The Key Sustainable Resource for the Companies Value – Intangible Assets

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Abstract

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Essential resources of the economy had changed rapidly; an increasing number of software, brands, and online-data got the main assets of sustainable value generation for companies. These goods have no physical substance and are not financial assets; accounting setters referring them as intangibles. This documentary research used these intangible assets, analyzed their company's value creation, showed various approaches of activation, along with future treatments in the balance sheet and the profit and loss statement. In particular, the key differences by self-developed- compare to purchased intangibles and a special kind of intangible asset, called Goodwill, was analyzed. This paper investigated the reason behind the measurable gap between balanced equity and the value of a company in the stock market. One explanation was that the international accounting standard setter could not agree on a Fair-Value accounting for every asset. That leads to the cohesion of historical cost and Fair-Value assets in the balance sheet, making it difficult for any stakeholder to compare companies of the same type. The results showed that the work of the top management was harder to evaluate for shareholders, therefore, this independent study's main task was to find a way to calculate the real value of intangible assets. The investigation ended with a suggestion to create a separate balance sheet called

information balance. This balance focuses on delivering forecasts to provide the shareholders with the necessary information about the company.

Keywords: Intangible Assets, Sustainable Resources, Companies Value.

CONTENTS

1 Introduction

1.1 Research Background

Due to the tremendous economic change from a heavy industry with many visible assets towards the age of the internet of things and the industry 4.0, the value of a company is mostly based on non-visible assets. In accounting, these goods, except for financial assets, are called intangibles (Swanson, 2018). Today, economic growth is mainly influenced by the investment in knowledge and creating intangible assets, not like in former times by the investment in physical capital, which are understood as land, machinery, and stock of goods. Competitive success requires in nowadays investments in intangible assets (Bianchi, & Labory, 2017).

Intangible assets have a wide variety. This can be shown as a perfect timed production process in an industry company, as a patent for a pharmaceutical firm, or a developed software from an IT-Company. An intangible asset could be the company's key resource (Bor, Grewal, & Islam, 2015). In accounting, intangible assets are described as: "an identifiable non-monetary asset without physical substance. An asset is a resource that is controlled by the entity as a result of past events and from which future economic benefits are expected" (IAS 38.8). The key benefit from an intangible asset as a resource is that the imitation is more complicated than by "normal" assets. According to this, a comprehensive advantage can be sustainable (Bianchi, & Labory, 2017).

The company's most objective value is being shown at the stock exchanges because stock markets are the point where demand and supply from companies come together (Yang, Zhang, & Wang, 2019). The market price cannot only be explained by the balance sheet assets - the market value of a company is in typical situations and by well-organized companies' way higher than the equity (Murphy, 2019). Regarding the regulation of accounting standards, the difference can be explained by intangible assets, which are mostly not activated as assets in the balance sheet (Reilly, 2018).

An intangible driver of a business is human capital. Companies' employees are necessary for an organization. Key-value drivers of this including the knowledge, skills, experience, training, and creative abilities employees archive for a company (Lenihan, McGuirk, & Murphy, 2019). Another intangible driver is the Marketing Strategy and Branding. Marketing is the connection between customers' needs and their response to a company's products or services. Strong branding will improve company sales by increased market recognition (Mamum, Shamima, & Islam, 2014).

1.2 Research Problems

As the name already indicates, intangible assets are non-monetary assets and, therefore, not easy to detect. Furthermore, it is problematic to value an intangible asset (Barba, 2017). Due to this, the international accounting standard setter (IFRS and US-GAAP) have strict rules for the activation of an intangible asset to reduce the management's scope and influence on the balance sheet. As a consequence of these rules, intangible assets are not well represented on the balance sheets. This stands in direct contrast to the value of intangible assets have for a normal company (Sounders, & Brynjolfsson, 2016).

The standard setters have different rules for the significant variety of intangible assets. Some of them are entirely forbidden to activate, and others must reach a certain point to archive the historical cost or the Fair-Value booking activation. Also, the rules are switching depending if the intangible assets are self-developed, purchased ore an entire business is bought (PricewaterhouseCoopers, 2019). Generally, the accounting standards often under-represent and under-value the intangibles in a company balance sheet (Bor, Grewal, & Islam, 2015).

