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**THE UNDISCLOSED VALUE OF INTERNALLY
DEVELOPED BRANDS: CASE STUDIES ON
EMERGING AND WELL-ESTABLISHED
BUSINESSES**

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Abstract

A very debated discussion is under way between and among both researchers and professionals. It deals with the recognition, evaluation and disclosure in financial statements of internally generated brands, i.e. brands which have not been acquired from third parties. Compelling arguments have been presented both by supporters and critics of a review in international accounting standards, which currently do not allow the recognition of internally developed brands as intangible assets. The next pages provide an analysis of brand and asset definitions, as well as practical applications of the potentially desired reform. Four different brand evaluation methods are outlined and assessed in their suitability for the goal. Subsequently, the “Relief from Royalty method”, considered to be the best one, is applied to evaluate the brand of Piquadro spa, Adidas AG, Piaggio spa, and the start-up Slashpay Ltd. The insertion of the brand among the intangible assets of the companies, suggests a convergence between the book value and the market value of the analysed companies. Downsides and upsides of this practice are displayed with supporting data and sources. The resulting conclusion is that brands have an ever-increasing impact in today’s society, and that not showing their value would be a precious missing part of financial releases. However, appropriate decisions should be taken thoughtfully, in order not to lead to unreliable and reckless conclusions. Informative and reliable financial statements is the highest aim of the international accounting standard board, while more consideration in budgeting and financial decisions is desirable by marketing departments. The discussion brings together the accounting world and the marketing one, trying to test practically the desirability of an implementation of a common metric for internally developed brands.

Un argomento che ha surriscaldato il dibattito tra il mondo della ricerca e quello professionale riguarda il riconoscimento, la misurazione e l’inclusione in bilancio dei marchi commerciali sviluppati con risorse interne all’impresa, piuttosto che acquisiti da terze parti. Diverse argomentazioni sono state sollevate sia a favore che contro una revisione degli standard contabili internazionali, che

al momento non prevedono il riconoscimento tra le immobilizzazioni immateriali dei marchi sviluppati internamente. Nelle pagine seguenti vengono presentate in primis un'analisi dei concetti di marchio e di attivo immobilizzato immateriale, e successivamente delle applicazioni pratiche degli effetti di una potenziale riforma degli standard contabili. Vengono delineati quattro diversi metodi per la misurazione del valore di un marchio; tra questi uno viene individuato come più adatto per lo scopo dell'inserimento successivo del marchio stesso in bilancio. Tale metodo è il cosiddetto "ritorno alle Royalties", e viene applicato nella misurazione del marchio di Piquadro spa, Adidas AG, Piaggio spa, e della start-up Slashpay Ltd. A seguire, il valore viene inserito nei rispettivi bilanci, tra le immobilizzazioni immateriali. L'analisi dei risultati ottenuti suggerisce che l'inserimento porti a una maggiore convergenza tra i valori contabili dell'azienda e il rispettivo valore di mercato. Ciò porta a conseguenze sia vantaggiose che svantaggiose, le quali vengono delineate con il supporto di dati e fonti accademiche appropriati. La conclusione ultima è che, considerato l'impatto sempre crescente dei marchi nella società contemporanea, non mostrare il loro valore tra i dati finanziari rappresenterebbe la perdita di una quota informativa particolarmente rilevante. Tuttavia è necessario che decisioni per l'implementazione di misure in tal senso siano accuratamente ponderate, per evitare la diffusione affrettata di informazioni imprecise e poco affidabili. IASB (International Accounting Standard Board) ha come scopo la determinazione di standard che permettano la diffusione di bilanci informativi e affidabili, mentre il marketing desidererebbe più coinvolgimento nelle decisioni finanziarie e di pianificazione. Le argomentazioni presentate in queste pagine uniscono il mondo della contabilità a quello del marketing, puntando a sostenere con dati reali la necessità di un punto d'incontro comune per l'inclusione nei documenti contabili dei marchi sviluppati con risorse aziendali interne.

Ein stark diskutiertes Thema in der Forschung- und Arbeitswelt ist die Anerkennung, Messung und Eingabe in die Bilanz von mit betriebsinternen Ressourcen geschaffenen Markenwerten, bzw. Marken die nicht aus Drittunternehmen erworben wurden. Zahlreiche Argumente sprechen sowohl für als auch gegen die Überprüfung von internationalen

Rechnungslegungsstandards, die im Moment die Anerkennung von selbstgeschaffenen Marken als immaterielle Anlagewerte nicht erlauben.

In folgenden Seiten wird erstens eine Analyse von Marken- und immateriellen Vermögenswertekonzepten dargestellt. Danach werden praktische Anwendungen von einer potenziellen Anpassung der Rechnungslegungsstandards erarbeitet. Vier verschiedene Messungsmethoden für Marken werden dargelegt; unter diesen wird eine fürs gesteckte Ziel bestpassende ausgewählt, d.h. den Einbezug des Wertes der Marke in die Bilanz. Die ausgewählte Messungsmethode ist die sogenannte Relief-from-Royalties Methode. Sie wird in der Messung der Markenwerte von Piquadro Spa, Adidas AG, Piaggio Spa, und dem Start-up Slashpay Ltd. angewendet. Als nächster Schritt werden die berechneten Werte in die jeweiligen Bilanzen als immateriellen Vermögen eingetragen. Die Ergebnisanalyse deutet die Annäherung von Buch- und Marktwerten der Unternehmen an. Die Eintragung verursacht sowohl positive als auch negative Auswirkungen, die im Rahmen des Aufsatzes mit der Unterstützung von geeigneten Daten und Quellen erklärt werden. Angesichts der immer relevanteren Rolle, die Marken in unserer Gesellschaft spielen, wäre die Vermeidung der Wiedergabe von Markenwerte in Finanzberichten einen erheblichen Informationsverlust. Allerdings sollten Entscheidungen in die Richtung einer Umsetzung von solchen Rechnungswesensmaßnahmen aufmerksam abgewogen werden, um die übereilte Verbreitung von unpräzisen Informationen zu vermeiden. Das IASB (International Accounting Standard Board) hat die Festlegung von Standards zum Hauptziel, die informative und zuverlässige Bilanzabfassungen fördern. Dabei wäre ein höheres Beteiligungsgrad von Marketingabteilungen in finanzrelevanten Entscheidungen wünschenswert. Diese Dissertation führt die Bereiche Rechnungswesen und Marketing zusammen, um mit realen Daten und Fallstudien die nötige Übereinkunft im Thema selbst geschaffenen Markenwert zu unterstützen.

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Introduction

Financial statements are created to share information "that is useful to present and potential equity investors, lenders, and other creditors" (Kieso, Weygandt, & Warfield, 2014) in order to allow them to take appropriate financial decisions regarding the company's financing. A correct and complete information sharing is indeed one of the pillars of accounting itself, which has consequences on the perception of companies and markets by society as well. In financial statements, all the resources and potential of a firm, as well as its weaknesses should be reported: they are the presentation of the entity to society. In order to do that, many accounting techniques, according to IFRS (International Financial Reporting Standards) or to national GAAP (Generally Accepted Accounting Principles), are applied. However, some of these principles are considered very controversial, as the case of internally generated intangible assets. According to IAS 38.63, "Internally generated brands, mastheads, publishing titles, customer lists and items similar in substance shall not be recognised as intangible assets" (International Accounting Standards Committee, p. 13). Such a way of accounting, or more correctly, not accounting for them, leads to a misinformation in financial statements about the actual value of businesses, as The Economist pointed out in an article dated August 2014. According to Roger Sinclair, advisor at MASB (...) and whose interview is reported in the article, rules are inconsistent ("Untouchable intangibles," 30th 2014). However, Prof. Sinclair belongs to the marketing world, while many accountants justify the "inconsistency" with the fact that brands could not be measured reliably, which is a condition by IAS 38, paragraph 21 (b), for the brand to be recorded as an intangible asset (Sinclair & Lane Keller, 2014, p. 288). Both standpoints have been presented in the academic literature with compelling arguments, and their practical implications on financial statements are the focus of this thesis.

