oréal Universal Registration, Own Estimates.*

million €	2021	2022	2023	2024	2025	2026
Revenues	32.287,60 €	40.188,41 €	44.586,81 €	47.009,74 €	49.596,68 €	52.404,60 €

4.1.2. EBITDA Margin

The EBITDA (Earnings Before Interest, Taxes, Depreciations and Amortizations) calculation is based on the historical EBITDA margin over the last 5 years. This assumption implies that operating expenses increase in proportion to revenue. Thus, we calculated the EBITDA margin for the years between 2017 and 2021, and obtained an average EBITDA margin of 23.35%, (Annex A). Since, as we saw earlier, this market was not significantly impacted by COVID-19, we will assume this EBITDA margin for the years under projection.

Below, in Table 4, and using the average EBITDA margin calculated in Annex A, we can observe the EBITDA that we forecast for L'Oréal to present in the next 5 years.

Table 4. L'Oréal's EBITDA Projections. *L'Oréal Universal Registration, Own Estimates.*

million €	2022	2023	2024	2025	2026
Revenues	40.188,41 €	44.586,81 €	47.009,74 €	49.596,68 €	52.404,60 €
EBITDA Margin	23,35%	23,35%	23,35%	23,35%	23,35%
EBITDA	9.385,34 €	10.412,51 €	10.978,35 €	11.582,48 €	12.238,23 €

4.1.3. Depreciation and Amortization

In projecting L'Oréal's Depreciation and Amortization (D&A), we followed the same rationale used in our EBITDA computation. Thus, we started by calculating the ratio between L'Oréal's Depreciation and Amortization and its revenues for the years 2017 to 2021. Having these ratios, it was possible to see that, on average, L'Oréal's Depreciation and Amortization represent 4.85% of its annual revenues (Annex B).

As mentioned in the EBITDA computation, this market was not significantly affected by COVID-19. Additionally, the company, even in the COVID-19 scenario will always be required to keep depreciating and amortizing its fixed assets. For these reasons, no adjustment was made to the rate presented above.

Below, in table 5, we have the estimated Depreciation and Amortization figures for L'Oréal for the period between 2022 and 2026. To obtain these values, we multiply the average D&A/Revenues ratio to the projected revenues, already presented above.

Table 5. L'Oréal's Depreciation and Amortization Projections. *L'Oréal Universal Registration, Own Estimates.*

million €	2022	2023	2024	2025	2026
Revenues	40.188,41 €	44.586,81 €	47.009,74 €	49.596,68 €	52.404,60 €
D&A/Revenues	4,85%	4,85%	4,85%	4,85%	4,85%
D&A	1.950,52 €	2.163,99 €	2.281,58 €	2.407,14 €	2.543,42 €

4.1.4. EBIT

The EBIT (Earnings Before Interest and Taxes) is essential in the valuation that we will perform ahead through the Free Cash Flow to the Firm model. To compute it we need the EBITDA and the amount of Depreciation and Amortization, both estimated in the two previous sections.

In table 6, below, we can find the EBIT computation, which is the result of subtracting the value of Depreciations and Amortizations from the EBITDA.

Table 6. L'Oréal's EBIT Projections. *L'Oréal Universal Registration, Own Estimates.*

million €	2022	2023	2024	2025	2026
EBITDA	9.385,34 €	10.412,51 €	10.978,35 €	11.582,48 €	12.238,23 €
D&A	1.950,52 €	2.163,99 €	2.281,58 €	2.407,14 €	2.543,42 €
EBIT	7.434,82 €	8.248,52 €	8.696,76 €	9.175,34 €	9.694,81 €

4.1.5. Corporate Tax Rate

To further be able to compute the Free Cash Flow to the Firm and the Weighted Average Cost of Capital, we will need to estimate the corporate tax rate for the years under analysis. To do so, we will use L'Oréal's average tax rates between the years 2017 and 2021. These rates represent the total expected tax expense as a percentage of pre-tax income.

As shown in Annex C, the rates for the years 2018 to 2020 are quite similar, leading those for the years 2017 and 2021 to appear as outliers. In this sense, we will only consider for the computation of the average corporate tax rate, the years in between 2018 and 2020. In table 6 below, it can be seen the average rate obtained in Appendix C, 26,28%, which will be used as an estimate for the years under analysis, 2022 to 2026.

