

# **Definitions of an Intangible Asset**

In context with HGB, IFRS  
and US-GAAP

Bachelor Degree Project in Economics  
15 ECTS  
Spring term 2008

Author: Susanne Wickerath

Supervisor: Max Zamanian  
Examiner: Hong Wu

## **Definitions of an Intangible Asset In Context with HGB, IFRS and US-GAAP**

This thesis is submitted by Susanne Wickerath to University of Skövde for the Bachelor Degree in Economics, at the School of Technology and Society.

**2008/09/15**

I certify that all materials in this thesis which are not my own work have been identified and that no material is included for which a degree has previously been conferred on me.

Susanne Wickerath

## **Abstract**

This Bachelor thesis deals with the definition of Intangible Assets in the context of financial reporting. The purpose is to integrate intangible assets into the balance sheet. After a thorough analysis of the ongoing research shows that there is general consensus concerning intellectual property, and general confusion concerning knowledge, information and organization capital. Some have what it takes to enter balance sheets, while others still lack a holistic concept that is generally accepted and fulfils the demand of accounting. Neither of them is reported according to the presently available and established knowledge. This thesis shows that a prerequisite for an improved reporting is the consequential extension of accounting principles for intangible assets. The fact that the term “intangible asset” became a gathering of all possible intangible phenomena demands counter-actions. One of its reasons is the demand for the measurement of relative performances of intangible assets. This thesis shows that reporting absolute figures for intangible assets does not stand in contrast with this, but can deliver the necessary data set for a holistic analysis that also deals with intangible assets.

## **Foreword**

Baruch Lev<sup>1</sup> uses the following thought experiment to show why full revelation fails for intangibles: Assuming there would be no hint for the intrinsic value of any company, the resulting uniform of all securities will motivate the managers of the above average performing businesses to show their base of capital in order to get better perceived and thus evaluated as more valuable.

It might be useful to extend this model: If we assume that there is already a ranking between companies and there is no uniform value prevailing. Further, there is a new value generator upcoming. The information situation is as follows: The new value driver appears in every company, but the extent, contribution or ability to realize returns from it is unknown. All efforts to make it public are up to the responsible people within the companies. Concerning their information policy, they face three options:

- a) reveal all available information about the new value driver to everybody
- b) conceal all available information about the new value driver from everybody
- c) reveal selected information to selected audiences

If we expect the affected players to be utility maximizers, all options apply in different market surroundings. And every chosen strategy inflicts the decisions of the other players.

---

<sup>1</sup> Lev, Baruch. *Intangibles : Management, Measurement and Reporting*  
Washington, DC, USA: Brookings Institution Press, 2001. p 86

The first option would be suitable if the market is highly competitive and every other player revealed all information of the new value driver. In this scenario we face a typical game theoretical dilemma.

Market	complete information supply	no information supply	Selective information supply
Manager			
Complete information supply	M N=0	M - (m-1) ER N=0	M-(m-1)ER N=0
No information supply	M-ER Last ER	M-ER ER	M- m*ER ER
Selective Information Supply	M-ER P	M-ER P	M- m*ER P

M = complete market volume, P = Prestige, ER = Excess Return,  
M = number of all market participants, N = No excess return

**Table 1: Strategies for information supply**

Above you can see all possible strategies one single manager can choose from in context with all possible counterparty actions, i.e. the sum of the responses of all competitors or the market’s strategy.

We face a situation in that the manager expects the new value driver to raise returns soon.

What can he do? How will the market react?

