

L'ORÉAL S.A.

CONSUMER GOODS

STUDENT: MAGNUS LAUVLI ANDERSEN

COMPANY REPORT

04.JANUARY.2019

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A Beautiful Company at a Luxurious Price

A safe investment in turbulent times

- We recommend buying L'Oréal as the current share price lies below the range of our FY Target Price of €235.83. With an expected dividend of €3.38 per share in 2019, this results in a total shareholder return of 19.60%.
- L'Oréal profits from long lasting, strong growth in the luxury segment, which outweighs current struggles in the mass segment. Overall, the company is expected to continue outperforming its peers (5y CAGR: 4.8% vs. market growth 4.6%).
- A stake in L'Oréal is attractive for investors who are looking for a place to store their money as the company has been the established market leader in an industry that has historically been "recession-proof" with growth rates never below 3.2% for the last eight consecutive years.
- L'Oréal is well positioned within Emerging Markets and has strong potential to benefit from secular growth in these regions, especially in China, where the company is the undisputed market leader (15.2%) in the fast-growing premium segment.
- The company's balance sheet is among the strongest in the beauty industry as the firm is reluctant to take on debt (net debt/equity of -7.64% vs. peer average of 28.5%). This, in addition to the Sanofi stake worth €9.4bn, gives room to create shareholder value in the future in terms of buy-backs, dividends and possible bolt-on acquisitions.

Company description

L'Oréal is a globally operating French cosmetics manufacturer. The company sells all major beauty products from Skin care to Colour Cosmetics and distributes its goods through various channels, like Traditional Retail Stores, Specialised Resellers, Travel Retail, e-commerce, Hair Salons and many more.

Recommendation: BUY

Vs Previous Recommendation HOLD

Price Target FY19: 235.83 €

Vs Previous Price Target n.a.

Price (as of 4-Jan-19) 200.00 €

Reuters: OREP.PA, Bloomberg: OR FP Equity

52-week range (€) 170.3-214.9

Market Cap (€m) 111,767

Outstanding Shares (m) 558.8

Source: Bloomberg



Source: Bloomberg

(Values in € millions)	2017	2018E	2019F
Revenues	26.023	26.829	28.267
EBIT	4.395	4.454	4.721
NOPLAT	3.520	3.155	3.341
Net income	3.585	3.378	3.568
FCF (core)	4.568	2.596	2.696
Total Assets	35.339	37.909	40.218
Total Equity	24.819	26.296	27.890
EPS	6.41	6.04	6.37
ROIC	21.4%	20.0%	20.3%
Operating margin (core)	16.9%	16.6%	16.7%
EV/EBIT	24.6x	24.3x	22.9x

Source: Analyst Estimations

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY NICK DÖRNER, A MASTER IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

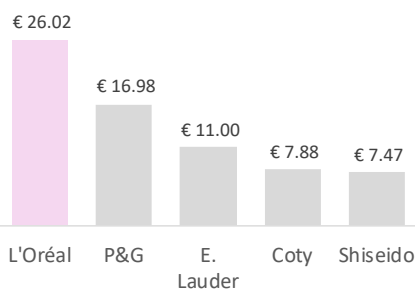
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Company description

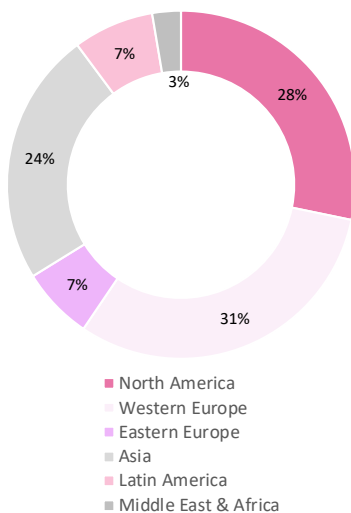
Headquartered and founded in 1909 in Clichy, France, L'Oréal S.A. is the world's largest cosmetics manufacturer with leading positions in the main beauty segments operating across the globe. L'Oréal produces and sells cosmetics for women and men and provides products for skincare, makeup, hair care, hygiene as well as fragrances and other smaller segments. The company's product portfolio contains inter alia, some of the most popular brands available like Garnier, Maybelline or Lancôme totalling to 34 different brands. L'Oréal distributes its products through various channels like Mass Retail, Pharmacies, as well as, Drugstores, Travel Retail, e-commerce and Hair Salons. L'Oréal is organized into four divisions, which generated sales of €26.02bn in 2017. Consumer Products, being the largest division by sales, covers all products for the mass market; L'Oréal Luxe, which focuses on the premium segment of beauty products is the second biggest division, followed by Professional Products, which is specialised in beauty salon products and Active Cosmetics, which provides products for skincare. L'Oréal is geographically well diversified and active in all major cosmetic markets worldwide. New Markets, comprising Asia/Pacific, Latin America, Eastern Europe and Africa & Middle East are marking the biggest area of sales (40.5%) followed by Western Europe (31.2%) and North America (28.3%). Operating profitability by geography and by division remains in double digits and lies between a minimum of 19.2% in New Markets and a maximum of 22.9% in Western Europe as well as 20.0% for Consumer- and Professional Products and 22.6% for Active Cosmetics.

Graph 1: Sales of the World's Largest Cosmetic Manufacturers (in bn)



Source: Bloomberg

Graph 2: Geographical Revenue Split L'Oréal

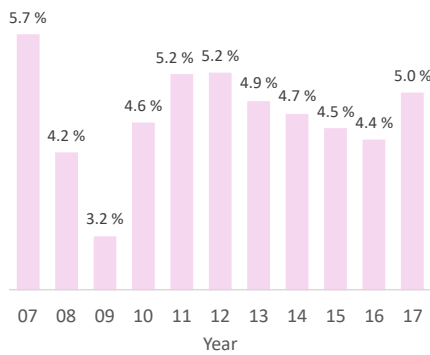


Source: L'Oréal Annual Report

Shareholder structure

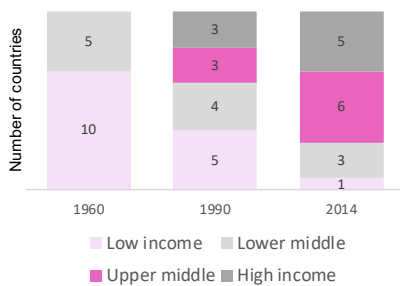
L'Oréal currently has 558m ordinary shares outstanding (diluted) and has been publicly listed at the French Stock Exchange since 1963. The Bettencourt family controls about 33% of the shares through its holding company Tethys SAS (27.22%) and through Françoise Bettencourt Meyers who personally holds 5.92%. Nestlé is the second biggest shareholder and controls 23.18% of the shares. Other shareholders such as Vanguard (1.74%), BlackRock (1.39%) and Norges Bank (0.99%) also hold mentionable stakes. The geographical ownership is focused in France and Switzerland with 40.18% and 32.28% of shares outstanding respectively, while the US represent 8.72%. Nestlé and L'Oréal have a long history together, which started in 1974, with L'Oréal seeking an international partner in fear of getting nationalized by the French state. The two parties had an agreement that as long as Liliane Bettencourt lives, they cannot

Graph 3: Global Cosmetic Market Growth



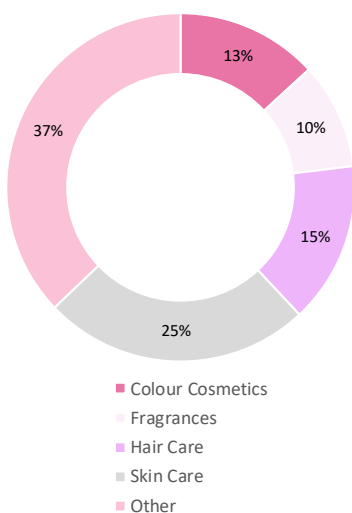
Source: Euromonitor

Graph 4: Income Class Distribution in developing Asia



Source: Asian Development Bank

Graph 5: Global Cosmetic Market Product Split



Source: Euromonitor

sell their shares to third parties, only amongst each other. This deal was terminated due to the passing of Liliane and the expiration of the six-month lock-up period after March 2018. Activist investor Daniel Loeb took a large position (5th biggest shareholder) in Nestlé during 2017 and has been pressuring the board of Nestlé to sell their stake in L'Oréal and return it to shareholders. Due to the stability of cash flows, net cash position and financial flexibility it wouldn't be surprising if L'Oréal buys back shares in case Nestlé decides to sell their stake.

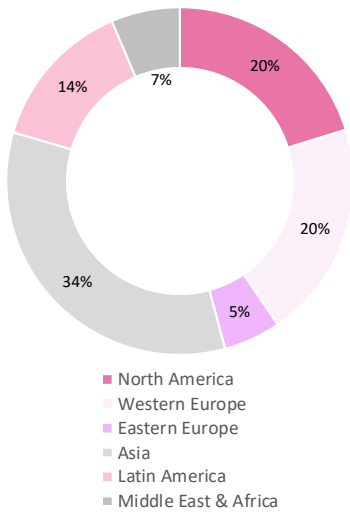
Beauty Market Overview

Being the market leader in the world of cosmetics, this industry represents the sole source of income for L'Oréal. Estimated at €412.5bn in 2017, the overall beauty market has grown continuously over the last ten years, resisting even the global economic downturn of the financial crisis in 2008/09 (Graph 3). Propelled by innovation and the everlasting change in consumer preferences annual growth has not fallen below the threshold of 3.2% during the last eight consecutive years. Especially favourable is the development of social media, as well as the rise in online shopping paired with the growth of the high-income class in Asia (Graph 4) and North America, which is expected to continue until 2030 and all of which are factors expected to fuel cosmetics sales going forward.

The world of cosmetics can be segmented in many ways. When differentiating by product category the largest one is Skincare with an overall market share of 25%, followed by Haircare 15%, Colour Cosmetics 13%, Fragrances 10% and multiple other smaller categories (Graph 5). Beauty products can also be classified into premium and mass production, where the latter accounts for 71% of global sales and is concentrated in large markets such as US, China and Brazil. Over the last five years luxury cosmetics growth has outperformed the mass cosmetics segment and is accounting for 40% of the worldwide cosmetics growth. This is largely driven by the expansion of the high-income class in prior mentioned regions and the increase in Chinese consumers traveling across the globe. Geographically, the Asian Pacific market is the largest marking 34% of overall sales succeeded by N. America 20% and Western Europe with 20% (Graph 6). As observable in Graph 7, the gap between Asia and the Western hemisphere is expected to further increase over the course of the next years mainly due to differences in demographic development as well as market maturity. Hence, leading cosmetic manufacturers are increasing their presence in these areas, which will be analysed in more detail later on.

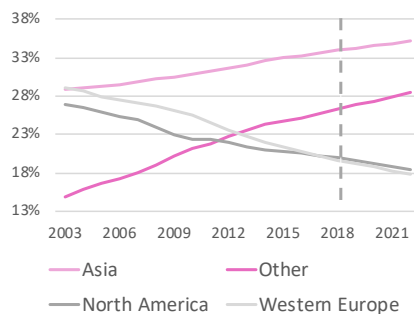
Currently, the cosmetics industry is rather consolidated as the top ten cosmetic manufacturers have about 45% market share of beauty market across all beauty

Graph 6: Global Cosmetic Market Geographical Split



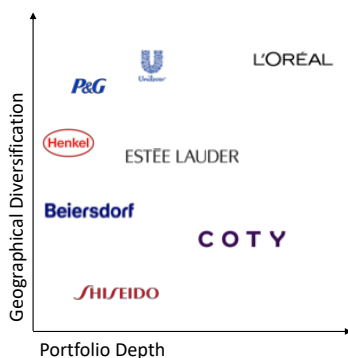
Source: Euromonitor

Graph 7: Global Cosmetic Market Geographical Split 2003-2023



Source: Euromonitor

Graph 8: Diversification Overview of largest Beauty Players



Source: Euromonitor

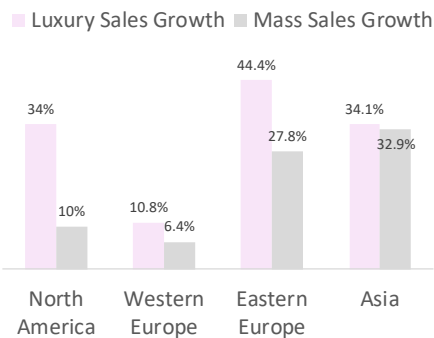
segments. L'Oréal is currently the biggest beauty company, followed by P&G and Estée Lauder (Graph 1). Economies of scale are strong in the beauty care industry, which made consolidation favourable, which is reflected in high M&A activity (Graph 14). Smaller companies hardly benefit from supply chain cost synergies in R&D, sourcing, manufacturing, and distribution since they are only achieved when volume gets high enough to drive substantial cost savings per unit. Moreover, large cosmetic companies have been dominating sales by squeezing out small competitors on the shelves of the large retailers and on the glossy magazine pages consumed by their target demographic. However, as sales (see below Table 1) and merchandising activities have become digital and thus, cheaper, more responsive smaller brands are also winning through their speed and depth of connection to their consumers – particularly, the younger demographic. These marketing trends are forcing bigger manufacturers to acquire smaller brands in order to revamp their aging image and capture momentum with up and coming tech-savvy generations.