Table 7. L'Oréal's Corporate Tax Rate Estimation. *L'Oréal Universal Registration, Own Estimates.*

	2022	2023	2024	2025	2026
Corporate Tax Rate	26,28%	26,28%	26,28%	26,28%	26,28%

4.1.6. Capital Expenditures

Capital expenditures (CAPEX) allow the company to purchase, improve or even maintain certain long-term assets to increase its profitability or capacity. Since, in L'Oréal's annual report, it was not possible to find specific information about current and future CAPEX, we consider that CAPEX, for the years between 2017 and 2021, corresponds to the "Purchases of property, plant and equipment and intangible assets", information that can be found in the cash flow statement.

As we can see in Appendix D, although the cosmetics market has not been greatly affected by the COVID-19 pandemic, we can notice that the company has retrenched, adopting a slightly more conservative stance towards its investments. Thus, to project future CAPEX from 2022 to 2026, we used the average CAPEX to Revenue ratio for the years 2017 to 2021. Thus, we obtained an average of 4.21% (Appendix D) which was used for the projections presented in the table below.

Table 8. L'Oréal's CAPEX Projections. *L'Oréal Universal Registration, Own Estimates.*

million €	2022	2023	2024	2025	2026
Revenues	40.188,41 €	44.586,81 €	47.009,74 €	49.596,68 €	52.404,60 €
CAPEX/Revenues	4,21%	4,21%	4,21%	4,21%	4,21%
CAPEX	1.690,87 €	1.875,93 €	1.977,87 €	2.086,71 €	2.204,85 €

4.1.7. Working Capital

Working Capital is concerned with the difference between the company's operating current assets and operating current liabilities and is useful to analyze the company's financial robustness in the short term. At L'Oréal we can consider as operating current assets "Inventories", "Trade accounts receivable" and "Other current assets". In his turn, the operating current liabilities are "Trade accounts payable" and "Other current liabilities".

Alongside the previous projections and using the changes in WC (ΔWC), we first calculated the average ratio between ΔWC and Revenues for the years between 2017 and 2021 and obtained an average of 1.17%. Subsequently, we applied this average to the revenues to project ΔWC for the years under consideration, 2022 to 2026.

Table 9. L'Oréal's Working Capital Projections. *L'Oréal Universal Registration, Own Estimates.*

million €	2022	2023	2024	2025	2026
Revenues	40.188,41 €	44.586,81 €	47.009,74 €	49.596,68 €	52.404,60 €
ΔWC/Revenues	1,17%	1,17%	1,17%	1,17%	1,17%
ΔWC	469,79 €	521,21 €	549,53 €	579,77 €	612,59 €

4.1.8. Terminal Growth Rate

To assume that L'Oréal's cash flows will keep on being generated at a constant growth rate until perpetuity, we must calculate the terminal growth rate (TGR). This rate can be computed using the formula shown below.

$$TGR = (1 + Expected\ Inflation\ Rate) \times (1 + Expected\ GDP\ Growth\ Rate) - 1 \qquad [27]$$

To calculate the TGR, we need to know the expected inflation rate and the expected GDP growth rate of the region where the analyzed company operates. In our case, and since L'Oréal is present all over the world, the solution was to consider the two regions of the world that mostly contribute to the company's revenues, Europe (31.5%) and North Asia (30.5%).

Regarding Europe, we have found in Trading Economics the two necessary rates for the European countries which are most relevant to L'Oréal's revenues, UK, Germany, France, Russia, Denmark, Sweden, and Norway. The average of these rates, computed in Appendix F, was the rate we used for our TGR assumption.

For the North Asia region, we also found in Trading Economics these rates for China, the North Asian country where L'Oréal's revenues have shown the highest expression and growth. Thus, in the case of North Asia, we will take in our TGR assumption the rates concerning China.

For both China and the countries in Europe considered in this assumption, it could be seen that inflation rates in August 2022 were pretty high, and this sharp rise in inflation rates is closely linked to the Russian-Ukrainian War. In this sense, being the TGR used as a constant growth rate in perpetuity and since it is not expected that inflation will remain at these extreme rates, the most reasonable and viable solution was to consider in this assumption the values of the inflation rate a year ago, in October 2021.