Another way to value intangible assets is by subtracting a firm's book value from its market value. This practical choice, opponents argue that because market value continually changes, the value of intangible assets also changes, making it an inferior measure. Other variables are taken into account in the calculated intangible asset valuation. An intangible asset normally is not easily convertible to cash, making its value calculation more difficult. The calculation should be allocating a fixed booked value to intangibles in the balance sheet, which do not change according to the company's market value (Kenton, 2020).

The creation of a special type of intangible asset, the Goodwill, is one of the most important objectives of a company. Goodwill can create a sustainable advantage to achieve higher profits than the benchmark (Gheta, 2017). In contrast to this, for the international standard setters, the Goodwill is just a residual amount of the purchase price and the Fair-Values of detected tangible and intangible assets (PricewaterhouseCoopers, 2019). This accounting procedure neglected the fact that Goodwill can be self-developed. In total, there are just under rare circumstances international accepted accounting rules to value intangible assets and the Goodwill with a Fair-Value.

1.3 Objective of the study

This research paper has the goal to show the varying ways how intangibles are booked in the balance sheet regarding the international accounting standards. First, this research paper has to make an overview of the different rules and their effect on the activation, and secondly, there have to be similar rules for the valuation of intangible assets. It also shows the impact of these different requirements on calculating if an investment in intangible assets has a positive present value in accounting. This will be illustrated by formulas. Also, the purchase price allocation and the residual amount "Goodwill" will be investigated.

Following that, this paper will give a guideline of how to value intangible assets based on an "information" balance sheet additionally to the normal balance sheet. The information balance sheet has a clear focus on the shareholders and to show the real value of the assets to provide necessary information for all the stakeholders without the restrictions of the international accounting law.

1.4 Scope of the study

This study is focused on large stock-listed companies. They have the capacity to make an additional balance sheet and the responsibility to deliver substantial information to the shareholders as well. Furthermore, these companies are the primary address of the international accounting standards because smaller and not stock listed companies mainly still use the national standards (Andre, 2017). The main subject of the investigation regarding the accounting standards will be the actual international accounting standards. The US-GAAP is rarely mentioned because the rules of booking intangible assets are similar - mostly identical (Sanko, Koldovskyi, 2017). In the end, the results of this study are recommendations added to the accounting regulations and as this useful for any stock listed company and shareholder.

As documentary material, the EBSCO Host and Google Scholar database, as well as published material of the big four auditors, has been read, proofed, and quoted. As a regulation, IAS 36 (impairment of assets), IAS 38 (activation intangible assets), and IFRS 3 (business combinations) were part of the investigation.

1.5 Research Significance

For a long time, it has been admitted that intangible assets can be seriously important for the value of a company. In contrast to this fact, accounting standard-setters are oblivious to this

change in the business world (Lev, 2019). For example, firms' research and development expenditures are usually still booked as cost, and this is not visible on the balance sheet (Lim, Macias, & Moeller, 2016).

Driven from this imbalance between change in the economic system but remaining on former accounting standards, this documentary research shows the significant difference in how intangible assets are booked and the influence on the balanced earnings. Generally, shareholders are more interested in the Fair-Value of an asset where they could see the expected profits, than in the historical cost, which has no predicted information (Elsiefy, & ElGammal, 2017).

According to the stuck situation that the standard setters are not willing to change the system, the author of this study applies for a second way, then to the in-realistic radical changing the standards – an additional information balance. This balance sheet should have defined rules and have a focus on delivering relevant information regarding the Fair-Value of intangible and tangible assets of a company. The study should help to give a guideline to show mainly shareholders the value and the change of each relevant balance sheet position (Chen, Shipper, & Zhang, 2019). In the end, the information balance sheet should additionally help to evaluate the performance of the management.

2. Literature Review

2.1 Intangible assets

Intangible assets can be defined as a non-financial asset without physical substance which will be able to generate future earnings (Vasconcelos, Forte, & Basso, 2018). They can be classified in multiple ways as if they have a base in disciplines like marketing, management, accounting, or human resources (Gheta, 2017).