- a) reveal all available information about the new value driver to everybody  
In this case, he can make no excess return, because he has no insider information. → N=0

The market return in this case varies according to the opponents’ strategy:

- They reveal all information, too → M (no social loss)
- They conceal all information → M-(m-1)\*ER (social loss= (m-1) ER)
- They provide selected information → M- (m-1)\*ER (social loss= (m-1) ER)

- b) conceal all available information about the new value driver from everybody  
In this case, he can realize all excess returns due to insider trade → ER

The social loss depends on the actions of the others:

They reveal all information →  $M-ER$  (only lose what the manager gains) PLUS  
this behaviour sets the manager under pressure, so that he will reveal  
his information on the new value driver in the next sequence

They conceal all information, too →  $M-m*ER$  (social loss=  $m*ER$ )

They provide selected information →  $M- m*ER$  (social loss=  $m*ER$ )

c) reveal selected information to selected audiences

The manager gives his information advantage to a certain shareholder  
(who gets the ER), in order to gain Prestige → P

The social loss is the same as if the manager would do the insider trade for himself.

As we can see, the social favourable would be if all players reveal all information, but this is a recessive strategy, which will only happen under pressure. The dominant strategy would depend on the personal goals of the manager, depending on whether he prefers to trade himself or rather gain prestige than money.

This is possible, if the manager knows about the value of the new value driver and if the predominating ranking based on mostly tangibles already gives a ranking that approximates the true ranking, or if the position within that ranking is good enough.

Social harm derived from insufficient information supply causes inefficiencies in the capital and money market. Opacity allows excess returns for those that access publicly unreachable information. If we see reporting as a means of enabling the market to be efficient, this means that the degree of uncertainty should be reduced to the maximum.

If we think back about the intangibles as the new value driving force, we can deduct that social losses only can be prevented by means of pressure, or more precise a reporting system that will force the responsible people to reveal relevant information on their value generators. As it was called in the introduction, the value driver, intangibles cannot be reduced to only one denominator, they appear in different surroundings, shapes, occasions and extend within one and between different countries. Economic information needs comparability to be useful, therefore a definition of intangible assets, that reflects all aspects and still allows benchmarking and comparison is demanded.

If we think back about the intangibles as the new value driving force, we can deduct that social losses only can be prevented by means of pressure, or more precise a

reporting system that will force the responsible people to reveal relevant information on their value generators. As it was called in the introduction, the value driver, intangibles cannot be reduced to only one denominator, they appear in different surroundings, shapes, occasions and extend within one and between different countries. Economic information needs comparability to be useful, therefore a definition of intangible assets, that reflects all aspects and still allows benchmarking and comparison is demanded.

# **List of Contents**

<b>ABSTRACT</b> .....	<b>3</b>
<b>FOREWORD</b> .....	<b>4</b>
<b>LIST OF CONTENTS</b> .....	<b>8</b>
<b>LIST OF TABLES</b> .....	<b>9</b>
<b>LIST OF FIGURES</b> .....	<b>10</b>
<b>LIST OF ABBREVIATIONS</b> .....	<b>11</b>
<b>1 INTRODUCTION AND PROBLEM STATEMENT</b> .....	<b>13</b>
1.1 BACKGROUND - IMPORTANCE OF INTANGIBLE ASSETS .....	13
1.2 CHALLENGES CONNECTED WITH INTANGIBLE ASSETS .....	15
1.3 LIMITATIONS .....	15
1.4 PURPOSE.....	16
1.5 STRUCTURE OF THE THESIS .....	17
<b>2 METHODOLOGY</b> .....	<b>18</b>
2.1 RESEARCH METHODS .....	18
2.2 DATA COLLECTION AND SOURCES .....	18
<b>3 THEORETICAL FRAMEWORK</b> .....	<b>19</b>
3.1 PREDOMINATING DEFINITIONS OF AN INTANGIBLE ASSET .....	19
3.2 LEGISLATIVE FRAMEWORK .....	19
3.2.1 <i>US-GAAP</i> .....	19
3.2.2 <i>How does it handle Intangible Assets?</i> .....	20
3.2.3 <i>IFRS</i> .....	21
3.2.4 <i>How does it handle Intangible Assets?</i> .....	22
3.2.5 <i>HGB</i> .....	22
3.2.6 <i>How does it handle Intangible Assets?</i> .....	24
3.3 ONGOING RESEARCH.....	25
3.3.1 <i>Overview of Intangible Assets</i> .....	26
3.3.1.1 Identifiable Intangible Assets .....	26
3.3.1.2 Unidentifiable Intangible Assets.....	27
3.3.2 <i>Characteristics of Intangible Assets</i> .....	29
3.4 HINTS OF INTANGIBLE ASSETS IN TODAY’S BALANCE SHEETS.....	31
3.4.1 <i>Expenses on R&amp;D</i> .....	31
3.4.2 <i>Goodwill</i> .....	32
3.4.3 <i>Impairment testing</i> .....	33
<b>4 DISCUSSION OF CONCEPTS TOWARDS DEFINING INTANGIBLE ASSETS</b> .....	<b>34</b>
4.1 STRATEGY APPROACH .....	34
4.2 LEV’S ECONOMICS OF INTANGIBLES: CLAIMS TO FUTURE BENEFITS .....	35
4.3 INTELLECTUAL CAPITAL APPROACH .....	37
<b>5 IMPLICATIONS</b> .....	<b>40</b>
5.1 OUTCOMES OF DEFINING APPROACHES .....	40
5.2 IMPLICATIONS FOR THE INTEGRATION OF INTANGIBLE ASSETS INTO BALANCE SHEETS .....	41
<b>6 CONCLUSION</b> .....	<b>46</b>