Indeed, practical evidence of the consequences on the financial statements of internally developed brand recognition are presented in the following pages. After an explanation of the main techniques used to estimate brand values, four empirical examples are computed. The analysed companies operate in different economic fields and include both well-established corporations and a start-up, with the aim of providing a wider application as well as a more significant

insight on brand measurement and recording. A subsequent comparison of financial statements, ratio and metrics is provided, and eventually, appropriate conclusions are drawn as to the desirability and necessity of internally generated brand disclosure.

1. Definition of brands

It is possible to refer to the word “brand” in a broader or a narrower sense. The latter meaning includes “name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competition.” (Keller, 2003)

In this sense, a brand is something tangible, or at least visible, which can be recognised by customers, and allows them to distinguish a specific product among all others.

If we consider the broader definition of a brand, it relates to a whole set of values, as well as the perception and awareness the customers have about the brand itself (Keller, 2003). Some brands represent for example a status symbol, as Rolex, some others innovation, such as Google, and so on.

In this thesis, brands are intended in their broadest meaning, which is the one that adds the greatest value to a company. Their measurement derives mainly from non-financial and non-accounting metrics, but rather from marketing KPIs (Key Performance Indicators). Most of these KPIs are customer based, such as brand awareness, loyalty, and quality perception (Seetharaman, Azlan Bin Mohd Nadzir, & Gunalan, 2001). These factors contribute significantly in creating brand value because they provide a risk reduction in the company’s future revenues, because of the development of long-term profit streams (Sinclair & Keller, 2017). For instance, if a firm can count on a high degree of loyalty from its customers, because it was able to create a positive trust relationship, it is less likely that they would shift to a product of a competitor. Investments in branding activities create the so-called brand equity (Seetharaman et al., 2001). There is no commonly agreed definition of brand equity, except for the stress on the importance of brands in marketing (Keller, 2003) and on strategies related to customer relationship.

2. Brands have a value

Moreover, it cannot be overlooked that brands have more and more impact on companies' success, which can be proved by brand valuations published yearly by famous consultancy firms, such as Interbrand.

In the next section I explain the current accounting practices for reporting brands, and how they could be implemented in order to include the brand in the framework of financial statements.

3. Brands as assets

Given the previous broad definition of a brand, it is clear that a brand is not something merely related to a logo or a product. It is in fact something not totally visible.

Generally, an asset is defined as a resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity itself (Kieso et al., 2014). Therefore, control and future economic benefits are two required conditions for an asset to be considered as such. Assets are commonly divided among tangible, financial, and intangible assets.

In the accounting framework, and more precisely under IFRS, those assets which are not physical nor financial are recorded as intangible assets. IAS 38 deals with the recognition, measurement and disclosure of intangibles, including the brand.

While control and future positive economic inflows are the general prerequisites for a resource to be considered an asset, one additional condition needs to be fulfilled in order to account for an intangible asset (Montrone, 2008). The three of them are stated in the paragraphs 11-17 of IAS 38:

- the asset has to be identifiable;
- the firm must have control over the asset, i.e. is able to benefit from it exclusively;
- the asset must be likely to provide positive economic future benefits to the entity.

Starting from the last point, a strong brand does provide future monetary inflows, because the owner company can count on a positive image in its customers' mind as well as on their loyalty, as stated in the previous section.

A brand which has been acquired is legally owned by the firm, which has control over it. If the brand has been internally generated over time, the developing entity could register it, so that it has its exclusive control.

Identifiability is considered to be necessary to distinguish the asset from the goodwill arising from the acquisition of another entity. However, drawing conclusions on brand's identifiability is not straight forward, which is the reason why IAS 38 explicitly prohibits to account for it as an asset: "Expenditure on internally generated brands [...] cannot be distinguished from the cost of developing the business as a whole. Therefore, such items are not recognized as intangible assets". (Sinclair & Lane Keller, 2014, p. 288).

Under this premise, companies which own well-known brands developed some alternative strategies to show their investors how much their company is worth. Non-financial metrics are often applied, and their results are usually discussed in a more narrative way either in financial reports or in the Management Discussion and Analysis section (Sinclair & Lane Keller, 2014, p. 292).

Despite these compromises, Amir, Lev and Sougiannis (2003) show evidence that, although financial analysts have started in the last decades to include comments and other non-financial information in their business valuations and forecasts, this is not enough. They find that compensation for the missing information is modest and incomplete, especially for high-R&D industries. Similar results are obtained by Gu and Wang (2005). They find that analysts' forecast errors are positively correlated to the amount of intangible assets. A parallel could be drawn between R&D and brands, which have both indefinite useful lives and cannot at this stage be capitalised as assets. It follows that if research on R&D brings out the "need for a continued concern and action of accounting policy-makers with intangibles-related information deficiencies" (Amir, Lev, & Sougiannis, 2003, p. 657), the same action could be as much desirable for brands.

In the following section, some brand evaluation methods are outlined in theory. They have been developed mainly by marketing experts, researchers, and professionals, in order to measure the impact of marketing and branding policies on organisation performances. They can be applied to assess the monetary value of a brand when it is not externally acquired. Such kind of computations may also apply, and indeed are, in the case of evaluating a brand in mergers and acquisitions, in order to separate the brand value from the undefined goodwill.

4. Brand evaluation

The issue of correct and reliable asset measurement is much more amplified when dealing with intangibles. Sinclair and Keller identify three main categories of methods that are usually applied in accounting practice: (Sinclair & Lane Keller, 2014):

- cost approach
- market approach
- income approach, and in its more specific form, the relief from royalty approach

Additionally, Seetharaman introduces the so-called formulary approach, (Seetharaman et al., 2001).

The cost approach is based on the brand development cost. It requires the allocation of expenses to the brand, in order to capitalise them (Seetharaman et al., 2001). Which costs and in which proportion to allocate them is a free choice.

Opting for a market approach means to evaluate a brand according to its market value. By the comparison with other similar “products”, the reasonable value of the brand is approximated.

Generally, income evaluation methods compute the present value of future cash flows. In this context, only cash flows generated from the brand should be taken into account (Sinclair & Lane Keller, 2014). Concerning the more specific Relief from Royalty approach, the underlying rationale is that a firm would have to pay a royalty to a third party for the use of the brand if it did not own it. The brand value is obtained by the capitalisation of the present value of the savings from not having to pay the royalties (Catty, 2010).

The formulary approach is based on the fact that the cash flows from each product are separately identifiable (Seetharaman et al., 2001, p. 250). After computing the net profit from branded products, the result is multiplied by a coefficient representing brand strength. The coefficient is obtained by the combination of seven factors, among which leadership, international image, protection etc... Each factor needs to be scored in order to compute the coefficient.