In accounting, the differentiation can be made if they can be activated or not. For the activation of self-developed intangible assets, the following point must be fulfilled first (regarding the IASB): they need to be separable, which means that they could be sold/transferred as one. Another opportunity to activate an intangible asset is when it is based on legal rights like patents or copyrights (Krizova, 2016). Three main points must be as well archived by every activation. First, the company controls the asset. Besides, future earnings should be expected, and finally, the cost calculation of the intangible asset has to be reliably (Maher, 2019). Generally, regarding IAS 38, it

is forbidden to activate the following items: internally generated brands, mastheads, publishing titles, and customer lists.

Self-developed intangible assets will - when they require the regulations – be booked with the historical cost of the development (PKF, 2017). But in general, most of the Costs of Research and Development are expenses (Jeny, & Moldovan, 2018). So, in accounting, the project is beneficial if the following rule is fulfilled: 1 Introduction

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The creation of a special type of intangible asset, the Goodwill, is one of the most important objectives of a company. Goodwill can create a sustainable advantage to achieve higher profits than the benchmark (Gheta, 2017). In contrast to this, for the international standard setters, the Goodwill is just a residual amount of the purchase price and the Fair-Values of detected tangible

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Driven from this imbalance between change in the economic system but remaining on former accounting standards, this documentary research shows the significant difference in how intangible assets are booked and the influence on the balanced earnings. Generally, shareholders are more interested in the Fair-Value of an asset where they could see the expected profits, than in the historical cost, which has no predicted information (Elsiefy, & ElGammal, 2017).

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$$\sum_{t=0}^{T} \frac{Future\ Earnings^t}{(1+k)^t} - \frac{Depreciation^t}{(1+k)^t} - Research\ Cost^{t=0} \geq 0$$

With k = interest Rate Tax = 0 % (for simplification)

In the formula, the future earnings are already reduced about future costs. What is the meaning of this formula? First, the whole investment must compensate for the research cost for the product (Swanson, 2018). According to this, the "matching principle" that revenues and expenses are in the same period isn't archived. The higher the research cost the higher the difference goes (He, & Shan, 2016). This makes it more and more difficult to get a profit from this item in the balance sheet.

When the intangible asset will be purchased the formula looks like this:

$$\sum_{t=0}^{T} \frac{Future\ Earnings^t}{(1+k)^t} - \frac{Depreciation^t}{(1+k)^t} \geq 0$$

With k = interest Rate Tax = 0 % (for simplification)

In this case, there are no costs of research, because these costs already accrued by the supplier and should be compensated by the purchase price. The purchase price represents the Fair-Value of the intangible asset (Barker, & Schulte, 2017). As an example: a self-developed Software with the same benefits as a purchased Software must archive higher Earnings because of the difference regarding the Research Cost which is, in the case of a purchase intangible, reduced about the interest rate.

Normally just mergers and acquisitions making these assets visible in the balance sheet, because with these transactions the intangible assets must be activated. When a company acquires another entire business, the company has to value the fair market price of the tangible and the intangible assets (Klimczak, Dynel, Pikos, 2016).

2.2 Goodwill

A special kind of intangible assets is Goodwill. A characteristic of Goodwill is that this asset cannot be separated from the company. Because of this, the valuation regarding a market approach is not usual to detect the value of the Goodwill. Because Goodwill often is measured based on future earnings, the income approach is mostly used to value the Goodwill (Reilly, 2015).

The international standard-setters understand Goodwill at the beginning as the difference between the purchase price from a business acquisition and the Fair-Value of the balanced assets minus liabilities (residual approach). Before the Goodwill can be detected there has to be a purchase price allocation (PricewaterhouseCoopers, 2019). In this, the buying company values the assets due to diligence proof and gives them a Fair-Value. If there is an unidentifiable difference after this proof - that is the accounting position Goodwill (King, Linsmeier, & Wangerin, 2019).