We can therefore observe in the table below the computation of the TGR, whose value is 4,35%.

Table 10. L'Oréal's Terminal Growth Rate Projection. *L'Oréal Universal Registration, Own Estimates.*

	2021 Revenues (in million €)	Region Revenue's Weight	Expected Inflation Rate	Expected GDP Growth Rate	Weighted Inflation Rate	Weighted GDP Growth Rate
Europe	10.170,59 €	50,81%	4,10%	2,54%	2,09%	1,29%
North Asia	9.847,72 €	49,19%	1,50%	0,40%	0,74%	0,20%
Total	20.018,31 €	100%	-	-	**2,82%**	**1,49%**
Terminal Growth Rate						**4,35%**

4.2. Valuation – DCF Method

4.2.1. Free Cash Flow to the Firm

Having all the assumptions established in the previous sub-chapter, we can proceed to the FCFF computation. In the table that follows, there are the FCFF forecasts for the years under consideration, 2022 to 2026, as well as for perpetuity. These amounts were calculated by using formula 1, which can be found in the literature review chapter.

Table 11. L'Oréal's FCFF Projections (2022 - Perpetuity). *L'Oréal Universal Registration, Own Estimates.*

million €	2022	2023	2024	2025	2026	Perpetuity
EBIT	7.434,82 €	8.248,52 €	8.696,76 €	9.175,34 €	9.694,81 €	10.116,91 €
EBIT*(1-Tax Rate)	5.481,20 €	6.081,09 €	6.411,54 €	6.764,37 €	7.147,33 €	7.458,52 €
+ D&A	1.950,52 €	2.163,99 €	2.281,58 €	2.407,14 €	2.543,42 €	2.654,16 €
- CAPEX	1.690,87 €	1.875,93 €	1.977,87 €	2.086,71 €	2.204,85 €	2.300,85 €
- ΔWC	469,79 €	521,21 €	549,53 €	579,77 €	612,59 €	639,26 €
= **FCFF**	**5.271,05 €**	**5.847,94 €**	**6.165,73 €**	**6.505,03 €**	**6.873,31 €**	**7.172,57 €**

4.2.2. Cost of Capital

4.2.2.1. Cost of Debt

Given that L'Oréal's Annual Report is not explicit about the yield of the bond with the largest maturity, the option to determine the cost of debt consisted in using the second method mentioned by Damodaran (2002). This method, as explained in the literature review chapter, involves adding the risk-free rate with the estimated default spread associated with the firm's debt rating (AA, according to S&P).

As for the risk-free rate, and since L'Oréal is a French company listed on the Paris stock market, the security used to proxy the risk-free rate is the 10-year French Government Bond, whose yield is 2.64% on September 30, 2022.

Therefore, considering a risk-free rate of 2.64%, and a default spread of 0,82%, the estimated cost of debt is 3,46%.

4.2.2.2. Market Value of Equity and Debt

First, we require the market value of Equity that can be computed by multiplying the number of L'Oréal shares that are outstanding with the price of those shares. Per the 2021 annual report, L'Oréal states it has 535.412.360 common shares and 0 preferred shares outstanding at the end of 2021. Considering that in accordance with Yahoo Finance, on December 31, 2021, L'Oréal's shares were worth 416,95 we were then able to determine the market value of Equity, resulting in a value of 223.240 million euros.

For the book value of L'Oréal's debt, it was assumed that it is equal to the market value of debt. Therefore, and based on L'Oréal's 2021 annual report, we have considered as Long-Term Debt the balance sheet items "Non-current borrowings and debt" and "Non-current lease debt". For the Current Portion of Long-Term Debt, we have taken into consideration the Balance Sheet items "Current borrowings and debt" and "Current lease debt". We thus reached a book value of debt of 6.300,40 million euros.

Table 12. L'Oréal's Capital Structure. *L'Oréal Universal Registration, Yahoo Finance, Own Estimates.*

	2021
Outstanding shares	535.412.360
Outstanding shares (in million shares)	535,41
Share price as of the end of the year	416,95 €
Market Value of Equity (in million €)	**223.240,18 €**
Long-Term Debt (in million €)	1.258,20 €
Current Portion of Long-Term Debt (in million €)	5.042,20 €
Notes Payable (in million €)	- €
Book Value of Debt (in million €)	**6.300,40 €**

4.2.2.3. Cost of Equity

Last, to compute the WACC, we need to determine the cost of equity. To do so, we need to identify three different inputs, as previously mentioned in the literature review, the risk-free rate, the levered beta, and the market risk premium. Given that the risk-free rate, 2,64%, had already been determined when determining the cost of debt, only the other two inputs remain to be determined.