There are many reasons in favour of choosing the Relief from Royalty approach as the most suitable for a reliable brand valuation.

Basing the evaluation on development cost involves a high degree of subjectivity and complexity in order to identify the correct expenses as well as their proportion to be attributed to the brand. Besides that, this method would not be suitable for mature brands, because of the necessity to perhaps track back expenses belonging to very old financial periods (Seetharaman et al., 2001).

The use of the market-based approach creates a loop, which does not actually allow a measurement. In order to know the amount at which a brand can be sold, you need to evaluate the brand. Moreover, even if some research shows evidence of a rise of a market for brands (Lechner, Lorenzoni, & Tundis, 2016), there is still no actual active market for them (Seetharaman et al., 2001).

With regards to the formulary approach, scoring the factors cannot be considered a task which can be carried out objectively and consistently. Albeit with some assumptions, this method is applied and has been developed in different versions by famous brand consultants, such as Interbrand (Interbrand, 2018). In fact, the same brand could happen to be valued very differently by different consultants. Facebook, for instance, was worth \$48.2 billion in 2017 according to Interbrand (Interbrand, 2017), but \$73.5 billion in Forbes' ranking (Forbes Media LLC., 2017). Because of its high subjectivity degree, the formulary approach is not suitable for the task.

As for the income approach, identifying the cash flows generated specifically by the brand is once again not straight forward, and could indeed lead to both double-counting and overlooking some other relevant information. However, the Relief from Royalty method considers total revenues as a starting point and

generally requires only a few inputs, which are often public and easily accessible. Additionally, the R-f-R approach is non-proprietary. For this reason, it is frequently employed by accounting and intellectual property law firms (Sinclair & Lane Keller, 2014).

4.1. The Relief from Royalties approach

Starting from the necessary inputs, the computation is outlined in a step by step approach.

The necessary inputs (Sinclair & Keller, 2017) for the application of the R-f-R approach are:

- gross revenues
- rate of growth
- royalty rate
- discount rate

In the following paragraphs, each of the inputs are discussed in more details.

4.1.1. Gross revenues

The amount of gross revenues is available in the income statement of both public and private firms. They are usually the starting point to forecast future revenues for a planning horizon between three and five years (Salinas, 2009). With regards to private companies, their financial statements are publicly available in Europe and many other countries, but not in the US.

4.1.2. Rate of growth

Growth rates can be estimated from the growth, for example in sales, of previous years. A proxy could be for instance the average growth in sales of the past 5 years. Additionally, the useful life of a trademark needs to be considered indefinite, given that at the time of the transaction it is unknown how long a brand will survive (Sinclair & Keller, 2017). In order to reflect this uncertainty in the brand value, an annuity is used as a growth rate over the considered time span (Sinclair & Lane Keller, 2014). However, Catty (2010) cautions against this procedure claiming that it could lead to unrealistic expectations in revenues.

4.1.3. Royalty rate

The choice of the most appropriate royalty rate is very much debated. General rules such as the “25% rule” or the “5% rule” (Smith & Parr, 2000), which are often applied for their simplicity, are neither company nor industry specific, and provide only little additional insights on the brand value. Keller and Sinclair define indeed the “25% rule” a “crude device”.

An appropriate and more tailor-made royalty rate should consider many factors, which include economic, institutional, and cultural factors, as well as contract specific characteristics (Jayachandran, Kaufman, Kumar, & Hewett, 2013).

Setting business-specific royalty rates

In the article “Brand Licensing: What Drives Royalty Rates?”, the authors identify a very practical and specific methodology to set royalty rates, which is partially reported in this section in a simplified version.

As stated above, economic, institutional and cultural factors need to be considered. In a more practical application, they could be represented by market size (i), by the degree of Intellectual Property Right Protection (ii), by risk perception (iii) of market players, and by the contract duration (iv).

The most significant economic factor to be considered is the size of the market. If the market in which the company operates is larger, it is possible for the licensee to expand more its business under the same brand name. The licensor is also expected to better protect the brand value (Jayachandran et al., 2013). Therefore, a positive correlation between market size and royalty rate can be inferred.

Intellectual Property Right Protection represents the institutional aspect. IPRP can be either weak or strong in different markets. The stronger the enforcement, the lower the threat of brand damages from opportunistic behaviour by competitors. Since there is a stronger need for monitoring, the licensee would be required to pay higher royalties if its market has a low degree of IPR Protection (Jayachandran et al., 2013).

Cultural factors influence the royalty rate too. In particular, a higher risk aversion of locals of a certain market, requires lower royalty rates. Indeed, since entering in a licencing contract involves a certain risk, a highly sensitive

uncertainty perception is likely to discourage potential licensees. A lowering in royalties may offset this problem.

Lastly, having brand protection as main concern, contract duration and exclusivity decrease the royalty rate. A longer contract enhances brand protection by the establishment of long lasting business relationships (Jayachandran et al., 2013).

Other researches identify many more relevant factors, among which negotiating power and product life cycle (Salinas, 2009). For simplicity, they are not included in this discussion.

4.1.4. Discount rate

WACC (Weighted Average Cost of Capital) is commonly agreed to be the best way to compute the discount rate, and it finds wide application in practice. It can be obtained as the sum of the cost of equity in terms of return required by shareholders, and the cost of debt, weighted by their respective proportion as financing sources (Penman, 2013). When weighting the average for the borrowing share, tax shield from debt needs to be considered as well.

In equation form:

$$WACC = \frac{E \times C_E + D \times C_D \times (1 - t)}{E + D}$$

where

E = Equity

C_E = Cost of equity

D = Debt

C_D = Cost of debt

t = Corporate effective tax rate

The Capital Asset Pricing Model is the basis for the cost of equity estimation. It computes the required return for an investment, in this case shareholders' return, as the sum of the risk-free return and market risk premium weighted by the firm's beta.

$$C_E = R_f + \beta \times (R_m - R_f)$$

where

R_f = Risk free interest rate

β = sensitivity

R_m = Market return

The beta corrects the return for the expected sensitivity of the firm's returns to the market fluctuations (Penman, 2013). It can be either estimated by the researcher from past returns or be found in specific country-specific or industry-specific databases. Alternatively, financial websites and newspapers such as Yahoo Finance or Financial Times compute some company betas.

Cost of debt is computed as the total interest paid for the period over debt.

$$C_D = \frac{\text{total interest paid}}{D}$$

4.1.5. Getting to the brand value

After having obtained all the necessary data, the brand value can be estimated as follows.

1. Future sales revenues for the desired time horizon should be predicted. In order to do that, sales of each previous year are multiplied by the growth rate (GR), assuming a yearly fixed increase in revenue.

$$Sales_{y_n} = Sales_{y_{n-1}} \times (1 + GR)$$

2. The forecasted royalty share is then calculated by multiplying yearly future revenues by the royalty rate ($i_{royalty}$). Taxes affect the royalty share; therefore, each amount needs to be reduced by taxes. In the equation, t represents the effective tax rate.

$$Royalty\ share_{y_n} = Sales_{y_n} \times i_{royalty} \times (1 - t)$$

3. The sum of the present values of the royalty shares (FV) represents the first part of the brand value. The amounts are discounted using WACC rate (r), as already outlined in the dedicated section.

$$PV = \sum_{n=1}^N \frac{FV_n}{(1+r)^n}$$

This result assumes a useful life equal to the considered timespan, i.e. normally N would be 3 to 5 years (Salinas, 2009). It has been discussed that intangibles such as brands usually have an indefinite useful life. The next steps show how to account for a longer but more indefinite useful life.