L'Oréal focuses exclusively on the beauty industry and is thus called a pure beauty player. Unlike most of its peers, there is no other field of activity in which L'Oréal participates. Even though there are a few other competitors, that have a similar, beauty-centric business model such as E. Lauder, Coty or Shiseido, none of them are as diversified in both product portfolio and geographical coverage simultaneously as L'Oréal is. E. Lauder for instance, is solely specialised in the sale of premium products, while Coty has a broader product portfolio but is more regionally focussed and lacks the geographical reach of L'Oréal (Graph 8). In terms of size there are only a few players in the market who can compete with the French cosmetics manufacturer. As observable in Graph 1 the closest pure beauty player E. Lauder has less than 50% of the total sales of L'Oréal. Unilever and Procter & Gamble are contenders which come close to L'Oréal when it comes to sales numbers, but these companies are no pure players and have additional areas of focus in the consumer industry. They lack the product depth of L'Oréal and focus more on a few large brands, which mostly cover the mass market as of now. Hence, to completely understand the challenges and opportunities for L'Oréal as a whole, we will analyse each geography with its unique competitive landscape and growth drivers separately.

Growth Drivers

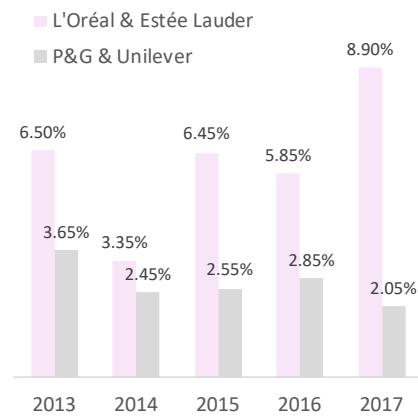
While there are regionally bound, idiosyncratic trends, we identified what we think to be the key drivers of growth affecting the cosmetics industry as a whole. As E. Lauder commented in their annual report (2017): “With a desire to always be camera-ready, consumers’ appetites for beauty products is intensifying,

Graph 9: Mass vs. Premium Sales Growth by Geography 2012-2017



Source: Euromonitor

Graph 10: Average Sales Growth of Premium and Mass Cosmetics Manufacturers



Source: Euromonitor

Table 1: Market share of E-commerce of total sales by Geography

	2012	2017	Growth
N. America	5.4%	9.4%	74%
W. Europe	4.3%	6.7%	56%
E. Europe	3.9%	5.8%	49%
Asia	6.4%	12.0%	88%
L. America	1.1%	1.8%	64%
M. E. & Africa	0.4%	1.4%	250%

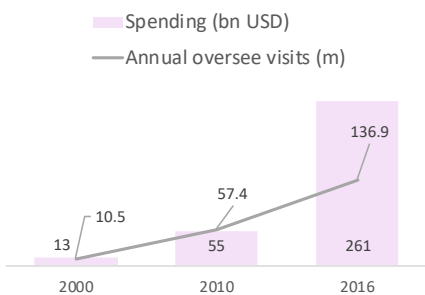
Source: Euromonitor

particularly in the luxury arena.” Due to mentioned favourable demographics and strong growth in the upper- and middle class, **luxury cosmetic** sales are surging (Graph 9) and the five largest manufacturers for premium cosmetics L'Oréal, E. Lauder, Shiseido, LVMH and Coty account for 46% of world-wide luxury sales in 2017. Inflation and rising input- and transportation cost are easier to pass on in the premium cosmetic segment, which is contrasting the situation in the mass segment, where consumers price sensitivity is higher. Due to intensified competition and lower barriers to entry caused largely by digital commerce and social media, prices stagnate, or even decrease in mature markets. Manufacturers which focused on this customer segment like P&G, Unilever and Henkel are struggling to keep up with the growth numbers reported by more luxury heavy competitors (Graph 10). Efforts to shift their business focus away from mass and more into the premium segment via multiple acquisitions are taking time to pay off and will most likely excel in the future.

In order to please customers thirst for innovation and better, more personalized products, cosmetic companies tend to invest heavily in research & development. L'Oréal is the leading player when it comes to R&D and they outspend the industry for the last five consecutive years, which will be analysed more thoroughly later on.

One of the biggest drivers in the cosmetics market is the increase in sales via the internet. **E-commerce** sales are rapidly growing among every major competitor, and in every geography around the world. Table 1 depicts that the market share of online sales in the beauty industry increased by at least 49% over the last five years on every continent with remarkably strong numbers in Africa & Middle East and Asia. Online shopping enables a swift comparison and detailed descriptions of products. This development is enhanced by manufacturers who take advantage of new technologies and communicate with their customers through social media and other new channels as well as growing mobile phone penetration rates (up 13% since 2014). We believe that the beauty companies that manage the shift to e-commerce successfully, will focus on merging the offline- and online shopping experience, rather than choosing one over the other. E-commerce will continue ‘cannibalize’ some of the offline sales but is also a channel that is needed to drive new customer experiences as this channel is open whenever and wherever. Brick-and-mortar stores will still be an important asset for beauty companies as they provide a unique experience for customers where they can touch and try out products physically. The rise of specialty beauty retailers is evidence of this (Graph 15). L'Oréal, E. Lauder and other beauty players have amassed millions of followers on Instagram, Facebook and YouTube through which they advertise their products and conduct market

Graph 11: Chinese Tourist Activity



Source: China Outbound Tourism Research Institute, United Nations World Tourism Organization

research. L'Oréal has a strong online presence with 250m followers on social media and one billion website visits annually. In 2017 L'Oréal had online sales of €2.1bn (8% of sales) and a growth rate of 33.6% making e-commerce its fastest growing distribution channel. The company's strategy is mainly to leverage retailer's online websites and platforms in order to drive sales, but also to push sales through the websites of their own brands (1/3 is direct to customers "D2C"). Tmall in China is a great example of this strategy, where L'Oréal leverages Alibaba's e-commerce platform to reach over 600m active users. This channel has been a strong driver of top-line growth and online sales account for over 1/3 of total sales in China 2017, up from only 3% in 2012. E. Lauder is one of the beauty peers that also has managed to adapt to the shift in consumer preferences and their online sales mark about 11% of total sales, up from almost 4% four years ago. Shiseido claims to have about 8% of sales online and the company is aiming for 20% in 2020, while Coty chooses not to disclose any online sales numbers or growth rates. E-commerce removes certain entry barriers such as labor- and leasing costs, which makes it easier to establish new beauty brands with less capital. On the other hand, the CEO of L'Oréal, Jean-Paul Agon, argues that e-commerce follows a more Darwinian approach where brands that have strong customer base will flourish. This is happening especially in China where big brands are becoming even bigger due to their online presence. Ratings and reviews influence consumer spending habits and big brands tends to have a larger market share online because of more reviews and information about products than smaller brands.

Graph 12: 5y CAGR of in Aircraft passenger by Geography



Source: Euromonitor

Travel retail is another distribution channel that is booming largely due to strong growth in Chinese tourists who go abroad and account for approximately 70% of growth in this channel. Their spending alone almost quintupled between 2010 and 2016 reaching a volume of \$261bn (Graph 11). This trend is expected to continue into the foreseeable future because of earlier mentioned upper- and middle-class growth¹. Moreover, the emergence of low-cost flights and digitalization attracts more and more millennials who spend their money at airports worldwide (Graph 13). Prestige beauty brands are benefitting the most from globetrotters and larger growing airports, which transform into high-end retail stores. In 2017, L'Oréal did almost €2bn in sales (8% of total) in travel retail and the distribution channel grew over 20%. The company uses the travel retail channel to introduce premium luxury brands such as Lancôme and YSL to new and existing customers. L'Oréal is the market leader in this distribution channel, but faces fierce competition from E. Lauder, which saw its travel retail sales grow 22% (in constant currency) in fiscal year 2017 and now consists of 14% of the

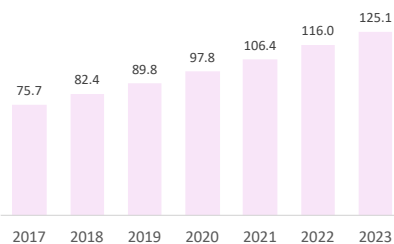
¹ Just 7% of the Chinese population possess a passport (vs. US 40%), hence there is huge growth potential for the future.

company's sales. Shiseido is also a serious player in the segment and grew their travel retail sales by 73.8% to €350mn in 2017.

Over the last five years, the leading cosmetic manufacturers have been busy **acquiring** smaller players in order to gain access to new customers, distribution channels, markets and innovation. Since it has proven challenging for them to grow their business organically by opening stores and expanding distribution channels for their existing portfolio, large and mature players rely increasingly on acquisitions as means for growth. Thus, the number of global beauty care deals has been steadily increasing from 100 in 2013 to 193 in 2017 (Graph 14). Recently, more than half of these purchases were taking place in order to reach customers since big beauty brands are threatened by young, independent brands that capture niche needs. The rise of social media combined with the growing popularity of specialised shops like Sephora/Ulta in the US (Graph 15), or Douglas in Europe, makes it easier for new brands to become household names. One example is the influencer Kyle Jenner, whose company Kyle Cosmetics went from zero to \$420m sales in just 18 months without any traditional advertising. After years of selling their products in department stores, large and mature beauty players are turning to start-ups to enable cosmetics to become connected and customised. In order to stand out from rivals, L'Oréal & Co. are using artificial intelligence and smartphone apps to reach their customers, improve their shopping experience and building brands early on. Japanese cosmetic manufacturer Shiseido has acquired three start-ups in the US in the past two years covering areas like artificial skin and AI technology. L'Oréal recently bought the Canadian beauty tech company ModiFace and LVMH has partnered with an accelerator for beauty-tech firms. Since these deals happened very recently, the impact of them on the industry and the company's valuation is yet to materialize. Even though it is hard to quantify as of now, we do think major cosmetics manufacturers are acquiring those tech companies as a precautionary move, in order not to miss a potential trend. Next to more advanced innovation techniques, deals are focused on natural cosmetic brands as customers awareness for sustainable products increases. Both L'Oréal and E. Lauder ramped up their portfolio with multiple acquisitions, which are expected to increase the company's market shares in this area looking forward. Estée added Becca and Too Faced in colour cosmetics, while L'Oréal took over IT Cosmetics and Atelier Cologne in 2016, derma skincare in 2017 and Korean Style. in 2018.

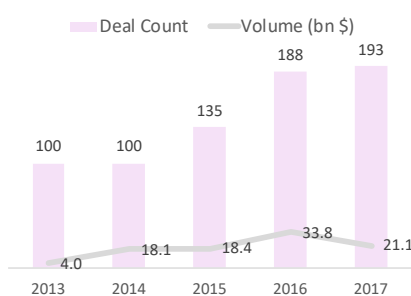
Due to its net cash position and its robust cash flows, L'Oréal is in the best financial position of the pure beauty players (Table 2). The company's stake in Sanofi, a publicly listed pharmaceutical company, is worth about €9.4bn and could come in handy if L'Oréal chooses to pursue larger acquisitions. E. Lauder

Graph 13: Global duty-free travel retail revenues (bn \$)



Source: Statista

Graph 14: Global Cosmetics M&A Deal Volume and Count



Source: Bloomberg

Table 2: Key Financial Ratios of Pure Beauty Players

	L'Oréal	E. Lauder	Shiseido	Coty
Cash Ratio	0.33x	0.82x	0.59x	0.08x
Current Ratio	1.20x	1.86x	1.81x	0.90x
Quick Ratio	0.76x	1.27x	1.14x	0.46x
Total D/E	4.73%	75.2 %	31.54%	79.07%
Net D/E	-7.64%	17.6 %	-7.60%	75.58%
Moody's	P-1*	A2	A2	Ba3
S&P	A-1+*	A+	A-	BB-

Source: Annual Reports, Bloomberg

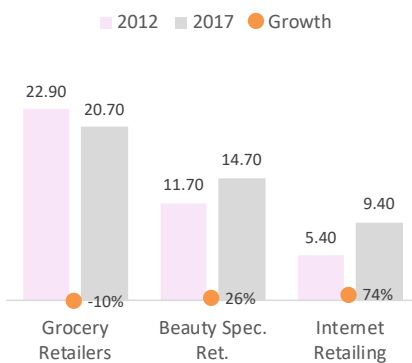
currently has a net debt position, but the company's free cash flow is large enough to cover this within one year - so its debt position is not constraining the company's M&A potential. The firm has a strong credit rating and should therefore have no problems with tapping into the debt markets if needed for acquisitions. Shiseido has a net cash position, but we believe that the cash position would not be deployed for any large acquisitions in the near future as the company is currently in an investment phase and has predicted that free cash flow will be negative until 2020. Coty has been struggling ever since the takeover of P&G's beauty division and currently has a net debt position of €6.7bn, which is larger than the company's market capitalization. With a low cash position and a credit rating of Ba3 the firm could run into liquidity problems and we believe Coty is not looking for acquisitions as of today.