For the levered beta, as L'Oréal is a listed company, we have considered the information provided by Zacks' website, and on December 31st, 2021, L'Oréal's levered beta was 0,66.

To determine the value of the Market Risk Premium (MRP), since L'Oréal is a French company, we used the MRP of France. Thus, we considered, on the Statista website, the average MRP of France in 2021, 5,8%. Additionally, as L'Oréal is a company operating internationally in over 150 countries, we added to its MRP the country risk premium (CRP). We derived the CRP based on the average CRP of the regions where L'Oréal operates, as well as the weight of each region's revenues in the company's total revenues. As shown in Annex G, we reached a CRP of 1,2%, which means that the final MRP that will be used to calculate the WACC is 7%.

Table 13. L'Oréal's Cost of Equity. *L'Oréal Universal Registration, Zacks, Statista, Damodaran, Own Estimates.*

Risk-free rate	2,64%
Levered Beta	0,66
Market Risk Premium	7,00%
Cost of Equity	**5,52%**

So, and with all the required data established, we used formula 3, introduced in the literature review, to obtain a cost of equity of 5.52%, as shown in the table above.

4.2.2.4. Weighted Average Cost of Capital

Through the inputs we previously obtained, cost of equity, cost of debt, capital structure and tax rate, it was possible to compute the WACC. Then, using formula 2 from the literature review, we got a WACC of 5,43%, as shown in the table below.

Table 14. L'Oréal's Weighted Average Cost of Capital. *Own Estimates.*

Cost of Equity	5,52%
Cost of Debt	3,46%
Tax Rate	26,28%
Market Value of Equity (in million €)	223.240,18 €
Market Value of Debt (in million €)	6.300,40 €
E/(E+D)	97,26%
D/(E+D)	2,74%
WACC	**5,43%**

4.2.3. FCFF Model Valuation

Based on the previously determined FCFF, WACC and TGR, we were able to obtain the Terminal Value, using formula 6, which can be found in the literature review.

Subsequently, we obtained an Enterprise Value of €535.903,89 million by adding up the present values of all the FCFF's and the Terminal Value, according to formula 5. From the Enterprise Value we subtracted the amount of Gross Debt and added the amount of Cash and Non-operating Assets to obtain the Equity Value, using formula 8. For Gross Debt we consider the following balance sheet items: Provisions, Tax Liabilities, Borrowings and Debt, Lease Debt, and Income Tax. As Non-operating Assets we consider: Financial Assets, Investments accounted for under the equity method, Tax Assets. We have thus obtained an Equity Value of €541.008,39 million.

Finally, to get the price of L'Oréal's shares we have divided the Equity Value by the number of outstanding shares, 535,41million, resulting in a final price per share of 1.010,45€, as per table 15.

Table 15. L'Oréal's Shares Price Estimation using the DCF-FCFF Method. *Own Estimates.*

million €	2021	2022	2023	2024	2025	2026	Perpetuity
FCFF	4.837,48 €	5.271,05 €	5.847,94 €	6.165,73 €	6.505,03 €	6.873,31 €	7.172,57 €
WACC							5,43%
TGR							4,35%
Terminal Value							664.252,94 €
Present Value		**4.999,40 €**	**5.260,71 €**	**5.260,74 €**	**5.264,19 €**	**5.275,57 €**	**509.843,29 €**
Enterprise Value	**535.903,89 €**						
- Gross Debt	9.372,10 €						
+ Cash	2.713,80 €						
+ Non-operating Assets	11.762,80 €						
Equity Value	**541.008,39 €**						
Shares Outstanding (in million)	535,41						
Price Target (€)	**1.010,45 €**						

4.2.4. Sensitivity Analysis

When estimating the value of L'Oréal's shares through the FCFF method, several assumptions were used that eventually impact the components used on the calculations. Thus, and to understand their impact on the computed share value, we performed a sensitivity analysis based on the WACC and the TGR. In the analysis previously performed we estimated a WACC and TGR of 5.43% and 4.35%, respectively, resulting in a price per share of 1.010,45€. By observing table 15 below, we can see the impact that ±0.25% in WACC and TGR has on the final price obtained for L'Oréal's shares.