4. The last year in the forecast can be a proxy for following years returns.

For instance, if in the first 3 steps time horizon of 5 years has been applied, the discounted 5th year royalty share would be the starting point. This amount needs to be discounted over the remaining predicted useful life. It could be either discounted as a perpetuity, reflecting the value of a brand which is supposed to last forever, or as an annuity for only a limited number of periods. The equation for a 5-year annuity after a 5-year forecast, i.e. the value from year 6 to 10, is the following:

$$PV_{annuity} = PV_{y_N} \times \frac{1 - (1+r)^{-N}}{r}$$

This additional discounting approximates both the long lasting life of brands (Sinclair & Lane Keller, 2014), but also the strong uncertainty connected to them in the long run.

5. As last step, the brand value is the sum of the discounted royalty shares and the annuity, which summed up in one equation would be:

$$Brand\ value = PV_{y_N} \times \frac{1 - (1+r)^{-N}}{r} + \sum_{n=1}^N \frac{Sales_{y_n} \times i_{royalty} \times (1-t)}{(1+r)^n}$$

4.2. Empirical examples

In this section, the brand value in 2017 of three different companies is estimated. The chosen businesses are all listed companies, which use IFRS as accounting standards, and which developed their main brand internally. As discussed in previous paragraphs, they are not allowed to disclose their brand value, according to IAS 38.

The companies taken into consideration are Adidas, Piaggio Group and Piquadro Group. All data used in the evaluation are publicly available in their financial statements, which are available on the companies' institutional websites. Some excerpts from financial reports as well as detailed computations are included in the appendix of this thesis.

Piquadro is famous for business bags and accessories. It focuses on sophisticated designs, functionality, and Italian style. The company is allowed to display on its balance sheet only the value of The Bridge, a classy leather product manufacturer acquired two years ago (Piquadro Spa).

Adidas is a multinational shoe and sportwear manufacturer. It has been on the market since 1924, and it is famous all over the world for its products and dynamic sport culture (Adidas AG, 2018). It owns two main brands, Reebok, which was acquired in 2006, and Adidas, which has been developed over almost a century.

Piaggio is active in the automotive industry, more specifically in the production of two-wheeler motor vehicles. It owns a wider brand portfolio compared to the previous two companies. Aprilia, Scarabeo, and Vespa are just some examples worth mentioning (Piaggio&C. SpA, 2017). Piaggio's brand value is not shown among its intangible assets either.

The royalty method, as presented in the previous section, is applied in order to compute the brand value. The results are obtained with simple data and methodologies. They are therefore meant to be only an approximation of the real value of the trademark.

Because of lack of data, the 5% rule was applied as royalty rate for this computation. It has been discussed before that a royalty rate should consider

many factors in order for it to offer more insights. The use of the 5% rule makes the estimation much more imprecise and cruder. This should be taken into consideration when considering the proposed brand values.

The discount factor has been computed as WACC. The cost of debt was measured as the total interest paid for the year divided by total long-term debt. The tax impact was also considered. The cost of equity is estimated using the CAPM. More specifically, the risk free rate is the yield given by AAA-rated euro area central government bonds, retrieved from the European Central Bank website (European Central Bank, 2018). The market return of each company is published on Yahoo Finance and is updated on 20th July 2018 (Yahoo Finance, 2018). The company specific beta is an average between the one provided by Yahoo Finance and Financial Times, computed by Thomson Reuters (Financial Times by Thomson Reuters, 2018).

The following tables show a summary of brand values and computations.

Table 1: Computation of brand value for Piquadro

	Piquadro (million of euros)				
	2018	2019	2020	2021	2022
Gross revenues	81.85	88.26	95.17	102.61	110.64
Rate of growth (in sales)	7.83%				
Royalty rate	5.00%				
Royalty share (5% of gross revenues)	4.09	4.41	4.76	5.13	5.53
Effective tax rate (from financial statements)	36.60%				
Tax effect	-1.50	-1.62	-1.74	-1.88	-2.02
Discount rate (WACC)	2.59	2.80	3.02	3.25	3.51
0.03					
Discounted royalty shares	2.52	2.64	2.77	2.90	3.04
Present value 2018-2022	13.87				
Present value 2022 as a 5-year annuity	13.95				
Brand value	27.82				

Table 2: Computation of brand value for Adidas

	Adidas (million of euros)				
	2018	2019	2020	2021	2022
Gross revenues	23,487	25,999	28,780	31,858	35,265
Rate of growth (in sales)	10.70%				
Royalty rate	5.00%				
Royalty share (5% of gross revenues)	1,174	1,300	1,439	1,593	1,763
Effective tax rate (from financial statements)	33.00%				
Tax effect	-388	-429	-475	-526	-582
Discount rate (WACC)	787	871	964	1,067	1,181
Discounted royalty shares	1.34%				
Present value 2018-2022	776	848	926	1,012	1,105
Present value 2022 as a 5-year annuity	4,668				
Brand value	9,980				

Table 3: Computation of brand value for Piaggio

	Piaggio (million of euros)				
	2,018	2,019	2,020	2,021	2,022
Gross revenues	1,377.46	1,413.38	1,450.24	1,488.05	1,526.86
Rate of growth (in sales)	2.61%				
Royalty rate	5.00%				
Royalty share (5% of gross revenues)	68.87	70.67	72.51	74.40	76.34
Effective tax rate (from financial statements)	50.10%				
Tax effect	-34.51	-35.41	-36.33	-37.28	-38.25
Discount rate (WACC)	34.37	35.26	36.18	37.13	38.10
Discounted royalty shares	2.91%				
Present value 2018-2022	33.40	33.30	33.20	33.10	33.00
Present value 2022 as a 5-year annuity	166.00				
Brand value	317.53				

To sum up, the brand values for Piquadro, Adidas and Piaggio using the Relief from Royalties approach are estimated to be as follows:

- Piquadro 27.8 € M
- Adidas 9,980 € M
- Piaggio 317.5 € M

As double-check for the reliability of the measurement, Adidas brand value computed by Interbrand in 2017 is € 7,860 million (Interbrand, 2017), which could be considered quite close to the one obtained in this computation.

Once the brand value has been estimated, the question of how to disclose it in financial statements raises. This matter is addressed in the next chapters.

5. The brand in financial statements

In the discussion above, it is stated that a brand should be considered an asset, more specifically an intangible asset. Therefore, it is logical to show its value in the intangible asset section of the balance sheet. This is indeed the aim of this work itself. The question would be how to counterbalance this added value on the asset side, with an equal one on the equity and liabilities side.