Market Analysis by Geography

North America

North America continues to be one of the biggest markets for beauty care with a total sales volume of €83.5bn where mass products account for 61% and premium products for 39%. L'Oréal's past performance in this region has been satisfactory in both of these segments (5y CAGR 7.12%) and the company could steadily increase its market share from 11.8% in 2012 to 13.3% in 2017. After a solid growth momentum over the last five years with a CAGR of (3%) the continent is facing a slowdown in some historical distribution channels and the mass market. As observable in Graph 15, traditional channels like grocery-, or departments stores are losing market share, which is fully captured by e-commerce and beauty specialist retailers like Sephora and Ulta Beauty. Nevertheless, N. America will remain being the wealthiest region globally, and is expected to be home to almost half of the world's high-income class by 2030. Hence, growth predictions for the premium cosmetics segment are in the higher single digits with a CAGR of 6% between 2017 and 2022. L'Oréal aims to exploit this trend going forward with its 15 brands in the Luxe-Division and various investments over the last years. YSL and IT Cosmetics have continued to record double-digit growth (YSL doubled sales over the last three years) and the increase in demand of exclusive premium products is also reflected by the success of niche fragrances and top-end skincare like Armani and Biotherm, where the former brand crossed the €1bn sales mark in 2017. We believe that L'Oréal is well positioned to capture future growth in the N. American luxury market and outperform most of its biggest competitors. Coty, which acquired large parts of P&G's beauty portfolio in order to compete in the premium segment is still struggling to integrate and streamline operations, which is expected to be

Graph 15: Sales Channel Market Share, North America



Source: Euromonitor

Table 3: Largest Beauty Players Market Share in Mass & Premium Segment in North America

2017 Market Share	Mass	Cumulative
Unilever	12.80%	12.80%
L'Oréal	12.60%	25.40%
P&G	9.60%	35.00%
Johnson&Johnson	7.90%	42.90%
L Brands	7.00%	49.90%
Coty	5.50%	55.40%
Other	44.60%	100.00%

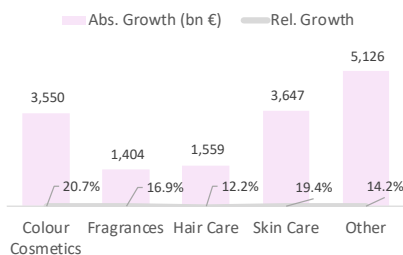
2017 Market Share	Premium	Cumulative
Estée Lauder	23.30%	23.30%
L'Oréal	19.80%	43.10%
Coty	6.50%	49.60%
Shiseido	6.00%	55.60%
LVMH	5.60%	61.20%
Rodan & Fields	5.20%	66.40%
Other	33.60%	100.00%

Source: Euromonitor

finished earliest in 2020. P&G drastically reduced its market share in the premium- and mass beauty segments after the brand divestment to Coty from 4% in 2012 to 0.4% in 2017 and 14.6% to 9.6% respectively and has less overlapping with L'Oréal's business. Shiseido repeatedly reports losses in the Americas ever since they entered the market through various acquisitions. On multiple occasions they cut fragrance brands and stores and are expected to lose market share going forward. Only E. Lauder is keeping up with L'Oréal's success due its exclusive focus on the premium segment and its strategic acquisitions as well as its shift of distribution channels from over-exposed brick-and-mortar outlets to specialist shops and an increase in web presence. Currently, their combined market share in the prestige segment amounts to 43% with E. Lauder owning 23.4% and L'Oréal 19.6%. Another emerging rival is Unilever, which intended to increase its exposure to the luxury segment through a string of acquisitions over the last five years. Acquired brands cover skin care (Dermologica, Murad, REN) as well as hair care (Living Proof) and, more recently, Hourglass and Equilibra.

In North America's mass-market price pressure is very high due to the strong competition. As observable in Table 3 the top two players only retain 25.4% market share compared to the 43.1% in the luxury segment. Growth in this segment was in the low single digits with an average growth rate of 1.72% over the last five years. L'Oréal is also affected by this development and challenged by stronger competition in the colour cosmetics and hair care segment. Coty is boosting its make-up brands with a multi-year brand turnaround strategy and opened a flagship store at the times square - therefore, the company is expected to gain traction in this segment going forward. In the hair care segment Johnson & Johnson gained a lot of attention and market share through the acquisition of Vogue and its brands. On the other hand, in 2017 L'Oréal acquired CeraVe, AcneFree and Ambi in an effort to complete and strengthen its positions in the strong growing N. American skin care segment, enabling it to meet growing demand for active skincare at a reasonable price point. As depicted in Graph 16, skin care is the largest product segment and expected to grow by the highest absolute amount across all categories of €3.6bn between 2018 and 2022. With mentioned purchases we expect L'Oréal to extend its position at the top of the skin care market whilst competitors like E. Lauder, P&G, Coty and Unilever lost market share in this segment for the last three consecutive years.

Graph 16: Forecasted 5y Growth 2018-2022 by Product Category, North America



Source: Euromonitor

Table 4: North America Market Forecast

North America	E2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	84,166	87,509	90,747	94,389	98,206	101,451
growth	0.80%	3.97%	3.70%	4.01%	4.04%	3.31%
L'Oréal (adj.) share	8.90%	9.00%	9.10%	9.00%	8.90%	8.90%
difference	0.10%	0.10%	0.10%	-0.10%	-0.10%	0.00%
L'Oréal revenues (€ m)	7,493	7,878	8,261	8,498	8,743	9,032
growth	1.94%	5.14%	4.85%	2.87%	2.89%	3.31%

Source: Analyst estimates, Euromonitor

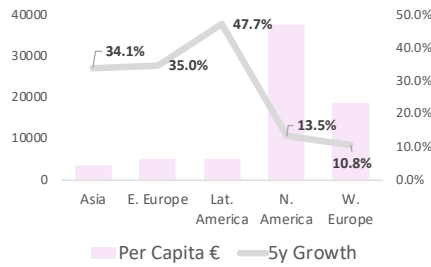
Overall, we forecast L'Oréal to outperform the market until 2021 due to its strong positioning in the higher price segment and its bolt-on acquisitions as well as its innovative R&D department. From that point on we expect stronger competition

from the currently more mass-market focused competitors, particularly Coty and Unilever, both of which invested heavily in the luxury segment (Table 4).

Europe

Being L'Oréal's home turf, Western Europe is a rather mature and large market (€83.5bn) and known for its purchasing power due to a high disposable income of its residents (Graph 17). Over the last five years this area has been the least dynamic with a CAGR of 1.51% and, similar to N. America, W. Europe is a highly competitive market where pricing power in the mass segment remains limited. Still, L'Oréal was able to outperform the overall market (CAGR 1.94%). L'Oréal covers all ages and income classes with its diversified and continuously growing product and brand portfolio. The French manufacturer has a high level of brand recognition in Europe, which is reinforced through regular marketing campaigns, free product trials and a very high social media presence - all of which reflects in the company's high Advertising & Promotion spending (see Valuation). Consequently, L'Oréal is the leader in the largest markets for cosmetics in W. Europe namely Germany, France, the UK and Italy, which translates into the overall highest market share among competitors in the premium- and mass segment and a total sales volume of €8.1bn in 2017 (Table 5). Nevertheless, L'Oréal remains challenged by weak growth in France for the last three years and has been losing 1.6% market share in the mass segment. This has mainly been caused by customers who opted for a more natural look, which included minimal make-up usage and by very strong competition in the colour cosmetics segment by Coty and Kiko, which have been gaining 5.1% and 2.8% market share respectively, while L'Oréal lost 5.2% since 2012. One major trend in W. Europe is the growing demand for sustainable and natural products. As customers become increasingly wary of chemical ingredients they search for organic and natural beauty products. The market for natural cosmetics is gaining traction and is estimated to almost double its current size of €13.2bn by 2024. In October 2018, L'Oréal bought German based vegan cosmetics manufacturer Logocos - thus, complementing its already existing portfolio for natural beauty products. Branching increasingly into plant-based products, the French company plans to expand sales of Logocos' products internationally, with a focus on W. Europe. Other large competitors have not reinforced their investments in this segment yet, giving L'Oréal a head start to gain market share going forward.

Graph 17: Disposable Income per Capita by Geography



Source: Euromonitor

Table 5: L'Oréal's Market Share Position by Geography and Category

L'Oréal's Market Position 2017	GER	UK	FRA	ITL
Premium	1	2	1	1
Mass	1	2	1	1
Skin Care	1	1	1	1
Hair Care	2	1	1	1
Colour Cosmetics	1	2	1	1
Fragrances	5	4	2	2
Overall	1	1	1	1

Source: Euromonitor

Table 6: Western Europe Market Forecast

Western Europe	F2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	85,109	87,324	89,718	92,319	95,030	97,532
growth	1.99%	2.60%	2.74%	2.90%	2.94%	2.63%
L'Oréal (adj.) share	9.69%	9.64%	9.59%	9.59%	9.59%	9.59%
difference	-0.05%	-0.05%	-0.05%	0.00%	0.00%	0.00%
L'Oréal revenues (€ m)	8,244	8,415	8,601	8,850	9,110	9,350
growth	1.46%	2.07%	2.21%	2.90%	2.94%	2.63%

Source: Analyst estimates, Euromonitor

Summing up, L'Oréal is the leader in W. Europe's beauty market. Regardless of the product category or geography, the French manufacturer always remains in the top 5 spots as observable in Table 5. With the exception of France, L'Oréal has either increased or maintained its market share in the mass- and premium beauty segment. Regardless, due to its already strong positioning and moderate

growth numbers, we currently do not see a further expansion of market share, especially due to the difficult situation in the mass segment. Moreover, L'Oréal gets threatened by smaller, trendy brands that might steal market share going forward. Thus, we conservatively assume L'Oréal to slightly lose ground going forward (Table 6).

Table 7: Market Share Eastern European Beauty Market

	2012	2017	Difference
L'Oréal	9.7	10.7	1.0
E. Lauder	1.2	1.3	0.1
Coty	2.4	5.7	3.3
Shiseido	0.4	0.6	0.2
P&G	13.0	8.3	-4.7
Unilever	5.9	5.7	-0.2
Henkel	4.8	4.7	-0.1
Beiersdorf	4.5	4.4	-0.1

Source: Euromonitor

Table 8: Market Share of the five largest Polish Cosmetics Manufacturers

Poland	2014	2015	2016	2017	
Premium	L'Oréal	16.7	16.5	16.4	16.6
	Coty	9.2	9.3	15	15.4
	E. Lauder	11	11.3	11.3	11.4
	Chanel	6.9	6.7	6.5	6.2
	Puig SL	4.5	4.5	5.4	5.4
Mass	L'Oréal	9.7	10.2	10.1	9.8
	Coty	7.2	7.6	9.6	9.5
	Avon	7.7	7.7	7.7	7.5
	Beiersdorf	6.7	6.7	6.5	6.3
	Henkel	5.8	5.7	5.6	5.4

Source: Euromonitor

Table 9: Eastern Europe Market Forecast

Eastern Europe	E2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	22,714	23,736	24,759	25,884	26,973	28,093
growth	3.19%	4.50%	4.31%	4.55%	4.21%	4.15%
L'Oréal (adj.) share	8.10%	8.25%	8.40%	8.45%	8.45%	8.45%
difference	0.15%	0.15%	0.15%	0.05%	0.00%	0.00%
L'Oréal revenues (€ m)	1,841	1,959	2,081	2,188	2,280	2,375
growth	5.13%	6.43%	6.20%	5.17%	4.21%	4.15%

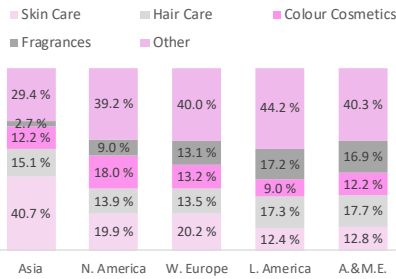
Source: Analyst estimates, Euromonitor

Eastern Europe's beauty market is still dominated by the mass segment, which generated €15.4bn out of the overall €22bn in sales in 2017. Compared to its Western counterpart, countries from E. Europe are significantly less developed and its inhabitants have a drastically lower disposable income (Graph 17). Therefore, people tend to buy rather cheap, mass market products. Nevertheless, growth of disposable income per capita has been tremendous over the last five years, which is also reflected in the overall sales growth of this beauty market (CAGR 5.45%) and which is projected to remain at similar levels for the next five years (CAGR 4.92%). Russia is by far the largest market measured by sales (44%), followed by Poland (18.5%), Ukraine (6.3%) and Romania (6.2%). The Ukrainian market has doubled since 2012 with a CAGR of 14.7%. This expansion dwarfs the one of the second fastest growing nation, Russia (CAGR 6.6%), but coming from a much smaller base. L'Oréal could continuously increase its market share in both of these states and, with the exception of the Ukraine, is the leader in each of the four largest markets in E. Europe. As alluded to earlier, the mass segment has been predominant in these areas - hence, cosmetic manufacturers, which have been focussing on the latter like P&G, Unilever, Henkel and Beiersdorf were L'Oréal's biggest competitors. But with growing income, locals are able consume more beauty products which is beneficial for companies with a broader, more luxurious product portfolio. Since previously mentioned competitors have a rather narrow product portfolio, with a few large brands, their market share has either stagnated or decreased since 2012 (Table 7). Coty could profit the most from its very extensive brand portfolio, especially after the acquisition of more than 40 brands from P&G. They are amplifying their presence all over E. Europe and are closing up to L'Oréal by offering credible brands at affordable prices. This has caused slight losses in market share for L'Oréal to Coty in the premium- and mass segment in Poland as depicted in Table 8.