Table 16. WACC and TGR Sensitivity Analysis. *Own Estimates.*

		WACC				
		4,93%	5,18%	**5,43%**	5,68%	5,93%
TGR	3,85%	1.029,34 €	837,26 €	705,96 €	610,54 €	538,06 €
	4,10%	1.324,68 €	1.019,82 €	829,57 €	699,53 €	605,02 €
	4,35%	1.874,62 €	1.312,36 €	**1.010,45 €**	821,97 €	693,17 €
	4,60%	3.257,79 €	1.857,08 €	1.300,18 €	1.001,10 €	814,47 €
	4,85%	13.285,81 €	3.227,16 €	1.839,76 €	1.288,15 €	991,91 €

We can notice that even with small deviations in WACC and TGR in either direction, the impact on the estimated share price is huge. Additionally, it can also be perceived from the analysis of the table that increasing the WACC results in a decrease in L'Oréal's share price, while increasing the TGR results in an increase of that price. We thus conclude that accurately estimating L'Oréal's share price is quite complex and subjective since increases or decreases in the variables used in the price calculation result in large impacts on the share price.

4.3. Relative Valuation

Finally, and before moving on to the discussion of the results obtained, a Relative Valuation was also performed to compare its results with those previously calculated through the FCFF model. For this valuation it is necessary to choose the multiples that will be used to compare the peers, and for this analysis the EV/EBITDA and the PE ratio (Profit to Earnings) were chosen.

For the Peer Group the 4 main worldwide players after L'Oréal were considered: Unilever, Estée Lauder, Procter & Gamble, and Shiseido, all of which are public companies.

Table 17. Peer Group and Relative Valuation. *YCharts, Macrotrends, L'Oréal Universal Registration and Own Estimations.*

Peer Group	EV (in million)	EBITDA (in million)	EV/EBITDA	PE Ratio
Unilever	$ 167.670,00	$ 12.381,14	13,54	19,73
Estée Lauder	$ 134.800,00	$ 1.599,00	84,30	41,83
Procter & Gamble	$ 417.350,00	$ 5.852,00	71,32	28,90
Shiseido	$ 23.250,00	$ 1.014,06	22,93	61,14
Comparable Average	-	-	**48,02**	**37,90**
L'Oréal				
Earnings per Share				8,21 €
EBITDA		7.619,40 €		
Enterprise Value			**365.903,05 €**	
- Gross Debt			9.372,10 €	
+ Cash			2.713,80 €	
+ Non-operating Assets			11.762,80 €	
Equity Value			371.007,55 €	
Shares Outstanding (in million)			535,41	
Price	-	-	**692,94 €**	**311,16 €**

The Enterprise Values and the PE Ratio were obtained from the YCharts website, while the EBITDA values were collected from the Macrotrends website. All these values are dated December 31, 2021, to be in line with the value of LOréal's shares previously calculated. Thus, in table 16, and based on the values of the Peer Group companies, the values of the multiples were calculated, an EV/EBITDA of 48.02 and a PE Ratio of 37.90.

Using the EV/EBITDA multiple, we were able to estimate the Enterprise Value of L'Oréal, obtaining a value of 365.903,05 million euros. Thus, and multiplying it by the number of outstanding shares, also previously used in the FCFF model, a price per share of €692,94 was obtained. On the other hand, applying the PE Ratio multiple, we arrive at a price per share of 311,16€. Therefore, according to the Relative Valuation method, the price of L'Oréal shares should be between 311,16€ and 692,94€, far below the value computed through the DCF - FCFF method.

4.4. Discussion of Results

Finally, and after computing the price of L'Oréal's shares using the DCF-FCFF and the Relative Analysis methods, we have assembled in table 17 the prices obtained, as well as the market value of these same shares on December 31, 2021.