What does currently happen? In case of an asset acquisition from third parties, the increase in value on the asset side is reflected either by an equal decrease on the asset side, like cash, by an increase in debt or by the issuance of shares in the equity section. In case of fair value accounting, "The consolidated balance sheet reflects the acquiring company's net assets at fair value" (Herauf & Hilton, 2016). At acquisition, the fair value of the asset should be equal to its purchase price, since it has been just acquired. Subsequently, the asset should be periodically revalued as prescribed by IAS 16 –Property, plant and equipment (Herauf & Hilton, 2016). The value could either decrease, increase or stay the same. Impairment is a situation in which the recoverable amount of an asset is below its carrying balance (Krimpmann, 2015). If this happens, an impairment loss needs to be recorded. On the contrary, a higher recoverable amount generates a gain. Gains and Impairment losses could either affect the income statement (Sinclair & Keller, 2017) or be included in other comprehensive income (OCI), according to the chosen revaluation method (Krimpmann, 2015). The other comprehensive income statement usually includes gains and losses deriving from valuation issues (Krimpmann, 2015). Transactions recorded in OCI are part of company's equity. When the assets (liabilities) that give raise to unrealised profits or losses are disposed, the net of profits and losses for the asset (liability) is converted into actual profits and losses which affect the bottom line (Krimpmann, 2015). The process of moving associated gains and losses from OCI to comprehensive income is called recycling, and it is strictly connected to the disposal of the asset (liability) generating the mentioned gains and losses.

Logically, the same can be applied to the recognition of internally generated brands, as well. The brand value is reflected within the intangible assets section as well as in OCI, and consequently in equity. According to this method,

periodical adjustments affect only Other Comprehensive Income, but do not jeopardise actual profits. An increase (decrease) in the value of an internally developed brand cannot indeed be considered a realised gain (loss). It would, in case the trademark was to be acquired by a third party, i.e. the asset would be disposed.

The journal entry for an increase in brand value as well as for first time recording would be:

Debit:	Brand	xxx
Credit:	Gain on brand value – OCI	xxx

According to what discussed so far, accretions would be included in OCI as well, as long as the asset is not disposed.

An alternative solution would be to increase retained earnings directly, without waiting for the brand disposal. Retained earnings have been reduced by branding expenditures over company's life, and adding the brand value back to retained earnings would reverse the process. Periodical tests for impairment should be carried out, and possible losses would pass through the income statement.

The main difference with the previously outlined method is the effect on net income. By passing gains and losses through OCI the bottom line is not subject to any change, whereas by using the second method net profits are directly affected. Sudden increases in net income, especially with regard to the very first brand value insertion, would make financial performances less comparable to previous financial years. In addition, the brand value would have a strong impact on corporate taxes, which companies usually try to minimise. Thirdly, shareholders are likely to claim more considerable or more frequent dividend payments because of the greater volume of profit. For these reasons, the first outlined method may be preferred, and it is the one applied to the selected case studies in the following pages.

Fair value accounting for long-term assets is not everywhere allowed. For instance, accretion (the opposite of impairment) is forbidden by US GAAP. Sinclair and Keller track back the origin of this rule to depreciation, for which of course accretion would not make sense. This is the case for assets accounted

at cost. However, the practice does not find justification in fair value accounting. Ultimately, the result is that even if a brand becomes more and more valuable, this value is somehow lost. Keller and Sinclair refer to the effect of this only-downward procedure as “the Moribund effect”, claiming that after acquisition brands have a “vivid loss of weight” and are left there, without caring of their actual potential and value. The authors draw attention on the need not only of periodical impairment tests but also of periodical accretion ones (Sinclair & Keller, 2017), as applied under IFRS. A higher degree of harmonisation in accounting standards would therefore contribute in making financial reporting comparable.

In the next section, practical examples and implications of the insertion of the brand in financial statements are outlined.

5.1. Empirical examples and ratio analysis

In the following pages the computed brand values for Piquadro, Adidas, and Piaggio are inserted in the respective financial statements for the financial year 2017. An increase in the intangible asset section as well as in comprehensive income is shown (which is reflected in equity). The complete statements can be found in the appendix, while the next tables show some comparisons of the most relevant figures and ratios. In appendix 5, the formulas for the computed ratios are presented as well. For simplicity purposes, no adjustments have been made to the non-controlling interest share of equity.

Generally, an additional asset with counterbalance in the equity leads to a lower proportion of debt, as shown by the debt-to-equity and debt ratios in tables 4, 5, and 6. The borrowing percentage decreases dramatically for all three companies, 57, 76 and 132 percental points respectively. A straight-forward interpretation is that when including the brand value in the balance sheet, companies appear more stable, and less subject to financial distress. However, there is also a downside, as outlined by Berk and DeMarzo (2014) when explaining the trade-off theory. Less debt means also less leverage. Companies often use debt to leverage profit and generate more shareholders’ wealth. Businesses can for instance obtain tax shields thanks to debt, since interest payments to lenders are not subject to corporate taxes (Berk & DeMarzo, 2014). Leverage could also be

used to provide a credibility signal to the market, showing commitment on long-term projects and their respective necessary borrowings (Berk & DeMarzo, 2014). The profitability ratios indeed decreased because of the brand asset. Piquadro shows a reduction in ROE from 8.89% to 5.15%, Adidas from 17.09% to 6.70%, and Piaggio from 5.19% to 2.84%. Liquidity is not particularly affected by the introduction of this new intangible.

The stock price-to-book value ratio provides the most interesting result. The pre-addition indexes were 1.90 for Piquadro, 5.92 for Adidas, and 2.05 for Piaggio, meaning that the market perception of the companies' value was far more than the value showed in the financial statements. If those indexes are compared with the ones obtained after the brand is included, the result provides a picture which is much closer to market expectations. The ratio for Piquadro is 1.10, the one for Adidas 2.32, while Piaggio's index is 1.12. Stock prices should theoretically incorporate the actual value of a company, its market value. Potential investors should be able to evaluate investment options using appropriate tools, i.e. appropriate and informative financial statements. The goal itself of financial reporting is indeed to provide reliable information (Kieso et al., 2014), as stated in the introduction of this thesis. It is not obvious that the market is showing reality, as the many cases of financial bubbles in recent history suggest, however, individuals acting on the market are able to process and consider not only purely numerical data, but also qualitative information, such as brand perception and awareness (Keller, 2003). For this reason, financial statements which include the brand value are more in line with the market, and could in a sense be considered more informative.

Table 4: Comparison before and after brand insertion - Piquadro

Piquadro Spa (tsd. €)	2017 - official	2017 - brand included
Brand value	0	27,821
Total non-current assets	24,102	51,923
Total assets	90,550	118,372
Total equity	38,284	66,104
Total liabilities	52,267	52,267
Net income	3,405	3,405
Comprehensive profit	3,456	31,278
number of shares	50,000,000	50,000,000
Share capital	1,000	1,000
earnings per share	0.068	0.068
Equity per share	0.7657	1.3221
ROA	3.76%	2.88%
ROE	8.89%	5.15%
Debt-to-equity	136.52%	79.07%
Debt ratio	57.72%	44.15%
Stock price at 31/03/2017	1.458	1.458
Fixed asset turnover	3.15	1.46
Net asset value per share	0.77	1.32
Price / Book value ratio	1.90	1.10

Table 5: Comparison before and after brand insertion - Adidas

Adidas AG (mio. €)	2017 - official	2017 - brand included
Brand value	0	9,980
Total non-current assets	5,877	15,857
Total assets	14,522	24,502
Total equity	6,435	16,415
Total liabilities	8,087	8,087
Net income	1,100	1,100
Comprehensive profit	224	10,204
number of shares	209,216,186	209,216,186
Share capital	209	209
earnings per share	5.42	5.42
Equity per share	30.76	78.46
ROA	7.57%	4.49%
ROE	17.09%	6.70%
Debt-to-equity	125.67%	49.27%
Debt ratio	55.69%	33.01%
Stock price at 31/12/2017	182.22	182.22
Fixed asset turnover	3.61	1.34
Net asset value per share	30.76	78.46
Price / Book value ratio	5.92	2.32