After this initially booking of the Goodwill the standard setters (IASB and FASB) prescribe that there has to be proof of the value of the Goodwill each year. This so-called Impairment-Test is necessary because there is no regular depreciation on the Goodwill like on other balanced assets (PricewaterhouseCoopers, 2019). By an Impairment-Test the company will be divided into Business Units (also called Cash-Generating-Units) and prove if the value of these Units (due to market research or more commonly future earnings check) is higher than the balanced amount

(Klimczak, Dynel, & Pikos, 2016). This test should be made at least every year or additionally when there are significant indications (IAS 36). If the balanced amount is higher than the value of the Business-Units, there has to be an Impairment-Loss of the difference. The balanced Goodwill has to decrease (Vogt, Pletsch, Moras, & Klann, 2016). On the opposite, if the balanced amount is lower than the value the balanced Goodwill will not increase – it will be remained by the same amount. Even a reversal from a decrease in former years to the initial value of the goodwill is not allowed (PricewaterhouseCoopers, 2019). The calculation regarding the international standards if a company should buy another business should look like this:

$$\sum_{t=0}^{T} \frac{Future\ Earnings^t}{(1+k)^t} - \frac{(Depreciation - Goodwill)^t}{(1+k)^t} - \left\{\frac{Imp.\ Loss^t}{(1+k)^t}\right\} \geq 0$$

Imp. Loss = (just in case) negative result impairment Test (=Impairment Loss)

With k = interest Rate Tax = 0 % (for simplification)

This is the accounting way of valuing Goodwill, but there are many interpretations (Reilly, 2015). Goodwill should not be just be valued by a company takeover. Also, internally generated Goodwill can be given a price. The creation and maintenance of Goodwill is a key element of a successful company because it allows generating a higher profit than the market (Gheta, 2017).

A study by Houlihan and Lokey shows how important intangible assets are. In 2017 Goodwill made 40 % and the other intangible assets 35 % of the purchase consideration (Houlihan, & Lokey, 2018). Following that study, intangible assets can be mentioned as the main generator of future earnings and dividends which are expected by the capital market in the stock exchange price (Pandey, 2015).

2.3 Sustainable Value of a company

The sustainability of an asset has four main factors: 1. Valuable in terms of value creation, 2. Rare, 3. Inimitability of resources, and 4. Non-substitutability. Companies generally try to achieve superior efficiency. For this to happen, a company in an industry must have a source of

competitive advantage that other companies in the industry find it difficult to imitate (Kabue, & Kilika, 2016).

The most objective valuation of a company is made on the stock market (Yang, Zhang, & Wang, 2019). A closer look on that fact shows that the list of the most successful companies are dominated by firms which success factor are intangible assets like Apple (brand and design, internally generated software), Microsoft (personal and business software solutions), Amazon (trade platform, brand, good customer relationship) and Alphabet (search engine, marketing platform). In total is likely to say that from the four most valuable companies worldwide the key success factors are intangibles (Statista, 2019). One of the most important intangible assets is human capital. To make this factor sustainable a company needs to have a good relationship between the company and the employees. The main focus of a company should be to hold the employees and make it to a long-term relationship. A successful workforce is marked as highly skilled through former education and continuously training in- and outside the firm. There is a relationship between the company's intellectual equity and the intrinsic Goodwill market value. Beginning from the top-management where hiring or firing of a manager can have an immediate influence on the stock market through a good research and development department where you can see the long-term effect in patents and other intangibles (Dealtry, 2017).

A highly skilled marketing department can also be responsible for the creation of a brand. It's not a surprise that all the four former mentioned firms with the highest stock value are also the four companies who dominate the list of the most valuable brand – just the order is different. The number one is Amazon with a brand value of more than 220 billion U. S. dollars (Statista, 2020).

Because an intangible asset has no physical form and isn't easily convertible to cash, calculating its value is challenging. This measurement aims to assign a fixed value to intangible assets, which do not change according to the market value of the business (Barba, 2017).

In total there are three different models to calculate the value of intangibles for an information balance sheet, the first one is the often also in accounting allowed cost model. Problematic with this model is that it is based on historical cost and has no forecast in it (Pastor, Glova, Liptak, & Kovac, 2016). Additionally, accounting forbids to book brand value and some other intangibles. For an information balance, there would be the possibility to calculate their market price. In this case, the intangible asset has to be separable from the company and there should be a market for

this product. This is possible for some patents and licenses (King, Linsmeier, & Wangerin, 2019). For an information balance, this procedure makes sense if the company is willing to sell the intangible in the future. This could give the shareholders an overview of potential cash flows in the future. But most intangibles will be not separable, or the company is not willing to sell them in the near future, then the calculation should be based on an income-model. When the intangible is not separable the valuation should be made on the Cash-Generating-Units which has to represents some independent parts of a company (PricewaterhouseCoopers, 2019). In total the Information balance is showing the future Earnings of each Unit:

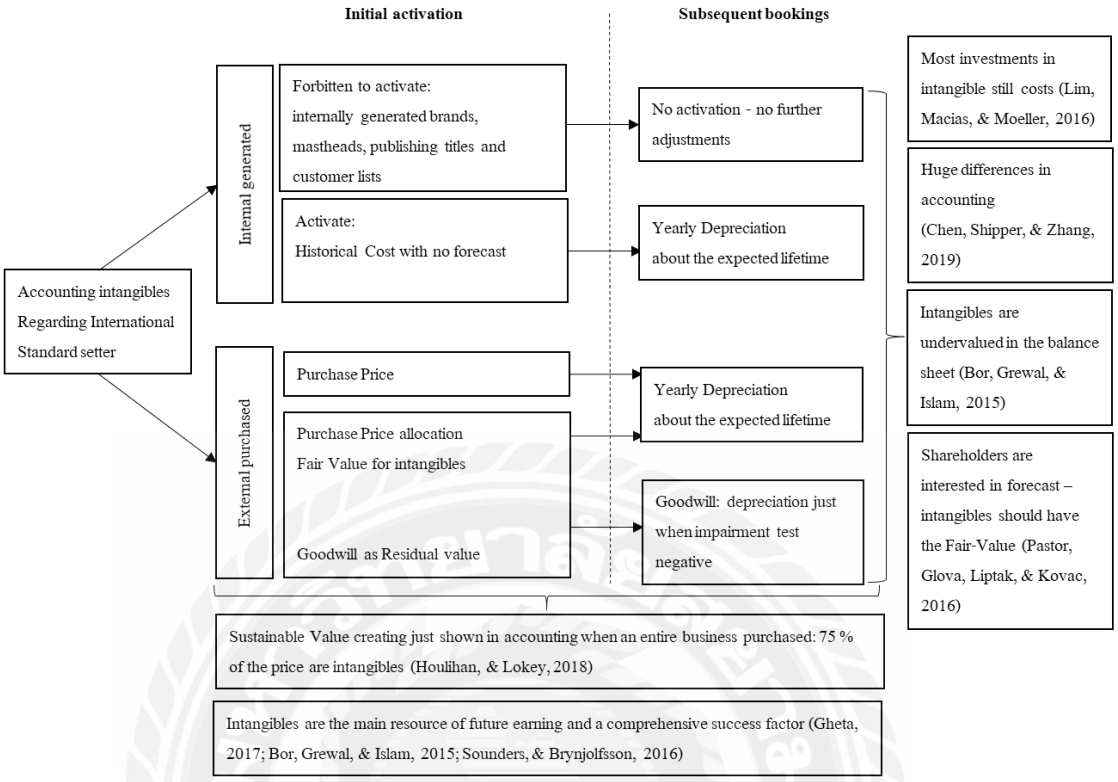
$$Information\ balance = \sum_{t=0}^{T} \frac{FE\ CGU1^t}{(1+WACC)^t} + \frac{FE\ CGU2^t}{(1+WACC)^t} + \{\dots\} + \frac{FE\ CGUX^t}{(1+WACC)^t}$$

FE CGU = Future Earnings Cash-Generating-Unit

With WACC = Weighted Average Cost of Capital Tax = 0 % (for simplification)

In the information balance, there is the calculated forecast of every Cash-Generating-Unit which is giving the Shareholder necessary feedback about the future earnings of each Business field (Vogt, Pletsch, Morás, & Klann, 2016). The future earnings are discounted with the Weighted Average Cost of Capital because a company not just has to pay interest it also has to pay money for the equity-like dividends (Adhikari, 2020). The information balance takes this fact into account. In total, the information balance can show the sustainable value of the company.