Table 18. Valuation Results. *Yahoo Finance and Own Estimations.*

Share Prices	As of 31/12/2021
DCF-FCFF	1.010,45 €
EV/EBITDA	692,94 €
PE Ratio	311,16 €
Market Value	**416,95 €**

By applying the FCFF method, we obtained a price per share of 1.010,45€, which may result in an eventual increase in value of 142% compared to the market value, which stood at 416,95€. This exponential price disparity is due essentially to the assumptions that were made because we are in a period of post-covid recovery, with the economy now being shaken by the exponential increases in inflation rates caused by the energy crisis coupled with the invasion of Ukraine by Russia. Therefore, and since L'Oréal's share price is undervalued, our suggestion to investors would be for them to buy shares since they are valued at 41% more than what they are currently worth.

Through the relative valuation we obtained divergent results, one below market value and one above. The calculation of the price of L'Oréal's shares made with the PE Ratio leads to a price of 311,16€, that is, a devaluation of 25% compared to the market price. On the other hand, using the EV/EBITDA multiple we obtained a value of 692,94€, which means an appreciation of 66% compared to the market price.

Thus, and although the value obtained through EV/EBITDA does not show an exponential valuation as the value obtained through the FCFF method, both show that L'Oréal's shares are undervalued. In this sense, we maintain our previous recommendation that investors should buy L'Oréal shares.

Conclusion

The main objective of this work was to determine the fair value of L'Oréal's shares on December 31, 2021. Through the literature review it was possible to see that several methods could have been used to achieve the objective, and we took the decision to determine the value of the shares by applying the FCFF method and the Relative Valuation method. Although we are aware that the use of more methods could allow a better comparison of the results, we believe that we chose the two methods that were more appropriate not only to the objective we wanted to reach, but also to the company under analysis and the market in which it operates.

The first method used was the FCFF method which is based on the forecast of future cash flow generation, which implicitly implies its projection. To get there we had to define and justify a series of assumptions, this being the most difficult part of this work. This difficulty arises not only from the fact that we are in a post-covid period, but also because we are working with values from years when the pandemic could have had an impact on them. Additionally, we had as a main difficulty the fact that, due to the energy crisis coupled with Russia's invasion of Ukraine, we were facing an unstable economy with inflation rates skyrocketing exponentially. It should be noted that we built the assumptions for the valuation at year-end 2022 and based on the information available at the time.

The second and last method used, Relative Valuation, is based on comparing L'Oréal with a peer group established by us through selected multiples. For the companies to be part of the Peer Group, we selected the four largest players in the market after L'Oréal. In turn, the multiples we decided to use in our analysis were the EV/EBITDA and the PE Ratio, and it is important to point out that different multiples could have generated different results. The main purpose of applying this method was to be able to compare the results obtained for each of the multiples with the result obtained by applying the model described above.

In the discussion of results, we point out that although the PE Ratio multiple suggests an overvaluation of L'Oréal's shares, both the EV/EBITDA multiple and the FCFF method led

to their undervaluation. It is important to note that the Peer Group companies, despite being the largest players in the market after L'Oréal, have a market share and sales and revenues well below those of the company under analysis. Thus, and based on the information presented, we believe that the results obtained by applying the FCFF method as well as the EV/EBITDA multiple are the ones that best reflect reality. In this sense, our final recommendation is that investors buy L'Oréal's shares, since the prices obtained in our analysis are above the market value recorded on December 31, 2022, €416,95.

Finally, we recommend that future valuations be performed in light of more information on the future of the global economy and at a time when inflation rates are more stabilized.

References

Automat. 2021. ***Why Is The Skincare Market Growing At Such Breakneck Speed?***

Blake, M. & Feingold, S. 2022. ***Inflation's paradigm shift, explained.*** World Economic Forum. Switzerland, November.

Chen, J. 2020. ***Economic value added (EVA)***. Investopedia. https://www.investopedia.com/terms/e/eva.asp

Roberts, R. 2022. ***2021 Beauty Industry Trends & Cosmetics Marketing: Statistics and Strategies for Your Ecommerce Growth***. Common Thread Collective. https://commonthreadco.com/blogs/coachs-corner/beauty-industry-cosmetics-marketing-ecommerce

Damodaran, A. 2002. ***Investment Valuation: Tools and Techniques for Determining the Value of Any Asset.*** (2nd Edition). New York: John Wiley & Sons.