Table 6: Comparison before and after brand insertion – Piaggio

Piaggio Spa (tsd. €)	2017 - official	2017 - brand included
Brand value	0	317,530
Total non-current assets	1,039,101	1,356,631
Total assets	1,510,128	1,827,658
Total equity	385,060	702,590
Total liabilities	1,125,068	1,125,068
Net income	19,984	19,984
Comprehensive profit	11,044	328,574
number of shares	358,153,644	358,153,644
Share capital	207,614	207,614
earnings per share	0.056	0.056
Equity per share	1.0751	1.9617
ROA	1.32%	1.09%
ROE	5.19%	2.84%
Debt-to-equity	292.18%	160.13%
Debt ratio	74.50%	61.56%
Stock price at 31/12/2017	2.2	2.2
Fixed asset turnover	1.29	0.99
Net asset value per share	1.08	1.96
Price / Book value ratio	2.05	1.12

In the next section, the same process is applied to the start-up Slashpay Ltd.

6. A case study for start-ups: Slashpay Ltd.

The goal of this paragraph is to investigate whether recently founded firms, such as start-ups may be able to track from the beginning their growth in brand value, in order to attract more investors and develop more quickly. The early tracking of brand development could let firms avoid the difficult process of brand evaluation “all of a sudden”.

The case study used for this example is Slashpay Ltd., a UK based start-up founded in April 2017. As for the brand value estimation, the same process described in previous chapters is applied, i.e. the Relief from Royalties approach. However, due to missing data, the brand value effect on the balance sheet is discussed only in a narrative way.

Slashpay deals with mobile shopping and mobile payments using slashes and hashtags. The technology they use allows to transfer money safely without inserting credit card information at each payment. Every user, being buyer or

seller, is assigned a “\username”, while every product available on the app market is identified by one or more “#productname”. The customer is able either to search for a product by its univocal #productname or to select it from Slashpay market. The use of multiple hashtags (e.g. the same product could have a different name if sold on social media and on a magazine) for the same product allows the manufacturer to identify not only the good but also the sale channel where the customer selected and bought the product. It follows that the seller knows in which channel he/she should invest more. Slashpay’s goal is to allow easier and faster payments as well as to boost a market for designers, artisans, and individual manufacturers.

All data, including the discount rate, were provided directly by the company and were computed as a forecast by the Advisor to the Board of Directors. Only the tax rate has been retrieved from the official UK government website and it is the general business tax rate (Corporation Tax rates and reliefs). A summary of the data is included in the appendix.

The value of Slashpay’s brand estimated with the Relief from Royalties approach is 2,061,224 €. Such a high value, if it were to be added to the balance sheet, would have a massive impact on the potential investor perception.

Table 7: Computation of brand value for Slashpay

	Slashpay (in euros)				
	2018	2019	2020	2021	2022
Gross revenues	59,644	1,406,585	5,331,227	10,463,127	18,620,700
Rate of growth (in sales)					
Royalty rate	5.00%				
Royalty share (5% of gross revenues)	2,982	70,329	266,561	523,156	931,035
Tax rate (business tax rate in the UK)	19.00%				
Tax effect	-567	-13,363	-50,647	-99,400	-176,897
Discount rate (WACC) - given by the company	2,416	56,967	215,915	423,757	754,138
Discounted royalty shares					
Present value 2018-2022	15.00%				
Present value 2022 as a 5-year annuity	2,101	43,075	141,967	242,284	374,940
804,367					
Brand value	1,256,857				
2,061,224					

Nevertheless, it cannot be overlooked that start-ups are generally not stable entities. They are in fact subject to many financial risks and, according to an article published by Forbes at the beginning of 2015, 9 out of 10 start-ups end up failing (Neil Patel, Jan 16th, 2015). Additionally, data sources need to be

verified systematically, and the projection needs to be based as much as possible on actual data.

Despite that, the early estimation could be helpful in new companies' financing. Other evaluation methods, such as the cost method described in previous chapters, could also be taken into consideration when deciding the most suitable one. For newly founded firms, the process of tracking back costs may indeed be easier if done systematically, and provide more accurate data about investments in branding activities.

Conclusion and further research opportunities

The implications of accounting for the brand as an intangible asset have been presented in this thesis, with the goal in mind to investigate the desirability of brand disclosure. The first sections outline the definition and role of the brand, as well as current accounting practices for intangibles according to IFRS. Four brand evaluation methods and techniques have been described, and their suitability for the desired aim has been assessed as next step. The Relief from Royalties approach has proved to be the best method, therefore, after explaining its functioning in details, the brand values for three mature companies and for a start-up have been computed. As for the three well-established businesses, the subsequent insertion of the values in the respective balance sheets has showed positive outcomes from the solvency standing point, since there is a counter-increase on the equity side. A second positive aspect has to be detected in the better matching between company's equity book value and market stock prices. The book value provided indeed a financial information which can be considered closer to the market perception of the company. On the other hand, profitability and financial leverage suffered from the presence of this new intangible, showing decreases in ROA and ROE. As for the start-up, early brand development tracking could lead to a better understanding by investors of the business's growth potential, eventually granting additional financing sources. The potential lack of reliable and historical data for new firms may by contrast represent a downside. Projections and expectations towards brand development may be either over or undervalued, missing the point of obtaining more informative financial reports.

In the analysis, some assumptions and simplifications were necessary for disparate reasons. Among those, the lack of customer based brand equity (Keller, 2003). Customers' brand perception and awareness are not included in the model except in the fine form of market rate, when establishing a company tailor-made discount rate. Marketing metrics, whose department bears a consistent share of responsibility in brand development, has almost no role in the R-f-R method, and criticisms about this proceeding has been made by more than one author (Salinas, 2009; Sinclair & Keller, 2017). Since debate is still ongoing, it means that much remains to be done in finding a reliable evaluation method, which connects more tightly marketing and accounting.

The desirability of the implementation not only of appropriate brand evaluation methods, but especially of accounting standards that allow internally generated brand disclosure is also an issue. As discussed over the thesis, accounting for the brand provides results that are closer to market expectations and increase firms' financial stability. However, a better matching to the share market does not necessarily mean that information would be more reliable. In fact, it has not been agreed yet on a reliable and common brand evaluation method. As for now, trademarks are measured very subjectively. Moreover, the market could have a distorted perception of the business, and consequently not being a reliable benchmark for the actual value of a company.

With the aim of offering complete and correct financial information, the missing value of internally developed brands needs nevertheless to be added to financial statements. Every step of this implementation should just be carefully thought out, because reckless actions could lead to much mistaken and confusing information sharing than maintenance of the status quo. The need of appropriate measures for accounting for internally developed brands is nevertheless very forthcoming, provided the ever-more relevant role of brands in contemporary society.