## **List of Tables**

Table 1: Strategies for information supply .....	5
Table 2: IFRSs highlights .....	22
Table 3: A common categorization of intangible assets, compare Reilly, 1998 .....	26
Table 4: Holistic classification framework, compare Roos 2004 .....	37

**List of Figures**

Figure 1: Percentage of Intangibles in 2006..... 14  
Figure 2: Reasons for measuring Intangibles..... 16  
Figure 3: Identification of intangible assets .....21  
Figure 4: Degree of Ownership of human relational and organizational resources, compare  
Roos 2004, original design.....39

## **List of abbreviations**

BSC .....	Balanced Scorecard
e.g. ....	exempli gratia (for example)
FAS .....	Financial accounting standard
FASB .....	Financial Accounting Standard Board
HGB.....	Handelsgesetzbuch [(the German) code of commercial law]
i.e.....	id est (that is)
IT .....	information technology
IC.....	intellectual capital
IAS.....	International Accounting Standard
IASB .....	International Accounting Standards Board
IASC .....	International Accounting Standards Committee
IFRS .....	International Financial Reporting Standard
ISBN .....	International Standard Book Number
ISSN .....	International standard Serial Number
R&D .....	Research and Development
SEC .....	Securities and Exchange Commission
US-GAAP .....	United States Generally accepted accounting Principles



# 1 Introduction and Problem Statement

This thesis is a contribution to the search of a definition for intangible assets that allows especially originated intangible assets to be introduced in balance sheets.

## 1.1 *Background - Importance of Intangible Assets*

Intangible assets play an important role in the economy nowadays, for instance software is a significant resource in fast growing companies of the information technology (IT) economy. The industry relies on competitive advantages concerning intangibles, since the omnipresent high level of competition enables goods to be copied easily. The survival in such cases can rely on aspects like speed, quality and brands. Since most physical assets and commodities are available in the same quality, cost and appearance for all competitors, those resources are not the determining variable for the success of a company. It is rather the unique use of them, whereby intangible resources are posing an opportunity for a competitive advantage. A patent is worth more than the paper on which it is written as soon as it positively affects the value chain of a company.

With the Treaty of Lisbon the members of the European Union committed themselves to increase the expenditures onto research and development to 3% of their country's GDP<sup>2</sup> until 2010; this is an evidence of the perception of the importance of knowledge, education and innovation in competitive environments. The named goal can be summarised as the production of intangible assets for the European economy.

In contrast to tangible assets, intangible assets - as their name says - cannot be recognised by their physical appearance. No wonder that it is not yet possible to get a transparent view into those increasingly important value drivers. It is crucial for analysts to focus on them, too; and to use all existing information in order to measure them and deduct their potential.