Damodaran, A. 2006a. ***Valuation Approaches and Metrics: A Survey of the Theory and Evidence.*** Working Paper, Stern School of Business, New York University.

Damodaran, A. 2006b. ***Damodaran on Valuation: security analysis for investment and corporate finance.*** (2nd Edition). New York: John Wiley & Sons.

Damodaran, A. 2008. ***What is the riskfree rate? A Search for the Basic Building Block.*** Working paper, Stern School of Business, New York University.

Damodaran, A. 2021. ***Equity Risk Premiums (ERP): Determinants, Estimation, and Implications – The 2021 Edition.*** Working Paper, Stern School of Business, New York University.

Damodaran, A. 2022. ***Ratings, Interest Coverage Ratios and Default Spread.*** https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.html

Fortune Business Insights. 2021. ***Skincare Market Size, Research, Share & Global Trends | 5.24% Compound Annual Growth Rate Forecast till 2026.*** India, August.

Gerstell, E., Marchessou, S., Schmidt, J. & Spagnuolo, E. 2020. ***How COVID-19 is changing the world of beauty.*** Working Paper, McKinsey & Company.

Grand View Research. 2022. ***Skin Care Products Market Size, Share & Trends Analysis Report By Product (Face Creams & Moisturizers, Shaving Lotions & Creams), By Gender, By Distribution Channel, By Region, And Segment Forecasts, 2022 – 2030.*** United States, March.

Larrabee D. T., & Voss, J. A. 2013. ***Valuation Techniques: Discounted Cash Flow, Earnings Quality, Measures of Value Added, and Real Options.*** (1st Edition). New Jersey: John Wiley & Sons.

Hayes, A. 2020. ***Free cash flow to the firm – FCFF definition.*** Investopedia. https://www.investopedia.com/terms/f/freecashflowfirm.asp

Höflmayr, M. 2022. ***Inflation explained: What lies behind and what is ahead?*** European Parliamentary Research Service. Belgium, August.

International Monetary Fund. 2021. **World Economic Outlook.** Washington, DC, April.

International Monetary Fund. 2022. **World Economic Outlook.** Washington, DC, April.

Koller, T., Goedhart, M. & Wessels, D. 2015. ***Valuation: Measuring and Managing the Value of Companies*** (6th Edition). New Jersey: John Wiley & Sons.

Liuima, J. 2022. ***Global Inflation Tracker Q3 2022: Inflation May Have Peaked but Energy Prices Continue to Cause Headwinds.*** Euromonitor International. United Kingdom, September.

L'Oréal. 2022. ***L'Oréal estimates for the global cosmetics market in 2021 based on manufacturers' net prices. Excluding soap, toothpastes, razors and blades. Excluding currency effects.***

L'Oréal. 2020. ***2019 Annual Report.***

L'Oréal. 2021. ***2020 Annual Report.***

L'Oréal. 2022. ***2021 Annual Report.***

Luehrman, T. 1997. What's it worth?: A general manager's guide to valuation. ***Harvard Business Review*** 75, no. 3: 132-142.

Macrotrends. 2022. https://www.macrotrends.net/

Mordor Intelligence LLP. 2021. ***Skincare Products Market - Growth, Trends, COVID-19 Impact, and Forecasts (2021 - 2026).*** India, April.

Mota, A. G., Barroso, C. D., Nunes, J. P., Oliveira, L., Ferreira, M. A., & Inácio, P. L. 2015. ***Finanças da empresa – Teoria e prática.*** (5th Edition). Lisboa: Edições Sílabo.

Pinto, J. E., Henry, E., Robinson, T. R., & Stowe, J.D. 2010. ***Equity Asset Valuation.*** (2nd Edition). New Jersey: John Wiley & Sons.

Pisani-Ferry, J. 2022. ***The economic policy consequences of the war.*** Belgium, March.