Appendix

I. Computation of discount rate for brand evaluation

	Piquadro	Adidas	Piaggio
Risk free rate (AAA-rated euro area central government bonds 5y) ECB	-0.26%	-0.26%	-0.26%
Market rate	3.08%	1.45%	2.49%
Beta (average of Yahoo and FT)	0.9748	0.77615	0.8976
by Thomson Reuters for the financial times	1.0896	0.8223	0.8652
by Yahoo Finance	0.86	0.73	0.93
CAPM - Cost of equity capital	3.00%	1.07%	2.21%
$C_E = R_f + \beta \times (R_m - R_f)$			
Total interest paid	€ 891	€ 62	€ 35,102
Total long term debt	€ 20,527	€ 1,796	€ 508,827
Cost of debt	4.34%	3.45%	6.90%
$C_D = \frac{\text{total interest paid}}{D}$			
Total equity	€ 38,284	€ 6,435	€ 385,060
D+E	€ 58,811	€ 8,231	€ 893,887
Discount Rate	2.91%	1.34%	2.91%
$WACC = \frac{E \times C_E + D \times C_D \times (1 - t)}{E + D}$			

II. Piquadro Spa financial statements
In thousand euros

CONSOLIDATED STATEMENT OF FINANCIAL POSITION		
(in thousands of Euro)	31-Mar-17	31-Mar-16
ASSETS		
NON-CURRENT ASSETS		
Intangible assets	3,775	4,107
Goodwill	4,658	0
Property, plant and equipment	12,691	12,618
Non-current financial assets	2	0
Receivables from others	772	700
Deferred tax assets	2,204	1,182
TOTAL NON-CURRENT ASSETS	24,102	18,607
CURRENT ASSETS		
Inventories	18,991	16,344
Trade receivables	27,747	23,801
Other current assets	3,411	1,893
Tax receivables	1,011	328
Cash and cash equivalents	15,288	10,214
TOTAL CURRENT ASSETS	66,449	52,581
TOTAL ASSETS	90,550	71,188
EQUITY		
Share Capital	1,000	1,000
Reserves	2,042	1,737
Retained earnings	31,942	30,212
Group profit for the period	3,435	3,946
TOTAL EQUITY ATTRIBUTABLE TO MINORITY INTERESTS	-136	-105
TOTAL EQUITY	38,284	36,790
NON-CURRENT LIABILITIES		
Borrowings	13,676	7,046
Payables to other lenders for lease agreements	916	1,431
Other non-current liabilities	5,935	1,378
Deferred tax liabilities	0	0
TOTAL NON-CURRENT LIABILITIES	20,527	9,854
CURRENT LIABILITIES		
Borrowings	5,987	7,881
Payables to other lenders for lease agreements	691	606
Trade payables	20,244	12,521
Other current liabilities	4,355	3,078
Current income tax liabilities	464	458
TOTAL CURRENT LIABILITIES	31,740	24,544
TOTAL LIABILITIES	52,267	34,398
TOTAL EQUITY AND LIABILITIES	90,550	71,188

EQUITY	
Share Capital	1,000
Reserves	2,042
Retained earnings	59,763
Group profit for the period	3,435
TOTAL EQUITY ATTRIBUTABLE TO MINORITY INTERESTS	-136
TOTAL EQUITY	66,104
NON-CURRENT LIABILITIES	
Borrowings	13,676
Payables to other lenders for lease agreements	916
Other non-current liabilities	5,935
Deferred tax liabilities	0
TOTAL NON-CURRENT LIABILITIES	20,527
CURRENT LIABILITIES	
Borrowings	5,987
Payables to other lenders for lease agreements	690.6
Trade payables	20,244
Other current liabilities	4,355
Current income tax liabilities	464
TOTAL CURRENT LIABILITIES	31,740
TOTAL LIABILITIES	52,267
TOTAL EQUITY AND LIABILITIES	118,372

CONSOLIDATED INCOME STATEMENT		31-Mar-17
(in thousands of Euro)		
REVENUES		
Revenues from sales		75,912
Other income		2,332
TOTAL REVENUES (A)		78,244
OPERATING COSTS (B)		72,555
OPERATING PROFIT (A-B)		5,689
FINANCIAL INCOME AND CHARGES		
Financial income		885
Financial charges		-1,203
TOTAL FINANCIAL INCOME AND CHARGES		-318
PRE-TAX RESULT		5,371
Income tax expenses		-1,966
PROFIT FOR THE PERIOD		3,405
Components that can be reclassified to profit or loss		
Profit/(loss) arising from the translation of financial statements (A)		86
Profit/(loss) on cash flow hedge instruments		-12
Profit/(loss) on brand fair value		27,821
Components that cannot be reclassified to profit or loss:		
Actuarial gains (losses) on defined-benefit plans		-22
Total Profits/(Losses) recognised in Equity (B)		27,873
Total comprehensive Profits/(Losses) for the period (A) + (B)		31,278

III. Adidas AG financial statements

In million euros

CONSOLIDATED STATEMENT OF FINANCIAL POSITION		
	2017	2016
Assets		
cash and cash equivalents	1,598	1,510
short-term financial assets	5	5
accounts receivable	2,315	2,200
inventories	3,692	3,763
income tax receivables	71	98
other current assets	891	1,309
assets held for sale	72	0
Total current assets	8,645	8,886
property, plant and equipment	2,000	1,915
goodwill	1,220	1,412
trademarks	1,309	1,680
other intangible assets	154	167
long-term financial assets	236	194
deferred tax assets	630	732
other non-current assets	327	190
Total non-current assets	5,877	6,290
Total assets	14,522	15,176
Liabilities and equity		
short-term borrowings	137	636
accounts payable	1,975	2,496
other current liabilities	1,576	1,208
income taxes	424	402
current accrued liabilities	2,180	2,023
Total current liabilities	6,291	6,765
long-term borrowings	983	982
other non-current liabilities	155	112
pensions and similar obligations	298	355
deferred tax liabilities	275	387
non-current accrued liabilities	85	120
Total non-current liabilities	1,796	1,957
Share capital	204	201
Reserves	-81	749
Retained earnings	6,327	5,521
Non-controlling interest	-15	-17
Total equity	6,435	6,454
Total liabilities and equity	14,522	15,176

CONSOLIDATED INCOME STATEMENT		
	2017	2016
Net sales	21,218	18,483
Cost of sales	-10,514	-9,383
Gross Profit	10,703	9,100
Other operating income	248	367
Other operating expenses	-8,882	-7,885
Operating profit	2,070	1,582
Financial income	46	28
Financial expenses	-93	-74
Income before taxes	2,023	1,536
Income taxes	-668	-454
Net income from continuing operations	1,354	1,082
Discontinued operations	-254	-62
Net income	<u>1,100</u>	<u>1,020</u>

CONSOLIDATED STATEMENT OF FINANCIAL POSITION	
	2017
Assets	
cash and cash equivalents	1,598
short-term financial assets	5
accounts receivable	2,315
inventories	3,692
income tax receivables	71
other current assets	891
assets held for sale	72
Total current assets	8,645
property, plant and equipment	2,000
goodwill	1,220
trademarks	11,289
other intangible assets	154
long-term financial assets	236
deferred tax assets	630
other non-current assets	327
Total non-current assets	15,857
Total assets	<u>24,502</u>

CONSOLIDATED INCOME STATEMENT	
	2017
Net sales	21,218
Cost of sales	-10,514
Gross Profit	10,703
Other operating income	248
Other operating expenses	-8,882
Operating profit	2,070
Financial income	46
Financial expenses	-93
Income before taxes	2,023
Income taxes	-668
Net income from continuing operations	1,354
Discontinued operations	-254
Net income	<u>1,100</u>
Items of OCI not reclassified to profit or loss	23
Items of OCI reclassifiable to profit or loss	-899
Profit/(loss) on brand fair value	9,980
Other comprehensive income	9,104
Total comprehensive income	10,204