Nevertheless, we expect L'Oréal to continue outperforming the market, due to its portfolio depth and strong presence in both premium- and mass segment. Income growth and a strong appetite for beauty products will fuel the Eastern European market in the future and we predict L'Oréal to further increase its market share together with Coty (Table 9).

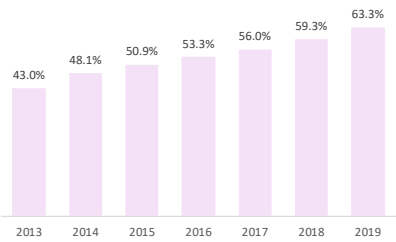
Asia Pacific

Graph 18: Product Segment Sales Split by Geography



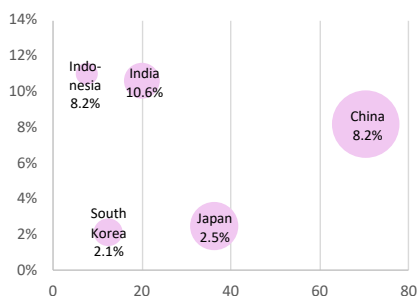
Source: Euromonitor

Graph 19: Smartphone penetration rate China



Source: Statista

Graph 20: Expected Market Sizes of largest Asian countries in 2022 (bn €, constant currency), 5y CAGR



Source: Euromonitor

The Asia Pacific Division is the crown jewel of L'Oréal's operations. It is momentarily "only" the third largest division by sales (€6.15b, 23.64% of total sales), but recent growth rates imply that it is just a matter of time before the division becomes the largest among all. The region represents 37% of the global cosmetics market today (€139.1bn) and will continue to fuel L'Oréal's top-line growth in the future. The Asia Pacific division experienced accelerated growth rates over the last seven quarters and with LFL² growth of 12.3% in 2017 it is easy to see why it gets a lot of attention. Skin care is by far the biggest segment and represents 40.7% of all beauty related sales in this Asia, the highest among all other segments (Graph 18). Moreover, Chinese tourists have a strong appetite for luxury brands and have taken the position as the world's biggest spender when it comes to travel as alluded to earlier³. The big influence of Chinese tourist spending on the beauty industry was underscored in October 2018, when the announcement of a momentarily cooldown in the former let the shares of the three largest pure beauty players plummet by at least five per cent respectively. E-commerce is another distribution channel where Chinese consumers are leapfrogging the Western consumers. The combination of high smartphone user penetration growth (Graph 19)⁴, functional logistics infrastructure (same-day delivery) and great e-commerce ecosystems (Tmall, Taobao and JD.com) have made this channel grow immensely during the last couple of years. Besides China, the three countries Japan, India and South-Korea are mentionable geographies and together represent 41.76% of the personal beauty market (77.67% incl. China) in Asia. By 2022, India is expected to overtake the UK and France to become the 6th largest country in the beauty market. In the Premium Beauty Segment L'Oréal has positioned itself as the undisputed leader in China and India with 15.2% and 14.4% market share respectively. On the other hand, L'Oréal faces strong competition in the Indian beauty mass market from Unilever and domestic companies such as Madrico and Godrej. L'Oréal currently holds the fourth spot with 4.3% market share. L'Oréal also has a weaker position in Japan and South-Korea with 2.2% and 6.7% of the overall beauty market. One of the reasons is that both these two developed countries have long-existing local players that dominate their home market - Shiseido in Japan (19.7%) and AmorePacific in South-Korea (32.7%).

Asia Pacific has been the most attractive market for beauty players in recent years and will continue to be going forward. The overall beauty market in this region is predicted to grow from €139.1b in 2017 to €197.1b by 2023 (CAGR

² LFL = Like-for-like growth in sales, which is adjusted for new or divested businesses.

³ As depicted in Graph 11, Chinese tourists spent \$261bn in 2016, runners-up are US tourists with \$123.6bn.

⁴ China currently has more than 750m active smartphone users, almost double the number of the second largest country India with 386m.

Table 10: L'Oréal's Market Share Position by Geography and Category

L'Oréal's Market Position 2017	CHI	JAP	IND	KOR
Premium	1	7	1	3
Mass	2	17	4	25
Skin Care	1	15	2	3
Hair Care	4	19	3	4
Colour Cosmetics	1	4	2	4
Fragrances	6	14	10	9
Overall	2	10	5	4

Source: Euromonitor

Table 11: Asian Market Forecast

Asia Pacific	E2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	143,848	152,907	162,646	173,844	185,930	197,059
growth	3.42%	6.30%	6.37%	6.88%	6.95%	5.99%
L'Oréal (adj.) share	4.52%	4.62%	4.67%	4.72%	4.72%	4.72%
difference	0.10%	0.10%	0.05%	0.05%	0.00%	0.00%
L'Oréal revenues (€ m)	6,506	7,069	7,600	8,211	8,781	9,307
growth	5.76%	8.65%	7.52%	8.03%	6.95%	5.99%

Source: Analyst estimates, Euromonitor

6.5%). China will naturally be the biggest contributor to this region due to its massive and rather developed economy, but other countries such as India and Indonesia are expected to grow strongly as well. Japan and South-Korea are lacking the growth characteristics of other mentioned nations where the former is expected to be overtaken in size by Brazil by 2022 and the latter is only expected to grow 2.1% annually for the next five years (Graph 20). In the Asian Personal Beauty Market Unilever and P&G are the two biggest competitors of L'Oréal and hold the number one and two positions when it comes to market share with 7.4% and 7.2% respectively. L'Oréal has the advantage of being a pure beauty player and has focused heavily on building brands online with the Asian consumers the past couple of years.

L'Oréal is the leading player in the massive skin care segment (6.8% market share) and we feel confident that the company will strengthen its position due to a solid presence in e-commerce and travel retail, combined with its ability to quickly adapt to local consumer preferences. Taking newly acquired skincare brand CeraVe global will also be another reason for forecasted slight increases in L'Oréal's market share in this region. Most growth is predicted to come from countries such as China and India, where L'Oréal is one of the top three players (Table 10) in the skin care segment. (Table 11)

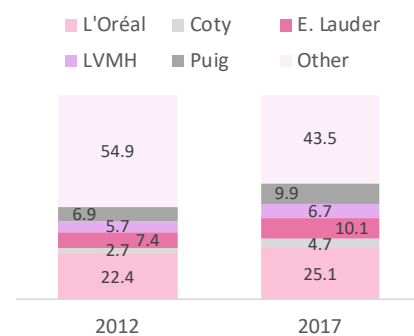
Others - Latin America and Africa & Middle East

L'Oréal's divisions in Latin America and Africa & Middle East have been united into one geographical segment called *The Others Division*. The Others Division represented 10.16% of L'Oréal's sales in 2017 (€2.64bn) and has been the second weakest division in terms of growth over the last five years with a CAGR of 3.01%. The overall market size for Beauty Products in this segment was €84.5bn in 2017 and is estimated to grow to €113.8bn in 2022. One of the main reasons this division has performed relatively poor is due to the rapid shift in oil prices, which started in the later stage of 2014 and bottomed out in the beginning of 2016. This change has heavily affected countries such as Brazil, Mexico and Saudi-Arabia, which - given their size - affected L'Oréal's sales in these two regions. Another attribute that these two regions share is the political instability that influences the economy and consumer spending related to beauty products.

Latin America

The Latin America division enjoyed healthy revenue growth of 6.2% in 2017, the highest reported growth rate during the last five years. Sales in this region reached €1.95 billions in 2017 due to an uptick in GDP growth rates, but also minor currency fluctuations (Venezuela excluded) in 2017. This region has given L'Oréal headaches for the last three years due to volatile currency movements,

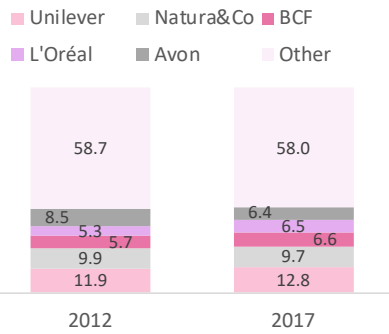
Graph 21: Largest Premium Beauty Manufacturers Market Share Latin America



Source: Euromonitor

which have affected its EUR nominated revenue numbers. The LFL growth on the other hand, has been satisfying ranging from 4.6% to 11.5% since 2012. The overall size of the Personal Beauty Market in this region was €58bn in 2017 and is expected to be €76bn by 2022. Brazil is the largest country by sales in L. America with 49% of the overall beauty market. The country has experienced negative GDP growth rates (-3.55% and -3.47% in 2015 and 2016) due to a combination of falling oil prices, devaluation of the currency, “stagflation” and the impeachment of head of state Dilma Rousseff. Sales in Mexico (14.4%) and Argentina (8.3%), number two and three in terms of market size, experienced double-digit growth and were a positive contributor to the overall sales growth in this geography for L'Oréal. Even though sales have been affected, the top players in the Premium Market such as E. Lauder, Puig, LVMH and Coty have, along with L'Oréal, used this opportunity to gain market share from smaller players, which is depicted in Graph 21. The Mass Beauty and Personal Care Market in this region has not seen the same consolidation over the last five years, where some of the top players have either kept their market share constant and, in some cases, even lost market share (Graph 22).

Graph 22: Largest Mass Beauty Manufacturers Market Share Latin America



Source: Euromonitor

Table 12: L'Oréal's Market Share Position by Geography and Category

L'Oréal's Market Position 2017	SAUDI	S. AFR.	ISRA.	UAE
Premium	4	4	3	5
Mass	5	3	2	4
Skin Care	4	7	1	4
Hair Care	3	1	4	3
Colour Cosmetics	2	2	1	3
Fragrances	7	10	3	8
Overall	6	4	1	3

Source: Euromonitor

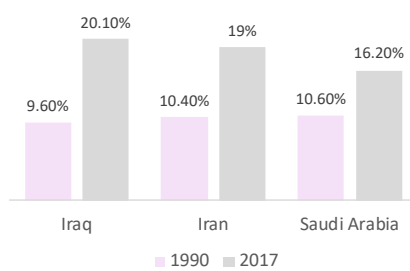
Africa & Middle East

Key countries in Africa & Middle East such as South-Africa, Saudi-Arabia and Iran have all felt the consequences of either the oil bust, political uncertainty or currency volatility. Hence, LFL growth for L'Oréal of -7.1% in 2017. The Personal Beauty Market in Africa & Middle East was €26.5bn in 2017 and is expected to grow by 9.46% (CAGR 5y) over the next five years reaching an overall market size of €41.6bn. L'Oréal only has a small presence in this region and has, until recently, delivered strong LFL growth. Sales have gone from €463.4m in 2012 to €692.4m in 2017, a 5y CAGR of 8.36%. This geography only represents 2.66% of L'Oréal's total sales in 2017 but is expected to take a larger part of its business in the future due strong growth in the overall beauty market. E. Lauder has been, and still is, the market leader of the Premium segment, followed by LVMH and L'Oréal as the second and third largest players. L'Oréal's market share has remained unchanged since 2012, while LVMH and Coty have increased theirs. One of the reasons L'Oréal has such a weak presence in this area is due to the fact that fragrances play a much larger part than in other geographies. The segment represents 16.9% of Personal Beauty in A.&M.E. compared to Asia Pacific (<3%), N. America (<10%) and W. Europe (<15%) where it is much less prominent. Skin Care represents 12.8% of the market, much lower compared to other markets such as Asia Pacific (40.7%), N. America (19.9%) and W. Europe (20.2%). The latter is a segment L'Oréal normally dominates but is currently only

the third largest player with 6.8% market share, behind Beiersdorf and Unilever with 13.5% and 12.9% respectively.