Steiger, F. 2008. ***The Validity of Company Valuation Using Discounted Cash Flow Methods.*** Seminar Paper, 1-25

Standard & Poors. 2022. https://www.spglobal.com/ratings/en/

Statista. 2022. ***Average market risk premium (MRP) for selected countries in Europe as of 2022.*** https://www.statista.com/statistics/664786/average-market-risk-premium-selected-countries-europe/

Statista. 2022. ***Beauty & Personal Care - Worldwide.*** https://www.statista.com/outlook/cmo/beauty-personal-care/worldwide

Trading Economics. 2022. https://tradingeconomics.com/

WWD Beauty. 2022. ***2021's Top 100 Global Beauty Manufacturers.*** April

Ycharts. 2022. https://ycharts.com/companies/UL

Zacks. 2022. https://www.zacks.com/stock/chart/LRLCY/fundamental/beta

Zion Market Research. 2022. ***Insights on Global Skin Care Products Market Size & Share Projected to Hit at USD 1719.1 Million and Rise at a CAGR of 11.1% By 2028: Industry Trends, Demand, Value, Analysis & Forecast Report | Zion Market Research.*** India, August.

Annexes

Annex A: Average Historical EBITDA's Margin

million €	2017	2018	2019	2020	2021
Revenues	26.023,70 €	26.937,40 €	29.873,60 €	27.992,10 €	32.287,60 €
EBITDA	5.845,70 €	6.017,30 €	7.164,40 €	6.825,80 €	7.619,40 €
EBITDA Margin	22,46%	22,34%	23,98%	24,38%	23,60%
Average of EBITDA Margin					**23,35%**

Source: *L'Oréal Universal Registration, Own Estimates.*

Annex B: Average Historical Depreciation & Amortization/Revenues

million €	2017	2018	2019	2020	2021
Revenues	26.023,70 €	26.937,40 €	29.873,60 €	27.992,10 €	32.287,60 €
Depreciation & Amortization (D&A)	1.169,40 €	1.095,30 €	1.616,90 €	1.616,80 €	1.459,10 €
D&A/Revenues	4,49%	4,07%	5,41%	5,78%	4,52%
Average of D&A/Revenues					**4,85%**

Source: *L'Oréal Universal Registration, Own Estimates.*

Annex C: Average Historical Corporate Tax Rate

	2017	2018	2019	2020	2021
Corporate Tax Rate	28,95%	26,25%	26,21%	26,37%	24,72%
Average Corporate Tax Rate					**26,28%**

Source: *L'Oréal Universal Registration, Own Estimates.*

Annex D: Average Historical Capital Expenditures (CAPEX)

million €	2017	2018	2019	2020	2021
Revenues	26.023,70 €	26.937,40 €	29.873,60 €	27.992,10 €	32.287,60 €
CAPEX	1.263,50 €	1.416,10 €	1.231,00 €	972,40 €	1.075,20 €
CAPEX/Revenues	4,86%	5,26%	4,12%	3,47%	3,33%
Average of CAPEX/Revenues					**4,21%**

Source: *L'Oréal Universal Registration, Own Estimates.*

Annex E: Average Historical Working Capital (WC)

million €	2017	2018	2019	2020	2021
Revenues	26.023,70 €	26.937,40 €	29.873,60 €	27.992,10 €	32.287,60 €
ΔWC	261,10 €	113,80 €	460,50 €	729,20 €	88,00 €
ΔWC/Revenues	1,00%	0,42%	1,54%	2,61%	0,27%
Average of ΔWC/Revenues					**1,17%**

Source: *L'Oréal Universal Registration, Own Estimates.*

Annex F: Europe's Expected Inflation Rate and Expected GDP Growth Rate

Europe	August 2022 Inflation Rate	October 2021 Inflation Rate	Expected GDP Growth Rate
United Kingdom	9,9%	4,20%	4,40%
Germany	7,9%	4,50%	1,70%
France	5,9%	2,60%	4,20%
Russia	14,3%	8,13%	-4,10%
Denmark	8,9%	3,00%	3,90%
Sweden	9,8%	2,80%	3,80%
Norway	6,5%	3,50%	3,90%
Average	9,03%	**4,10%**	**2,54%**

Source: *Trading Economics, Own Estimates.*

Annex G: Country Risk Premium Estimation

	Revenues Region Weight	Average CRP by Region	CRP x Weighted
Europe	31,50%	1,47%	0,46%
North Asia	30,50%	0,70%	0,21%
North America	25,30%	0,00%	0,00%
South Asia, Middle East and North Africa	7,20%	3,16%	0,23%
Latin America	5,50%	5,31%	0,29%
Total	**100%**	-	**1,20%**

Source: *L'Oréal Universal Registration, Damodaran, Own Estimates.*