IV. Piaggio Spa financial statements
In thousand euros

Consolidated Income Statement		
In thousands of euros	2017	2016
Net revenues	1,342,450	1,313,109
Operating costs	1,256,601	1,251,529
Amortisation and depreciation	119,998	109,838
Other operating income	106,478	109,163
Operating income	72,329	60,905
Income/(loss) from investments	825	588
Financial income	1,303	1,023
Borrowing costs	35,102	36,952
Net exchange gains /(losses)	700	-61
Profit before tax	40,055	25,503
Taxes for the period	20,071	11,463
Net Profit (loss) for the period	19,984	14,040

Consolidated Statement of Financial Position		
	As of 31/12/2017	As of 31/12/2016
Assets		
Non-current assets		
Intangible assets	648,977	668,665
Property, plant and equipment	273,013	301,079
Investment Property	11,523	11,710
Investments and financial assets	14,917	26,654
Long-term tax receivables	19,913	15,680
Deferred tax assets	58,601	60,372
Other receivables	12,157	13,170
Total non-current assets	1,039,101	1,097,330
Current assets		
Trade receivables	83,995	75,166
Other receivables	26,916	24,151
Short-term tax receivables	11,106	26,783
Inventories	218,622	208,459
Other financial assets	2,321	7,069
Cash and cash equivalents	128,067	191,757
Total current assets	471,027	533,385
Total Assets	1,510,128	1,630,715
Shareholders' Equity and Liabilities		
Shareholders' equity		
Share capital and reserves	385,296	394,019
Share capital and reserves attributable to NCI	-236	-305
Total shareholders' equity	385,060	393,714
Non-current liabilities		
Financial liabilities falling due after one year	446,483	535,105
Other long-term provisions	9,096	10,566
Deferred tax liabilities	3,170	3,880
Retirement funds and employee benefits	44,457	48,924
Other long-term payables	5,621	5,485
Total non-current liabilities	508,827	603,960
Current liabilities		
Financial liabilities falling due within one year	137,780	173,445
Trade payables	411,775	395,649
Tax payables	10,185	8,128
Other short-term payables	56,501	55,819
Total current liabilities	616,241	633,041
Total Shareholders' Equity and Liabilities	1,510,128	1,630,715

Consolidated Income Statement	
In thousands of euros	2017
Net revenues	1.342.450
Operating costs	1,256,601
Amortisation and depreciation	119,998
Other operating income	106,478
Operating income	72,329
Income/(loss) from investments	825
Financial income	1,303
Borrowing costs	35,102
Net exchange gains /(losses)	700
Profit before tax	40,055
Taxes for the period	20,071
Net Profit (loss) for the period	19,984
Items that will not be reclassified in the income statement	1,274
Items that may be reclassified in the income statement	-10,214
Profit/(loss) on brand fair value	317,530
Other components of the Statement of Comprehensive Income	308,590
Total Profit (loss) for the period	328,574

Consolidated Statement of Financial Position	
As of 31/12/2017	
Assets	
Non-current assets	
Intangible assets	648,977
Brand	317,530
Property, plant and equipment	273,013
Investment Property	11,523
Investments and financial assets	14,917
Long-term tax receivables	19,913
Deferred tax assets	58,601
Other receivables	12,157
Total non-current assets	1,356,631
Current assets	
Trade receivables	83,995
Other receivables	26,916
Short-term tax receivables	11,106
Inventories	218,622
Other financial assets	2,321
Cash and cash equivalents	128,067
Total current assets	471,027
Total Assets	1,827,658
Shareholders' Equity and Liabilities	
Shareholders' equity	
Share capital and reserves	702,826
Share capital and reserves attributable to NCI	-236
Total shareholders' equity	702,590
Non-current liabilities	
Financial liabilities falling due after one year	446,483
Other long-term provisions	9,096
Deferred tax liabilities	3,170
Retirement funds and employee benefits	44,457
Other long-term payables	5,621
Total non-current liabilities	508,827
Current liabilities	
Financial liabilities falling due within one year	137,780
Trade payables	411,775
Tax payables	10,185
Other short-term payables	56,501
Total current liabilities	616,241
Total Shareholders' Equity and Liabilities	1,827,658

V. Ratios' formulas

ROA	$\frac{\text{Net Income}}{\text{Total assets}}$
ROE	$\frac{\text{Net Income}}{\text{Equity}}$
Debt-to-equity	$\frac{\text{Total liabilities}}{\text{Equity}}$
Debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}}$
Stock price at 31/03/2017	Retrieved from Yahoo Finance
Fixed asset turnover	$\frac{\text{Sales revenue}}{\text{Fixed assets}}$
Net asset value per share	$\frac{\text{Net assets}}{\text{Nr. outstanding shares}}$
Price / Book value ratio	$\frac{\text{Stock price}}{\text{Equity per share}}$

VI. Slashpay Ltd. data

In euros

	Online transaction model - 5 year plan				
	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Slashpay Merchants (Year End)	1,550	36,178	67,495	91,296	109,385
Transaction Volume					
Social Media	24,539	1,202,035	3,843,197	6,477,812	8,984,159
IFC	11,300	143,344	670,182	1,990,425	3,617,837
Instore - Push-to-Mobile	25,746	241,928	1,128,643	4,632,670	15,583,865
Instore - POS	257,460	1,764,311	4,451,171	9,228,644	18,828,846
Total	319,045	3,351,618	10,093,193	22,329,552	47,014,707
Transaction Value (EUR)					
Social Media	518,862	25,633,965	82,690,275	140,742,409	197,136,690
IFC	155,720	2,014,796	9,608,255	29,107,036	53,963,651
Instore - Push-to-Mobile	733,216	7,775,607	36,726,595	150,630,295	519,963,788
Instore - POS	7,332,158	59,116,486	150,148,745	310,742,213	633,547,207
Total	8,739,955	94,540,855	279,173,870	631,221,953	1,404,611,336
Average Transaction Size (EUR)					
	27	28	28	28	30
Gross Merchant Cost (EUR)					
Payment Processing Fees	172,904	2,002,937	5,978,741	13,098,336	27,909,609
Sales and Listing Fees	16,882	834,501	2,680,301	4,522,800	6,288,319
Monthly Merchant Fees	8,044	399,965	1,225,348	1,867,264	2,355,121
Total	197,830	3,237,402	9,884,390	19,488,400	36,553,049
Net Slashpay Proceeds (EUR)					
Payment Processing Fees	66,878	855,695	2,662,442	5,994,460	13,062,761
Sales and Listing Fees	3,827	473,301	2,181,615	3,969,008	5,681,659
Monthly Merchant Fees	2,339	242,874	1,008,165	1,641,767	2,126,289
Net Slashpay Proceeds (EUR)	73,044	1,571,870	5,852,222	11,605,234	20,870,709
Chargebacks (EUR)					
Social Media	1,509	73,925	236,357	398,385	552,526
IFC	1,271	16,126	75,395	223,923	407,007
Instore - Push-to-Mobile	965	9,072	42,324	173,725	584,395
Instore - POS	9,655	66,162	166,919	346,074	706,082
Total	13,401	165,285	520,995	1,142,108	2,250,009
Net Slashpay Revenue (EUR)	59,644	1,406,585	5,331,227	10,463,127	18,620,700

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