The Others division, along with Asia Pacific, is expected to outperform Europe and N. America in terms of growth due to a number of reasons. Firstly, this division has a favourable age distribution with almost 41.6% of the population being in the prime working-age, which ranges from 25 to 54 in Latin America and the Caribbean. This demographic group is expected to grow by 6.7% by 2023 and will be beneficial for the Beauty Market as the middle- and upper income classes continue to grow. The Personal Beauty Market in L. America is expected to grow to €80.7bn, which implies a CAGR of 6.3% over the next five years (Table 13). The strongest contributor here is Brazil, which is expected to become the third largest country in the world by market size. A more liberal culture in Middle East will be another driver for beauty sales in this division. Women are starting to take part in the workforce and Saudi-Arabia recently lifted a ban on women getting their driver's license (Graph 23). Both factors will support beauty sales going forward. As of now, Unilever dominates this area with 10.7% market share, but L'Oréal is gaining traction by overtaking P&G in 2017 to become the second largest player with 6.6% of the market. The two regions in the Other Division seem to be moving in different directions when it comes to the Premium Beauty Market. While the Premium Beauty Market in L. America is experiencing increased consolidation (Graph 21), the Premium Market in A.&M.E. has been less dominated by the key players. The top three players (L'Oréal, E. Lauder and Puig) in Latin America control 45.1% of the premium market, while the top three players (E. Lauder, LVMH and L'Oréal) in A.&M.E. only control 24.4%. Mature markets tend to be more dominated by top three players (N. America: 49.6%, W. Europe: 38%), thus we expect that L'Oréal will become one of the three players dominating the A.&M.E. Premium Market. Going forward, we assume that skin care will play a larger part of the Personal Beauty Market in these two regions. According to Euromonitor, Fragrance is destined to become the largest segment by 2022 in these two regions and this could give L'Oréal trouble in terms of outperforming the overall beauty market growth. Hair care is another segment that is expected to outperform overall market growth and will according to the same source be the second largest beauty category by size. L'Oréal has a strong presence in this segment with 18.9% (No. 2 player behind Unilever with 20.9%) in L. America and 16.4% in Africa & Middle East (No. 1 player).

Graph 23: Female workforce as % of total workforce



Source: World Bank

Table 13: Others Division Market Forecast

Other Division	E2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	87,308	93,237	99,189	106,091	113,842	120,866
growth	3.34%	6.79%	6.38%	6.96%	7.31%	6.17%
L'Oréal (adj.) share	3.14%	3.16%	3.16%	3.16%	3.15%	3.15%
difference	0.01%	0.02%	0.00%	0.00%	0.00%	0.00%
L'Oréal revenues (€ m)	2,745	2,946	3,131	3,347	3,589	3,806
growth	3.80%	7.31%	6.31%	6.90%	7.21%	6.05%
Latin America	E2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	59,490	63,263	66,993	71,416	76,338	80,650
growth	2.51%	6.34%	5.89%	6.60%	6.89%	5.65%
L'Oréal (adj.) share	3.41%	3.46%	3.49%	3.51%	3.51%	3.51%
difference	0.05%	0.05%	0.03%	0.03%	0.00%	0.00%
L'Oréal revenues (€ m)	2,031	2,191	2,337	2,509	2,682	2,834
growth	4.04%	7.90%	6.66%	7.37%	6.89%	5.65%
Middle East & Africa	E2018	F2019	F2020	F2021	F2022	F2023
Market size (€ m)	27,819	29,974	32,196	34,675	37,504	40,216
growth	5.14%	7.75%	7.42%	7.70%	8.16%	7.23%
L'Oréal (adj.) share	2.57%	2.52%	2.47%	2.42%	2.42%	2.42%
difference	-0.05%	-0.05%	-0.05%	-0.05%	0.00%	0.00%
L'Oréal revenues (€ m)	714	754	794	838	906	972
growth	3.13%	5.65%	5.28%	5.52%	8.16%	7.23%

Source: Analyst estimates, Euromonitor

(2.8% and 2.5% market share in L.A. and A.&M.E.) which is expected to outgrow the overall market. On the bright side, the hair care segment is also expected to outperform other beauty segments and given the size of this segment and L'Oréal's strong presence in it, we believe this will mitigate their market share losses. Hence, we forecast the company's market share will decrease over the next four years and then remain constant afterwards (Table 13).

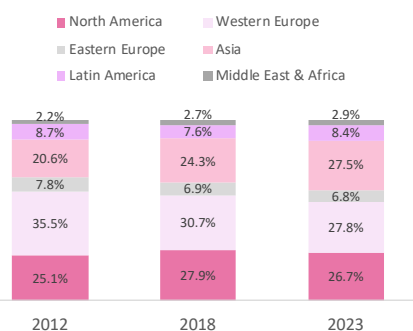
Valuation

Financial Projection

Revenues

As alluded to earlier, L'Oréal is globally active and faces different challenges and trends in various geographies. Hence, to forecast sales numbers as accurately as possible we used a top down approach where each region was analysed separately. By projecting the total market size and L'Oréal's respective market share per geography, we could back out its individual revenues. The reasoning for our projected market shares was established in the previous chapter and leads to total revenues of €33.9bn in 2023. This corresponds to a CAGR of 4.8% for the next five years (a small increase compared to the past 5y CAGR of 4.6%, excl. Body Shop), indicating that L'Oréal is able to outperform the global beauty market (CAGR 4.6%). Geographically, we could see the most distinct development in the Asian region as it is forecasted to replace N. America as the second largest market for L'Oréal by 2022. Generally, it is observable that L'Oréal's geographical footprint shifts more and more from mature- towards emerging markets. Hence, by 2023 N. America and W. Europe will contribute less (percentage-wise) to total sales than they did in 2018 (Graph 24).

Graph 24: L'Oréal's Geographical Sales Split



Source: Annual Report, Analyst Forecast

Table 14: Impact of FX movements on the market value of hedging instruments

€ millions	31.12.2017	31.12.2016	31.12.2015
+10% EUR vs all other Group currencies	250	224.5	216.2
-10% EUR vs all other Group currencies	-217.4	-214.4	-200.4
+10% USD vs key Group currencies	10	24.5	-11.7
-10% USD vs key Group currencies	3.6	-14.2	21.9

Source: Annual Report

Foreign Exchange

The global operations of L'Oréal expose the firm's in EUR reported revenues to currency fluctuations. Therefore, when translating the foreign currency financial statements of subsidiaries into EUR, FX movements might distort the comparability of performances between two financial years. Thus, the French manufacturer hedges on an annual basis with futures and options based on operating budgets in each of its subsidiaries. Since the Group's companies have to borrow and invest their funds in their local currency, the exchange rate risks generated by managing their own cash and debt are almost non-existent. "Owing to the Group's policy of hedging a large part of annual requirements for the following year before the end of the current year, the sensitivity of profit or loss to changes in foreign exchange rates at 31 December is marginal." We assume that L'Oréal continues to use approximately 1% of its group's sales in order to hedge

FX-exposure in the future, as this was the case for the last five years. As more than 50% of the company's revenues are either generated in USD (26.4%) or Euro (24.3%) the EUR/USD exchange rate is the one which affects the reported revenues the most. Table 14 shows a conducted sensitivity analysis of the impact of a sharp in- or decrease of 10% in EUR and USD against all other Group currencies at once. As depicted, due to the hedging in place such a currency movement would not be too dramatic considering the size of the Group's balance sheet.

Supply Chain and Cost Analysis

L'Oréal's supply chain is among the most efficient ones in the cosmetics industry. The firm has a supply chain that embraces globalization but still tends to regional customers' needs. Being present with manufacturing facilities and research centres in all major beauty markets around the world, L'Oréal can react swiftly to shifts in demand. Moreover, the company opts for local sourcing of packaging and raw materials, ensuring greater efficiency for the group, stronger ties with regional communities and a positive impact on the local development of economies as well as the firm's ecosystems. Due to its age, L'Oréal's presence in many markets is long established with relationships to suppliers and distribution channels that date back decades. Hence, the company has a significantly higher number of suppliers than its peers (Table 15), leading to less potential price pressure. The company's huge network allows to bring acquired brands - developed on a local or regional scale - to a global scale in a short period of time with the same quality. In addition, the French manufacturer continuously invests in a more efficient and automated supply chain (27% of total investments in 2017), using new technologies to improve production processes and enhancing flexibility to benefit consumers. L'Oréal is using 3D printing for several years (other competitors are only starting to use this technology) in order to create mock-up's, packaging models or production parts, allowing smaller batches, lower manufacturing costs and shorter lead times compared to traditional matching. Thus, innovation and time-to-market happens quicker and cheaper, which fuels growth strategies. The use of RFID-chips in selected stores ultimately enhances operational management allowing for more reliable inventories, optimised stock and product protection, which reflects in L'Oréal's comparably high inventory turnover (2.83 vs. industry average of 2.62). Furthermore, due to the company's various distribution channels the number of customers (as in supermarket's, specialist retailers, etc.) is significantly higher than that of its peers, (Table 16) which makes revenue sources more diversified and less dependent on big clients. Eventually, L'Oréal's operational superiority

Table 15: Mentioned leading Suppliers of Pure and Mixed Beauty Players

Company	# Sup.	COGS %	COGS/Sup.	
L'Oréal	167	20.1%	0.1%	
Estée Lauder	19	9.3%	0.5%	Pure
Coty	13	6.5%	0.5%	Beauty
Shiseido	5	1.0%	0.2%	
Unilever	63	16.4%	0.3%	
Henkel	83	12.0%	0.1%	Mixed
Beiersdorf	15	7.2%	0.5%	

Source: Annual Report, Earnings Calls, Bloomberg

Table 16: Mentioned leading Customers of Pure and Mixed Beauty Players

Company	# Cust.	Rev %	Rev/Cust.	
L'Oréal	137	35.9%	0.3%	
Estée Lauder	37	28.2%	0.8%	Pure
Coty	28	29.9%	1.1%	Beauty
Shiseido	7	3.4%	0.5%	
Unilever	169	45.9%	0.3%	
Henkel	116	38.2%	0.3%	Mixed
Beiersdorf	109	37.6%	0.3%	

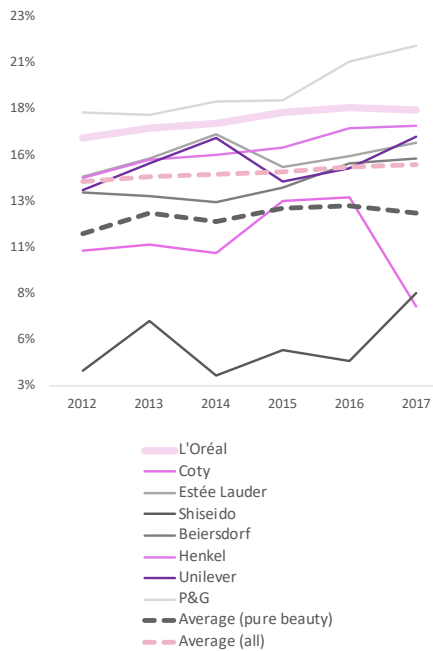
Source: Annual Report, Earnings Calls, Bloomberg

reflects in lower cost and higher margins, which will be further analysed in the following section.

Operating margin

Even though L'Oréal has faced headwind due to a strong EUR the company has steadily increased its operating margin (EBIT) over the span of the last five years (Graph 25). One of the reasons is solid growth in the premium segment where L'Oréal has a strong presence along with E. Lauder. The premium segment is significantly less price sensitive than the mass segment, thus resulting in higher gross margins. Out of L'Oréal's four divisions, L'Oréal Luxe and Active Cosmetics have been the two outperforming divisions with a 5y CAGR of 8.76% and 6.8% respectively. The operating margins of these two division are also the highest of the four with 21.91% and 22.61% for L'Oréal Luxe and Active Cosmetics respectively. The combination of high growth and high margins has also been a contributor to the margin expansion in the last five years. Another factor has been the disposal of Body Shop, which experienced a margin compression from 9.0% in 2012 to 3.7% in 2016 due to a decrease in store traffic and intense competition. The disposal shows that L'Oréal's strategy and execution lies within building brands and not retail stores.