3. Findings and Conclusion



A business that wants to have a sustainable source of competitive advantage has to build strategies that will help him combine the resources in a way that rivals cannot duplicate. The heterogeneous intangible assets can demonstrate this within an organization that can achieve this goal. Companies should develop approaches that will help them develop a competitive advantage in a sustainable manner (Kabue, & Kilika, 2016). These advantages should also be shown to the shareholders. For this, they should be valued in future earnings.

The literature review showed that the sustainable key success factors are based on intangible assets, but now the international standard setter has no consistency by activating intangible assets (Bor, Grewal, & Islam, 2015). The result is that there is a massive gap between the balanced amount and the company value at the stock market. One main task of the IASB is to give the stakeholders the necessary information (Framework IFRS). On the other hand, intangibles' valuation is far away from a Fair-Value accounting and mostly based on not activating or historical cost accounting. In general, shareholders and potential investors are interested in future earnings and profitability – the company should provide this information to give an overview (Pastor, Glova, Liptak, & Kovac, 2016).

Besides, the regulation's inconsistency regarding the activation can result in the reduced organic growth of a company, because all the research cost (plus development cost by the general forbidden items) has to be compensated first. Compare to that, purchase of an intangible; the activation will be book the purchase price – here, the investment just has to compensate for the interest and the depreciation. An even higher gap occurs when an entire business is purchased because here are the depreciation's lesser. Therefore, the reason is that one of the most important assets, the Goodwill is just a depreciation when the impairment test is failed (Vogt, Pletsch, Moras, & Klann, 2016). In total, there is to say that the accounting standards are under-value the intangibles in a company balance sheet (Bor, Grewal, & Islam, 2015).

Intangible resources make a larger contribution to firm performance than tangible resources (Kamasak, 2017). Regarding this, especially also internally created intangibles should find their way in the information balance – sometimes also on external valuation could be resorted from. For example, there is the valuation of the brands from Reuters and Statista (Statista, 2020).

The literary review closed with the sustainable valuation of intangibles. The most objective should be the valuation regarding Business Units, which are the smallest independent entity that generates turnovers. This should also help the management to have a better overview of the main profit generators and focusing the investments in the Business fields.

4. Recommendation

Companies should start to deliver more information, which is essential for the shareholders. This will also be honored by the market in a higher stock value (Teo, Nishant, & Koh, 2016). A recommendation that already is to find in the literate review is the information balance. This balance should have clear and fair rules for every company, which makes them more comparable. The most sustainable drivers of a company should be shown as independent items in the information balance or if this is not possible or too expensive as part of a Business Unit. To value the items could be based on external information like Statista or Reuters and/or on internal forecast planning for the Business Units (Klimczak, Dynel, & Pikos, 2016). By the forecast planning, the earnings are discounted with the Weighted Average Cost of Capital because a company also has to pay for the equity (Adhikari, 2020). Additionally, for high-risk projects, the company should consider evaluating a higher discounted rate – a risk-adjusted WACC

(Jagannathan, Matsa, Meier, & Tarhan, 2016). Future earnings should be based on the forecasted turnovers minus the calculated budgets. This should be made at least for the next three years. After this, the company should determine the perpetuity – a variant of a Business Unit or intangible with payments continuing forever. This perpetuity should be discounted by the WACC plus additionally a risk premium rate because the prediction forecast is very insecure (Lindblad, 2019). This makes the decisions why a company invest more in one sector transparent and helps the shareholder to feedback the management decisions. Also, this helps to evaluate if internal growth is more favorable than the purchase of a good or company (Klymenko, Nosovets, Sokolenko, Hryshchenko, & Pisochenko, 2019).

Generally, it is not good to have different rules for similar goods. This is a huge problem in accounting nowadays. The variation of the value in the balance sheet is too high, and the gap will not be closing because the value of intangibles is increasing. The international standard-setters should consider changing the rules to an accounting-based model on Fair-Value. At the moment, there is an unsatisfying togetherness of historical cost accounting and Fair-Value – this makes the balance sheet unnecessary challenging to interpret for every stakeholder (Magnan, & Parbonetti, 2018).

The influence on the management decisions was not part of this independent study – here could be a problematic situation. That the management prefers to buy an entire business than to generate internal growth. Mainly because the time-horizons of a manager could be shorter and internal growth generically needs longer to develop. That could be part of an investigation in a different study.

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