The first source of information of any firm evaluation is found within financial reporting. Financial reporting is supposed to give a concrete and reliable overview of a company's intangible, tangible and financial assets and liabilities. Let us take a

---

<sup>2</sup> Bundesministerium für Bildung und Forschung (BMBF) Referat Öffentlichkeitsarbeit [http://www.bmbf.de/pub/forschung\\_und\\_innovation\\_in\\_deutschland\\_2006.pdf](http://www.bmbf.de/pub/forschung_und_innovation_in_deutschland_2006.pdf) (accessed: April 07, 2008), page 8

closer look at the reporting of intangibles. Below you can see that part of the company’s value that is formed by them:

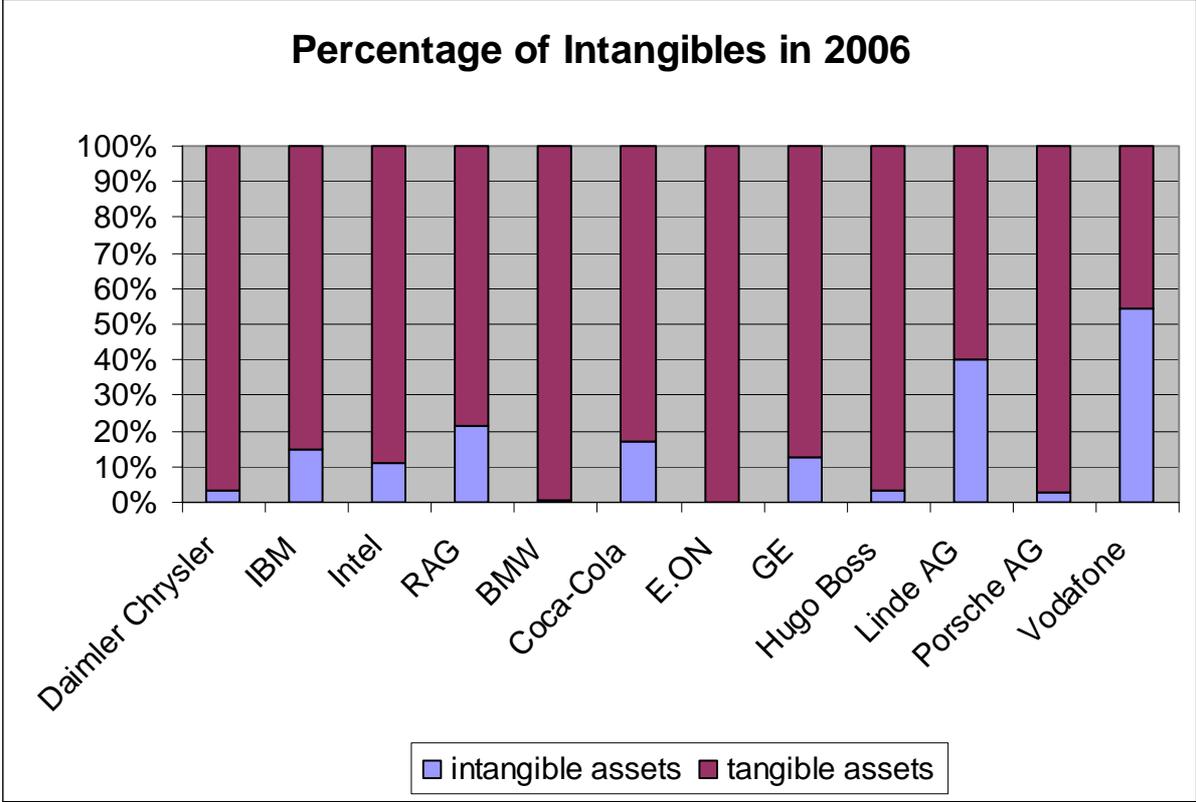


Figure 1: Percentage of Intangibles in 2006

It is striking that Vodafone consists of 55% of intangibles. The reason is heavily investments in merger and acquisition: £52.6 billion out of £69.1 billion are goodwill. Energy provider E.ON has an intangible to total assets ratio of 0.04% that is completely comprised of purchased software. Does this mean that E.ON has no human or organisational capital or excess value, (because it did not yet acquire other companies?) The automobile industry has astonishingly low percentages of intangible assets; on the one hand this reflects the high amount of tangibles that are necessary to produce cars. But on the other hand, especially if we consider lean production, the high amount of intangibles like patents, designs and brands enable those companies to produce cars. If we consider luxurious and well-engineered cars of today and divide the result into parts that are made from steel and those that are made of elaborated know-how, we would expect a higher intangible/tangible ratio. We can see that the position intangible “assets” is a sum of other positions that are all in all not well standardized and especially not complete.

This thesis is interdisciplinary. It will examine accounting principles and concepts thoroughly in order to form a strategic alliance with the other side of corporate

finance. Even though the expressiveness of balance sheets may be limited, it is a powerful tool concerning the evaluation of companies. But especially in context with the rise of the new source intangibles, they fail their objective to give a fair presentation of all corporate assets.

## ***1.2 Challenges connected with Intangible Assets***

Accounting has typically very narrow and concrete definitions of what to define as an asset, how to identify, measure, compare and estimate its useful life. This concept is not so compatible with the ways of perception or recognition of intangible assets. It is a catastrophe for accountants that those assets regularly appear unexpectedly and leave unintended – what is worse: the perception of these appearance can only be comprehended retrospectively.

On top of that the age of globalization punishes internationally different accounting and financial reporting standards in the long run, because it is harder to compare companies in their quality as investments. Ceteris paribus, some might be considered as better investment opportunities than another. The structure according to the Accounting for intangible assets has to satisfy those needs, too.

## ***1.3 Limitations***

Definitions need to fit into the context they shall be used in. The definition – as a prerequisite for the evaluation of an intangible asset – is considered in three

surroundings:

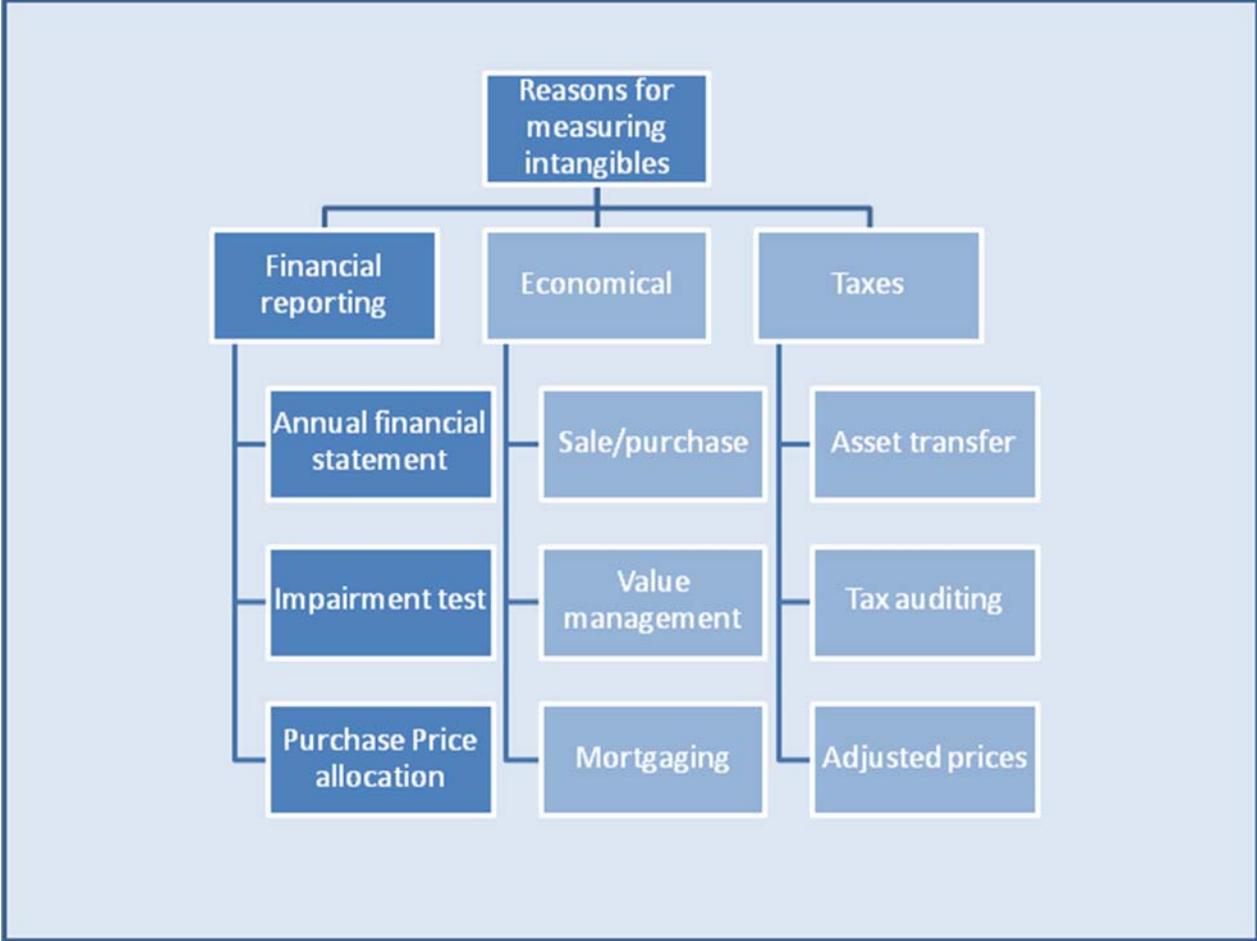


Figure 2: Reasons for measuring Intangibles

These are financial reporting, economical goals and taxation. This thesis concentrates on financial reporting, among the other sub-sections impairment testing and purchase price allocation, specialized on annual financial statements.

**1.4 Purpose**

To finally solve the question “Which expenses later become real assets?” is the goal of analysing intangible assets. This thesis aims at doing the first step and contributes to finding reliable, expressive and accurate definitions of phenomena of intangibles we faced so far. In the long run their application should provide enough data to take samples and draw conclusion concerning the causal relation of their origin. Until then this thesis tries to enlighten the identification of intangible assets in the context of financial reporting.

## **1.5 Structure of the Thesis**

Firstly, all relevant characteristics of intangible will be discussed and an overview of all existing intangible assets that appear in a company will be given.

Secondly, predominating definitions will be described. We differ between internal and external accounting, whereas the latter will be subordinated in three parts. That is when and how to apply HGB, US-GAAP and IFRS. The former will be compared to the external ways of reporting, in order to identify gains or losses due to the translation from internal to external data.

Thirdly, there will be a conclusion in which the gained knowledge will be transformed into implications for affected interest groups caused by deficient financial reporting.

Finally, the definition of an intangible asset will be given.

## 2 Methodology

### 2.1 Research Methods

This thesis will be conducted by means of literature research.

### 2.2 Data Collection and Sources

The legislative framework's theoretical foundation will be found in law books and their comments, the other types of literature being used for this paper will be presented following an enlistment of Zina O'Leary<sup>3</sup>:

*Discipline-based reference materials:* i.e. subject specific dictionaries and encyclopaedias help to gain an overview of technical terms and basic constructs and theories.

*Subject-specific books:* i.e. learning materials, anthologies, popular works, and research reports. They provide theory and method but are not always up-to-date.

*Journal articles:* i.e. articles that are addressing academic audiences, published in short intervals and concentrate on special aspects of a subject.