Graph 25: Adjusted Operating Margins of largest Cosmetics Manufacturers

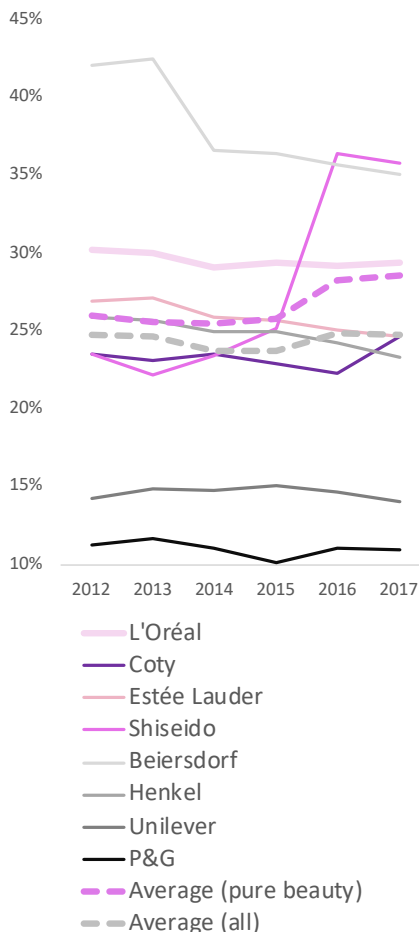


Source: Bloomberg

L'Oréal and E. Lauder, the two biggest pure beauty companies, have the highest operating margins with 18.0% and 16.2% respectively. The two companies have seen an improvement in their operating margins of 151bps and 188bps from 2012 to 2017. Shiseido has improved its operating margin the most (by 416bps) due to weak performance in 2012 and has an operating margin of 8.0% based on fiscal year 2017. Coty has struggled with the takeover of P&G Beauty Division, which reflected in a compression of their operating margin by 300 basis points to 7.3% in fiscal year 2017 (negative if not adjusted). L'Oréal's improvement during the last five years has mainly come from a reduction in their COGS ratio and A&P ratio, by 105bps and 77bps, while their SG&A ratio increased by 46bps over the same time. R&D ratio had a minimal positive effect due to its reduction of 15 basis points. L'Oréal's presence in all distribution channels and beauty segments makes its operating margin less volatile compared to other pure beauty players. E. Lauder and Shiseido have both enjoyed the stronger growth in the premium beauty segment and have outperformed L'Oréal in terms of sales growth and the two companies have seen a larger increase in their operating margin during the last five years. While we do not believe we will see strong margin expansion going forward, we also do not believe their margin will compress as much as peers during a worldwide recession.

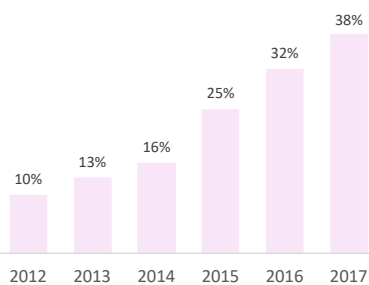
Costs of Sales/Goods Sold

Graph 26: A&P/Sales Ratios of Main Beauty Players



Source: Bloomberg, Annual Reports

Graph 27: L'Oréal percentage spent on digital media of total A&P budget



Source: Annual Reports L'Oréal

L'Oréal's COGS ratio has gone down by 105bp from 2012 to 2017 (173bp based on TTM), which implies that L'Oréal has either managed to increase productivity or raise prices without customers leaving them. We believe it is rather the latter, as sales within the luxury segment are taking a larger part of overall sales with a higher gross margin attached to it. The company also mentioned in its most recent earnings call that 80% of the growth comes from value-added products, which backs up our reasoning. Among the pure beauty players, E. Lauder is the only peer that can compete with L'Oréal's margins. One particular note here is that E. Lauder does not have a presence in the mass market opposed to L'Oréal, which is clearly reflected in their COGS ratio. With a Gross Margin of 80% based on the last calendar year, the highest among all beauty players, E. Lauder has managed to position itself as one of the top premium beauty players over the last decade and is L'Oréal's fiercest competitor out of the pure beauty companies.

Operating Expenses - A&P, SG&A and R&D

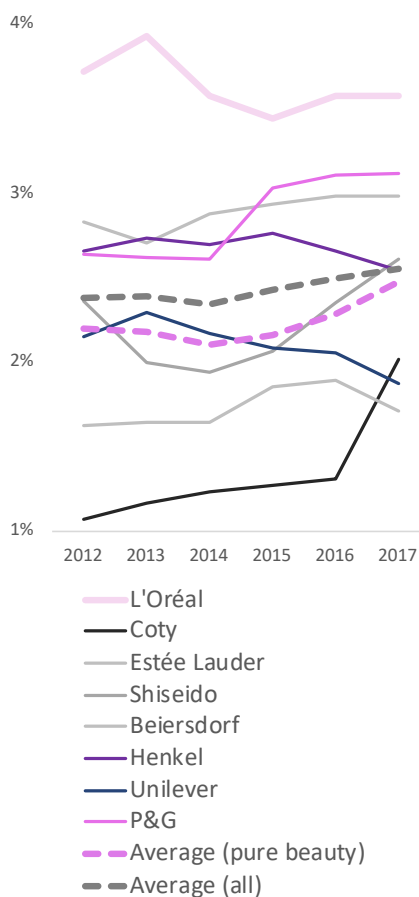
Even though pure beauty players normally have a higher gross margin than mixed beauty players, it does not necessarily mean that their operating margins are higher. Premium beauty players have to distribute a larger part of their revenue to A&P as a part of sales. L'Oréal has an A&P ratio of 29.4%, which is the second highest ratio among the beauty players with Shiseido on top of the list with 35.7%. The average A&P ratio of the pure beauty players has more or less remained constant over the last five years. An increase in 2016 was due to a change in recognition of costs on Shiseido's part where costs from SG&A were transferred to A&P. All pure beauty companies have seen a positive development in their A&P ratios (meaning a lower ratio), except for Shiseido as mentioned (Graph 26). Digital media plays a larger part of the overall A&P spend (Graph 27) and, in some cases, it has surpassed traditional media. As previously mentioned, we believe this trend (digital media) will continue and thus we forecast slightly higher A&P ratios as the shift in distribution channels from offline to online will result in customer acquisition costs (CAC) being categorized in A&P, rather than SG&A (Think of retail stores as a form of CAC, which is categorized in SG&A). We do not believe this shift will dramatically improve operating margins, but rather that costs will shift category as customer's shift preferences. Digital media offers a higher ROI than traditional media, which means that beauty players can get more out from their investments in A&P in terms of sales. It is still uncertain (for outsiders) exactly what the ROI on digital media is and how much higher it is, but a comprehensive study published by Nielsen in 2018 (CMO Report 2018) shows, that companies have a higher confidence in calculating the ROI on digital media versus traditional media. 74% of the surveyed companies said that they were confident when it comes to their ability to calculate the ROI on their A&P

spend, compared 59% regarding traditional media. The same study shows that 82% of the companies believe their digital media budgets will increase the next 12 months versus only 30% for traditional media budgets. This is a strong indicator that ROI on digital versus traditional media is higher due to reach (Lower CPM) and personalized ads (higher conversion rate). We believe this will not change the A&P ratio dramatically, but rather that digital media will overtake traditional media, and in some cases, it has already happened such as with Estée, which recently reported that nearly two-third of their ad spending goes to digital media.

E. Lauder has along with Shiseido the highest SG&A ratios in the beauty industry with 37.1% and 30.1%, which is an indicator that their operations do not run as efficient as L'Oréal's. We have seen a slight increase in SG&A ratios for all pure beauty players since 2012. These firms are known for their acquisitions in the beauty industry and recent acquisitions have a larger effect on SG&A than A&P due to a different business model. Brands that L'Oréal has acquired during the last five years such as IT Cosmetics (2016), NYX Professional Makeup (2014) and Urban Decay (2012) have a different business model, which is less dependent on A&P due to its strong presence in social media with a younger customer base. On the other hand, these newly acquired brands are more service oriented, which means higher costs related to staff in stores, the stores itself and leasing costs. All these costs go directly into SG&A, and not the A&P, thus the increase in SG&A ratios we have seen during the last five years. We do not believe this trend will continue going forward due to a shift to e-commerce, which is one of the main drivers in the beauty industry today. Online sales will become one of the largest distribution channels for L'Oréal in the future and we believe costs related to this will have a larger effect on SG&A costs than A&P costs, as mentioned earlier.

Of the mentioned cost factors, Research and Development costs (R&D) have the smallest effect on companies operating margin. R&D also tends to be more of a company's own choice, than a requirement in order to keep the business running, especially in the short-term. Out of the comparable pure beauty companies, L'Oréal has the highest R&D spending, both in absolute terms and as a percentage of revenue. This builds up under the fact that L'Oréal truly focuses on the long-term when it comes to innovate quality products; and this reflects why their R&D ratio is twice as high compared to other beauty players (Graph 28). As a result of this, 15-20% of L'Oréal's products in 2017 were new products entering the market. L'Oréal has research hubs in both today's and the future's largest markets (United States, Japan, China, Brazil and India), which shows that the company can swiftly adapt to local beauty trends and can scale up production,

Graph 28: Main Beauty Manufacturers R&D/Sales Ratios



Source: Bloomberg, Annual Reports

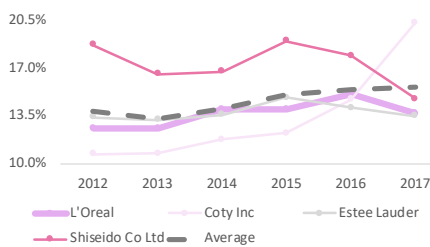
when needed. An example of this is L'Oréal's adaption to smaller packaging in India, where consumers buy more sachet-size (smaller sized) beauty products compared to other parts of the world. Research and innovation are one of the seven success criteria L'Oréal outlines for merit in the future. We expect this ratio to remain rather stable due to the consistency of the metric since 2012, which has remained in the range of 3.25-3.75%.

CAPEX & Working Capital

Historically, L'Oréal's capital expenditures (CAPEX) attributed to PP&E, Goodwill and other Intangible Assets have been very volatile. This is mainly due pursued acquisitions, which varied in size over the years. Due to the company's strategy, multiple acquisitions take place every year, which reflects in an increasing Goodwill position. Most recent examples of L'Oréal's purchasing spree include CervaVe in 2017 (\$1.3bn), IT Cosmetics in 2016 (\$1.2bn), Niely Cosmetics in 2015 (\$130m) and Magic Holdings plus NYX Cosmetics in 2015 for a combined \$1.3bn. We expect the firm to continue its purchasing behaviour of the past, and model Goodwill to be a fixed percentage of sales as this has been the case over the last five years. L'Oréal's PP&E/Sales ratio converged to the pure beauty industry average, indicating that the French manufacturer uses its equipment as efficiently as its peers to generate sales (Graph 29). With the disposal of The Body Shop and the announcement of modernizing plants rather than building new ones, we expect the PP&E ratio to decrease until 2021. After that, we expect this ratio to gradually increase back to its past 5y average, due to potential new demand in emerging markets or other unforeseen developments that might increase spending. Other Intangible Assets such as Patents, Software and Brands with indefinite useful life dropped significantly in 2017 by 600m, which was largely due to the disposal of The Body Shop and we forecast this position to stay in a rather constant proportion with sales going forward.

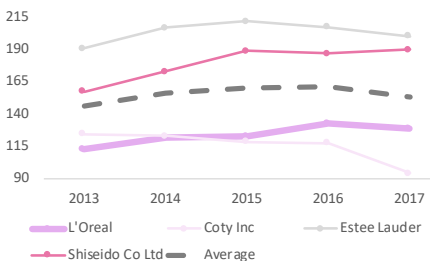
L'Oréal's Working Capital has been fluctuating, but always slightly above zero for the past five years. The company currently has an above industry average collecting time for receivables which is due to frequent acquisitions and the inherent streamlining process. Going forward, this time frame is expected to decrease as D2C and e-commerce are playing a larger part of the company's business. Thus, we assume accounts receivables will not increase proportionally with revenues, since retail consumers do not get the same treatment as larger players and are expected to pay quicker, meaning less receivables outstanding. The same is assumed for inventories days outstanding. As observable in Graph 30, the industry average time of DIO has been decreasing recently, with L'Oréal and Coty being a lot more efficient than E. Lauder and Shiseido. This big discrepancy might be due to the fact that pure premium brands do not tend to

Graph 29: PP&E/Sales Ratio of largest Pure Beauty Players

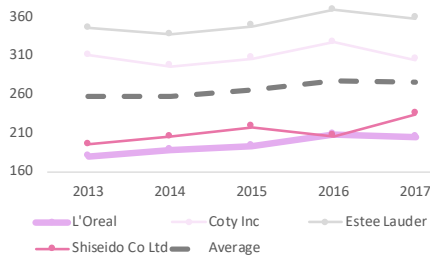


Source: Annual Report, Earnings Calls, Bloomberg

Graph 30: DIO of largest Pure Beauty Players



Source: Annual Report, Earnings Calls, Bloomberg

Graph 31: DPO of largest Pure Beauty Players

Source: Annual Report, Earnings Calls, Bloomberg

manage their inventory levels with discounts or other drastic sales initiatives in order to keep their premium image. Regardless, with e-commerce capturing a larger part of sales, we assume lower inventory-levels as this distribution channel is less inventory-heavy compared to retail- and department stores. The industry is still in the early days of e-commerce, but from 2020 onwards we assume DIO to improve (going down) as operations become more efficient. Days payable outstanding is with 205 currently a lot lower than the pure beauty industry average of 276 (Graph 31). Other pure beauty manufacturers take a lot more time to pay back their suppliers, which for instance in Coty's case might indicate that they have liquidity issues or simply that L'Oréal receives discounts for paying earlier. Since L'Oréal has the largest supplier base among peers, we think that there is still a lot of room for potential to delay payments and conserve cash. As depicted, over the last five years, L'Oréal gradually increased its DPO from 179 to 205 and we expect this trend to continue until 2020. Overall, we forecast a gradual decrease in working capital, which - triggered by e-commerce and a more efficient cash conversion cycle - is forecasted to be slightly negative by 2019.

Discounted Cash Flow Analysis

Cost of capital

In order to quantify L'Oréal's weighted average cost of capital, multiple input factors had to be determined, adjusted and, ultimately, used (Table 16). As a proxy for the risk-free rate we used the 10y German Bunds. The MSCI World functions as our benchmark in order to compute the Beta of L'Oréal. We used weekly returns over a three-year period in order to get a true sense of the company's Beta. Aiming to get a greater understanding of L'Oréal's volatility against the market, we looked into how the company's Beta behaved during the financial crisis in 2008/09. During this period, L'Oréal's Beta reached a value of 0.45 (14/11/2008), the lowest observation in our dataset since 2005, which could be an indicator on how the share price moves against the market during a recession in the future. A 95% Confidence Interval was implemented in order to bring assurance to the calculated Beta. This resulted into an upper- and lower bound for cost of equity, thus an upper- and lower bound for the WACC, used in the following sensitivity analysis (Table 18). L'Oréal's revenues are spread across the world – hence, instead of using a Market Risk Premium (MRP) of a single country we calculated the MRP by computing a weighted average of the major countries L'Oréal sells their products in, such as China, US, France, Brazil and others⁵. Due to L'Oréal's capital structure, we assumed a target D/E ratio of -0.01, as the company has historically held a net cash position (last five years)

Table 17: Input Factors Weighted Average Cost of Capital

Tax	28%
Tax (2018 onward)	23%
D/E current	-0.003
D/E target	-0.010
D/V	-0.31%
E/V	100.31%
Risk-free rate	0.31%
Cost of net debt/(cash)	1.99%
Market Risk Premium	6.97%
Cost of equity	5.40%
Company Beta	0.73
Upper bound	0.91
Lower bound	0.55
WACC	5.41%
Upper bound	6.65%
Lower bound	4.17%

Source: Annual Report, Bloomberg, Damodaran

⁵ We used Aswath Damodaran's world wide database, a reliable source when it comes to market risk premiums for countries.

Table 18: Sensitivity Analysis of Share Price

		LT Growth Rate				
		2.8%	2.9%	3.0%	3.1%	3.2%
WACC	4.2%	405.70	434.92	469.15	509.77	558.76
	5.3%	230.28	238.42	247.26	256.90	267.46
	5.4%	222.21	229.70	237.81	246.63	256.24
	5.5%	214.73	221.65	229.12	237.21	246.00
	6.7%	156.92	160.20	163.66	167.32	171.19

Source: Analyst estimates

and does not guide on future capital structure. Since L'Oréal does not have any long-term bonds outstanding and most of its debt is short-term, we assumed book values are equal to market values. As a result of this net cash positions we needed to look at opportunity cost of cash rather than cost of debt. We assumed the risk-free rate as the company's opportunity cost of cash. The combination of lack of comparable peers with a similar capital structure, predictability in cash flows, credit ratings and geographical presence backed up our conclusion to assume the risk-free debt as our opportunity cost of net cash. We assumed a tax rate of 23.24%, which is adjusted for the recent change in corporate tax rate in the US, but also for the future change in France's corporate tax rate by 2022. By using the CAPM we calculated L'Oréal's cost of equity to be 5.4% and ultimately, we arrived at a WACC of 5.41%.

In order to value L'Oréal, a Discounted Cash Flow Analysis has been conducted. We forecasted the company's future performance up to the point where its value creation stabilized, i.e. the ROIC and growth of unlevered free cash flows stayed rather constant between years three and five and were assumed to remain so perpetually (see Appendix). Thus, we used a five-year forecast horizon for all the necessary input factors and, implicitly, our free cash flows which were subsequently used to estimate the company's Enterprise Value. By discounting the future cash flows of the core business and the terminal value with the prior computed WACC of 5.41%, we assigned L'Oréal an Enterprise Value of €121.8bn. Approximately 89% of the EV can be allocated to the terminal value, indicating that a high weight of the company's worth resides in the long-term future. By implementing a sensitivity analysis (Table 18), we could model how L'Oréal's share price alters depending on different WACC and terminal growth assumptions. We chose 3% as a terminal growth rate due the stability in both, free cash flow growth and ROIC and our belief that the company will maintain this growth rate in the future. Subtracting the company's net debt position and adding its non-core assets to the Enterprise Value leads to an Equity Value of €132.8bn. With forecasted 558.8m shares outstanding in 2019, the corresponding share price is €237.62. Based on our estimations for 2019 we expect L'Oréal to pay out a dividend of €3.38 per share resulting in a forward dividend yield of 1.69%. We estimate no change in outstanding shares until the dividend payment of 2019 as the buybacks decided at the 2018 Annual Shareholder Meeting have already been executed as of first-half of 2018.

Scenario Analysis

Like noted earlier, the global market for cosmetics is currently the most dynamic in emerging markets, where growth rates often exceed the ones from developed ones by a landslide (Table 19). The forecasted growth rates for emerging

Table 19: Past and forecasted Market growth per geography

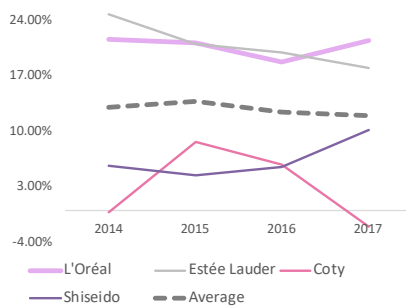
Market growth (CAGR) in constant currency	2012-2017	2018-2023
North America	2.99%	3.80%
Western Europe	1.51%	3.23%
Developed Markets	2.23%	3.52%
Asia	6.00%	6.67%
Eastern Europe	5.45%	5.21%
Latin America	7.33%	8.30%
Africa&Middle East	9.10%	9.39%
Emerging Markets	6.57%	7.26%

Source: Euromonitor, Analyst estimates

Table 20: Scenario Analysis of Share Price in Bear Cases

Scenario	Share Price	Weight	Weighted Share Price
DCF Base Case	€ 237.62	75%	€ 178.22
-2% Em. Markets	€ 231.77	15%	€ 34.77
-4% Em. Markets	€ 226.57	5%	€ 11.33
-2% Dvlpd. Markets	€ 230.39	5%	€ 11.52
Share Price			€ 235.83

Source: Analyst estimates

Graph 32: ROIC of pure beauty players

Source: Bloomberg, Analyst estimation

markets in the base case of our valuation are more than twice as high as the ones from developed markets, which leads to a substantial shift in L'Oréal's geographical revenue split and top-line growth. Since emerging markets can be very volatile due to factors like political instability, currency fluctuations, dependency on commodities and many more, we conducted a scenario analysis, accounting for various cases of growth deviating from our base case. In the bear cases we subtracted a defined percentage from each year's base case growth number. We distinguished between four scenarios. Forecasted emerging markets growth slowing down by 2% and 4%, developed markets growth slowing down by 2% and the regular base case. As depicted in Table 20, we can see that a slowdown in emerging markets by 2% effects the share price a little less than a similar slowdown in developed markets, due to the fact that revenues from latter markets still have a higher share of the company's total revenues. We attributed each scenario and the corresponding share price a weight, where the bear cases in emerging markets combined were attributed a higher likelihood than the one in developed markets. This is because we think emerging markets are rather slowing down, than accelerating even further and developed market growth was rather stable in the past. The weighted average of the resulting share prices gives us a final share price of 235.83€.

After conducting L'Oréal's valuation, we shortly want to examine the company's value creation metrics. In 2017, L'Oréal's ROIC (21.37%) is almost four times larger than its WACC of 5.41%. For the whole scrutinized time frame the firms ROIC exceeds its WACC by at least 13% as plotted in Graph 32. Therefore, the French cosmetics manufacturer creates shareholder value by generating future cash flows at rates of return exceeding its cost of capital at all times. The forecasted ROIC is also above the current industry average of 11.9%.

Appendix

Financial Statements

REFORMULATED INCOME STATEMENT / ACTUALS				FORECAST			
€ millions	2017A	E2018	F2019	F2020	F2021	F2022	F2023
Revenues	26,023	26,829	28,267	29,682	31,088	32,497	33,862
- Cost of Sales	7,359	7,587	7,966	8,335	8,699	9,060	9,407
<i>in % of revenue</i>	28.3%	28.3%	28.2%	28.1%	28.0%	27.9%	27.8%
Gross Profit	18,664	19,242	20,301	21,347	22,390	23,437	24,455
- Advertisement & Promotions	7,651	7,888	8,339	8,786	9,233	9,684	10,125
<i>in % of revenue</i>	29.4%	29.4%	29.5%	29.6%	29.7%	29.8%	29.9%
- Selling General & Administrative	5,461	5,630	5,903	6,169	6,430	6,689	6,936
<i>in % of revenue</i>	21.0%	21.0%	20.9%	20.8%	20.7%	20.6%	20.5%
- Research & Development	877	940	991	1,040	1,090	1,139	1,187
<i>in % of revenue</i>	3.4%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
+ Other Operating Income (Expense)	(280.30)	(330)	(348)	(365)	(382)	(400)	(416)
<i>in % of revenue</i>	-1.1%	-1.2%	-1.2%	-1.2%	-1.2%	-1.2%	-1.2%
EBIT (core operating income before tax)	4,395	4,454	4,721	4,987	5,255	5,525	5,791
<i>in % of revenue</i>	16.9%	16.6%	16.7%	16.8%	16.9%	17.0%	17.1%
- Operating Taxes	875	1,299	1,380	1,463	1,544	1,626	1,706
<i>in % of EBIT</i>	19.9%	29.2%	29.2%	29.3%	29.4%	29.4%	29.5%
NOPLAT	3,520	3,155	3,341	3,525	3,711	3,900	4,085
+ Non-Core income (Expense)	152	358	366	375	383	392	401
<i>in % of revenue</i>	0.6%						
- Non-Core Taxes	43	85	87	87	89	91	93
<i>in % of reported tax</i>	19.9%						
+ Other Comprehensive Income (Non-Core)	(1,525)	157	165	174	182	190	198
<i>in % of revenue</i>	-5.9%						
+ Financial Cost	-62	(65)	(69)	(72)	(75)	(79)	(82)
<i>in % of gross debt</i>	-5.2%						
- Tax Shield	-18	-16	-16	-17	-18	-18	-19
<i>in % of revenue</i>	-0.07%						
+ Other Comprehensive Income (Financial)	369	254.70	268.35	281.78	295.14	308.51	321.47
<i>in % of revenue</i>	1.4%						
Comprehensive Income	2,428.10	3,789.71	4,001.44	4,212.35	4,424.39	4,638.83	4,849.70

TAXE OVERVIEW				FORECAST			
€ millions	2017	E2018	F2019	F2020	F2021	F2022	F2023
Statutory Rate	29%	24%	24%	23%	23%	23%	23%
Reported Taxes	901	1,369	1,451	1,533	1,615	1,698	1,780
<i>in % of EBIT</i>	20.5%						
Tax Shield	-18	-16	-16	-17	-18	-18	-19
Non Core Taxes	43	85	87	87	89	91	93
Operating Taxes	875	1,299	1,380	1,463	1,544	1,626	1,706
Operational Result before Taxes	4,395	4,454	4,721	4,987	5,255	5,525	5,791
Tax rate on operations / effective tax	19.9%	29.2%	29.2%	29.3%	29.4%	29.4%	29.5%

€ millions	REFORMULATED BALANCE SHEET / ACTUALS			FORECAST			
	2017A	E2018	F2019	F2020	F2021	F2022	F2023
+ Operating Cash	520	537	565	594	622	650	677
<i>Operational Cash as % Sales</i>	2%	2%	2%	2%	2%	2%	2%
+ Accounts Receivable	3923	3992	4126	4248	4362	4469	4563
<i>DSO</i>	195	192	189	186	183	180	177
+ Inventories	2495	2571	2699	2824	2947	3070	3188
<i>DIO</i>	129	126	123	120	117	114	114
+ Other current assets	1130	1111	1165	1217	1269	1320	1368
<i>in % of SG&A</i>	20.7%						
Total Current Assets	8068	8210	8555	8883	9200	9509	9796
<i>in % of total liabilities and equity</i>	22.8%	21.7%	21.3%	21.0%	20.8%	20.7%	20.7%
+ Property, Plant & Equip, Net	3571	3804	3952	4090	4222	4452	4792
<i>in % of revenue</i>	13.7%	14.2%	14.0%	13.8%	13.6%	13.7%	14.2%
+ Goodwill	8872	8952	9432	9904	10374	10844	11299
<i>in % of revenue</i>	34.1%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%
+ Other Intangible Assets	2579	3070	3234	3396	3557	3718	3874
<i>in % of revenue</i>	9.9%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%
+ Non-current loans and receivables	240	167	176	185	194	202	211
<i>in % of revenue</i>	0.9%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
+ Deferred Tax Assets	530	449	473	497	520	544	567
<i>in % of revenue</i>	2.0%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Total Non-Current Assets	15792	16442	17267	18072	18866	19760	20742
<i>in % of total liabilities and equity</i>	44.7%	43.4%	42.9%	42.7%	42.7%	43.1%	43.8%
Total Operating Assets	23860	24652	25822	26955	28066	29269	30539
- Trade accounts payables	4141	4370	4697	5029	5249	5467	5676
<i>DPO</i>	205	210	215	220	220	220	220
- Current Provisions for liabilities and charges	889	837	882	926	970	1014	1056
<i>in % of revenue</i>	3.4%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
- Other current liabilities	2633	2659	2802	2942	3081	3221	3356
<i>in % of revenue</i>	10.1%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%
- Income tax	159	190	200	210	220	230	240
<i>in % of revenue</i>	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Total Current Liabilities	7822	8056	8581	9107	9520	9931	10328
Net Operating Assets (NOA)	16038	16596	17241	17848	18546	19337	20210
Non Core							
+ Investments in Affiliates	1	1	1	1	1	1	1
+ Investments in Associates	1	1	1	1	1	1	1
+ Sanofi	8495	8988	8988	8988	8988	8988	8988
+ Unlisted securities	32	32	32	32	32	32	32
Total Non-Operating Assets	8529	9022	9022	9022	9022	9022	9022
- Non-current Provisions for liabilities and charges	434.9	297	313	328	344	359	374
Total Non-Operating Liabilities	434.9	297	313	328	344	359	374
<i>in % of revenue</i>	1.7%						
Invested Capital Non Core Business	8094	8726	8710	8694	8679	8663	8648
Financial							
+ Excess of Cash	2526	3676	4789	5769	6485	6933	7113
<i>in % of revenue</i>	9.7%	13.7%	16.9%	19.4%	20.9%	21.3%	21.0%
+ Current Financial assets	24	72	72	72	72	72	72
+ Derivatives	241	281	296	311	326	340	355
<i>in % of revenue</i>	0.9%						
+ Current tax assets	160.6	205	216	227	238	249	259
<i>in % of revenue</i>	0.6%						
Total Financial Assets	2951	4234	5374	6380	7120	7594	7799
- Derivatives	191	232	244	257	269	281	293
<i>in % of revenue</i>	0.7%						
- Deferred tax liabilities	597	894	942	989	1036	1083	1129
<i>in % of revenue</i>	2.3%						
- Non-current borrowings and debt	13	45	47	50	52	55	57
<i>in % of revenue</i>	0.1%						
- Current borrowings and debt	1161	1197	1261	1324	1387	1450	1511
<i>in % of revenue</i>	4.5%						
- Provisions for employee retirement obligation	302	892	939	986	1033	1080	1125
<i>in % of revenue</i>	1.2%						
Total Financial Liabilities	2264	3260	3435	3607	3778	3949	4115
Net Financial Assets	687	974	1939	2773	3343	3645	3684
Equity	24818.5	26,296	27,890	29,315	30,568	31,646	32,543
Total Assets	35339.2	37908.9	40217.9	42356.6	44208.7	45885.0	47359.9
Total Debt + Equity	35339.1	37908.9	40217.9	42356.6	44208.7	45885.0	47359.9

REFORMULATED CHANGES IN EQUITY				FORECAST			
€ millions	2017A	E2018	F2019	F2020	F2021	F2022	F2023
Initial Balance	24,504	24,818.60	26,296.21	27,890.05	29,315.02	30,567.80	31,645.64
Net Transactions with Shareholders	-2,114	-2,312	-2,408	-2,787	-3,172	-3,561	-3,953
+ Capital increase	118.3	85	85	85	85	85	85
+ Cancellation of Treasury stock	0.0	0	0	0	0	0	0
stock)	-1,861	-2,034	-1,888	-2,025	-2,168	-2,315	-2,464
Payout Ratio	51.9%	60.2%	52.9%	53.9%	54.9%	55.9%	56.9%
+ Share-based payment	128.8	137	145	153	160	168	176
Absolute incremental increase	8.40						
+ Net changes in Treasury stock	-499.2	-500	-750	-1,000	-1,250	-1,500	-1,750
+ Purchase commitments for non-	0.0	0	0	0	0	0	0
+ Changes in scope of consolidation	-1.3	0	0	0	0	0	0
+ Other movements	0.3	0	0	0	0	0	0
Comprehensive Income	2,429	3,789.7	4,001	4,212	4,424	4,639	4,850
Final Balance	24,819	26,296.2	27,890	29,315	30,568	31,646	32,543
Financial Result	325	205	216	227	237	248	258
Net Financial Assets	687	974	1,939	2,773	3,343	3,645	3,684
Investment in Net Financial Assets	-2,046	-287	-965	-834	-570	-302	-39
Net Cash Transactions with Shareholders	-2,114	-2,312	-2,408	-2,787	-3,172	-3,561	-3,953
Financing Cash Flow	-3,836	-2,394	-3,157	-3,394	-3,504	-3,615	-3,733
€ millions	2017A	E2018	F2019	F2020	F2021	F2022	F2023
NOPLAT	3,520	3,155	3,341	3,525	3,711	3,900	4,085
ROIC	21.37%	19.98%	20.32%	20.41%	20.54%	20.67%	20.67%
Depreciation	1,219	1,187	1,233	1,277	1,318	1,390	1,496
in % of PPE	34.1%						
Operational Cash Flow	4,738	4,342	4,574	4,801	5,029	5,289	5,581
Invested Capital - Fixed Assets	15,792	16,442	17,267	18,072	18,866	19,760	20,742
Gross CAPEX Investment	682	-651	-825	-805	-794	-894	-982
Net CAPEX	-536	-1,838	-2,058	-2,081	-2,112	-2,284	-2,478
Invested Capital - NWC and Others	246	154	-26	-224	-319	-422	-532
delta NWC and Others	366	92	180	198	96	103	109
FCF Core Business / (Unlevered)	4,568	2,596	2,696	2,918	3,013	3,109	3,212
Growth	242.0%	-43.2%	3.9%	8.2%	3.3%	3.2%	3.3%
Non-Core CF							
Non-Operational Cash Flow	-1,417	430	444	461	476	491	506
Invested Capital	8,094	8,726	8,710	8,694	8,679	8,663	8,648
Investment Cash Flow	684	-632	16	16	16	16	15
Free Cash Flow Non Core Business	-733	-202	460	477	492	507	521
FREE CASH FLOW	3,835.1	2,394	3,157	3,394	3,504	3,615	3,733

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Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
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Introduction

In this individual report I am going to make a further analysis of one of the most critical factors for the valuation of L'Oréal in our equity research report, more precisely, the beta of the company. As L'Oréal's capital structure consists to a vast extend of equity, the beta, along with the market risk premium, are among most the important inputs for our valuation as cost of equity is almost equal to the WACC. I will make a deeper analysis of the different factors that are needed to be estimated or calculated in order to arrive at a beta that is representable for the chosen company. Throughout this report I will also question the methodology my partner and I used when arriving to the company's beta.

Deeper analysis of the components of the beta

First off, I am going to start with the estimation of the beta of L'Oréal. Beta measures the systematic risk of a security against the market, or in this case a broad index. In the equity research report we chose to run a regression of weekly returns over a three-year period against the MSCI World Index. There are several critical assumptions we had to make in order to use this framework to arrive at the beta. Firstly, we are implicitly assuming that the beta reflects the company's business over the time frame of the regression and that the business has remained unchanged. In our case I believe it is safe to assume that L'Oréal's business has not changed significantly over the last three years, but in other cases it could have. Coty, one of the pure beauty competitors of L'Oréal, is a great example of this, as the company acquired a part of Procter & Gamble's assets, thus changing the business mix of the company, both in terms of size and geographical presence. Another assumption that was made was that the beta mirrors the company's average financial leverage, but not necessarily the current leverage of the company today. This could have been another misstep. At last, one gets different betas when changing benchmarks and time periods. In cases one could chose large companies that potentially could dominate the local benchmark, thus it is important to choose a broad benchmark where the company of your choice has a minor effect on the index. The frequency

of data is another factor that needs to be decided on when estimating the company's beta. Higher frequencies, given a constant time frame will provide you with more data, but it could also attract unnecessary noise as daily price movements have a tendency to overreact. The liquidity of the stock can also affect the beta as stock prices could fluctuate greatly during an illiquid trading environment. In L'Oréal's case this is not a problem due to the size of the company and its trading volume.

An alternative solution in order to estimate the beta of a company

Rather than estimating the beta by running a regression, I looked at the three different factors that could make a better estimation of the beta of a company; the cyclicality of the company's business, the operating leverage of the company and the financial leverage the company has.

The general rule is that the higher the cyclicality of a company's business, the higher the beta of the company, *ceteris paribus*. L'Oréal is the worldwide leader in the beauty industry, an industry that has historically performed well during economic recessions such as the one in 2008-2009. Beauty products have become an important necessity due to secular trends such as urbanization and a growing middle class. As L'Oréal becomes a larger player within the premium beauty segment, this could affect the cyclicality of the business as this segment tends to be more cyclical than the mass market segment, thus L'Oréal's beta should increase if this scenario plays out, keeping everything else constant.

Operating leverage is a ratio that measures the fixed costs as a proportion of total costs (sum of variable and fixed costs). Companies with higher operating leverage, meaning a higher percentage of fixed costs of total costs are attributed a greater beta, *ceteris paribus*. A cost structure that has a lower percentage of fixed costs gives the company more flexibility to ramp up/down production as demand fluctuates. The cash flows of a company with high fixed costs will fluctuate more than the ones of a similar company with lower fixed costs. This translates into a greater business risk (fluctuation of cash flows) which yields a higher beta. Smaller companies tend to have a larger beta than large companies, as former companies have yet to

scale their business to its full potential. In L'Oréal's case the company is a manufacturer of consumer goods and has input costs in order to make their beauty products. This gives the company a lower operating leverage since it can adjust its supply according to the change in demand. A larger part of the firm's costs is relating to Advertisement and Promotions, also known as A&P spend. During economic downturns advertisement is one of the costs that could easily be cut if necessary, meaning it could be segmented as a variable cost.

Financial leverage is the last component we need to look at in order to make an estimation of the company's true beta. Financial leverage magnifies the cash flows of the company, both during good and bad times. Similar to operational leverage, this will make the cash flows of the company fluctuate more than the ones of the same company with lower financial leverage. This implies that highly levered firms should have a greater beta. Coty, which amassed a high debt burden following the acquisition of P&G's Beauty Division, will in this case deserve a higher beta than companies that finances an acquisition with equity. Coty will be under pressure to meet its principal and interest payments, thus the company would be considered a riskier investment *ceteris paribus*, thus a higher beta.

An alternative framework for estimating beta

The first thing to do is to find comparable companies that operate in the same business as your chosen company. In L'Oréal's case this would be the beauty industry where we can find comparable peers such as Estée Lauder, Shiseido, Coty, P&G, Henkel, Beiersdorf and so on. Then you estimate the beta of these companies by running a regression against a broad index. We use the average of the betas we found. Then we unlever the average beta by using the average debt to equity ratio of these comparable peers.

$$\beta_{unt} = \frac{\text{Average of } \beta_{peers}}{(1 + (1 - Tc) \times \text{Average } \frac{D}{E} \text{ peers})}$$

In some cases, your chosen company will have several business units, meaning you would have to find comparable peers for each unit and then estimate how much each unit contributes to

overall value of the firm. This is normally done by revenue, but operating income is a more precise measurement due to the fact operating margins differ across units. If the company has several business units you must compute a weighted average (by operating income) of the unlevered betas of the business units. As the last step you compute the levered beta for your company, by using its debt to equity ratio (market values).

$$\beta_{lev} = \beta_{unl} (1 + (1 - Tc) \left(\frac{D_{mv}}{E_{mv}} \right))$$

In this case we also have to make assumptions to arrive at the beta. We assume that the D/E ratio will remain constant or that the ratio used mirrors the future capital structure. We also assume the weights of the business units will not change over time, which is not necessarily true. As a last point, we can also adjust for the operating leverage of the chosen company against the average beta of comparable peers.

This framework for estimating the company's beta will be a better proxy than running single a regression. As I'm using a larger sample size (comparable peers) to find the company's beta, I'm minimizing the Standard Error of the company's beta.

$$SE = \frac{\sigma_{avg}}{\sqrt{n}}$$

With an increasing number of comparable peers, the number of outliers, both on the up- and downside, will play a lesser role in affecting the average beta. This will make the estimation of the company's beta more precise and thus, works as a better framework rather than relying on one single regression. This framework is also good for estimating the beta of a private company, which is not possible when running a regression.