*Grey literature:* i.e. those materials that have neither an International standard Serial Number (ISSN) nor an International Standard Book Number (ISBN) e.g. conference papers, newspaper articles and brochures/pamphlets or unpublished research papers. Their advantage is that they can be even more current than journal articles.

*Official publications:* i.e. statistics and archives. It is a source of data not only for secondary data analysis. In this paper annual reports represent this category of literature.

---

<sup>3</sup> O'Leary, Zina, *Essential Guide to Doing Research*, London, GBR, Sage Publications, Incorporated, 2004, p 67 et seq

## 3 Theoretical framework

### 3.1 *Predominating Definitions of an Intangible Asset*

Existing Definitions should not be left out when in search of a practical definition. Especially not, when they are either stipulated by commercial law or commonly used for internal accounting.

### 3.2 *Legislative Framework*

Intangible assets need to be presented - just like tangible assets. Annual reports deliver the data stakeholder and especially shareholders demand in exchange of supplying equity, time, knowledge and more, in order to control the performance of the management. The need for regulation is evident, “without explicit rules in place, some say intent-based accounting opens the door for corporations to commit more fraud, not less.”<sup>4</sup> But we are dealing with two-edged sword here: At present there is evidence that too a conservatively accounting for intangibles “hamper[s] the value-relevance of financial statements.”<sup>5</sup> [emphasised by the author] So, especially in this very soft area of intangible assets, we have to keep in mind that its reporting has to be narrow enough to prevent from fraud and broad enough to provide space to unfold its potential when we consider US-GAAP, IFRS and HGB and their significance, superior principles and finally how they treat intangibles in the following

#### 3.2.1 US-GAAP

The United States themselves are a powerful economy. Out of the 500 biggest companies, 162 have their base in the United States of America<sup>6</sup>. On the other hand, the United States Generally accepted accounting Principles (US-GAAP) are one of the leading examples of accounting standards and thus a guideline for those who try to formulate new and international standards, for instance IFRS.

The Financial Accounting Standard Board (FASB) issues statements which all in all form the US-GAAP system. They are not drafted by government, but by private

---

<sup>4</sup> A. Tarantino, “Manager’s guide to Compliance”, John Wiley & Sons.Inc., New Jersey, 2006, page120

<sup>5</sup> N. E. J. Hùegh-Krohn, K. H. Knivsfla, *Accounting for Intangible Assets in Scandinavia, the UK, and by the IASC: Challenges and a solution*, in *The International Journal of Accounting*, Vol. 35, No 2, 2000, University of Illinois pp. 243-265

<sup>6</sup> Fortune, the May 5, 2008 issue,

<http://money.cnn.com/magazines/fortune/global500/2007/countries/US.html>, (accessed April 03, 2008)

organisations, the Securities and Exchange Commission (SEC) has capacious influence.

### **3.2.2 How does it handle Intangible Assets?**

In 2001: Statement No. 141, Business Combinations, and Statement No. 142, Goodwill and Other Intangible Assets were issued. They made significant changes regarding the treatment of intangibles. From then on they were accounted as follows<sup>7</sup>:

Intangibles comprise identifiable intangible assets and goodwill. Financial accounting standard (FAS) 141 demands that an identifiable intangible asset is separable, i.e. it can be considered autonomously and without confusion. They can be measured by means of various valuation techniques, if they are in accordance with the principles of US-GAAP. If the useful life is finite, those intangibles are depreciated according to the amortisation.

The other half of intangibles, goodwill, is a residual value, which comes up to the balance sheet only after the acquisition of a firm. It is the difference between the total of the net assets and the higher acquisition price. Its useful life is assumed to be indefinite. Those intangibles that are assumed to be eternally useful are tested for impairment, annually to check if their value decreased in the meantime, whereby the rules for an impairment of goodwill are stricter.

---

<sup>7</sup> Cohen, Jeffrey. *Intangible Assets: Valuation and Economic Benefit*, Hoboken, NJ, USA, John Wiley & Sons, Incorporated, 2005, p 47et seq.

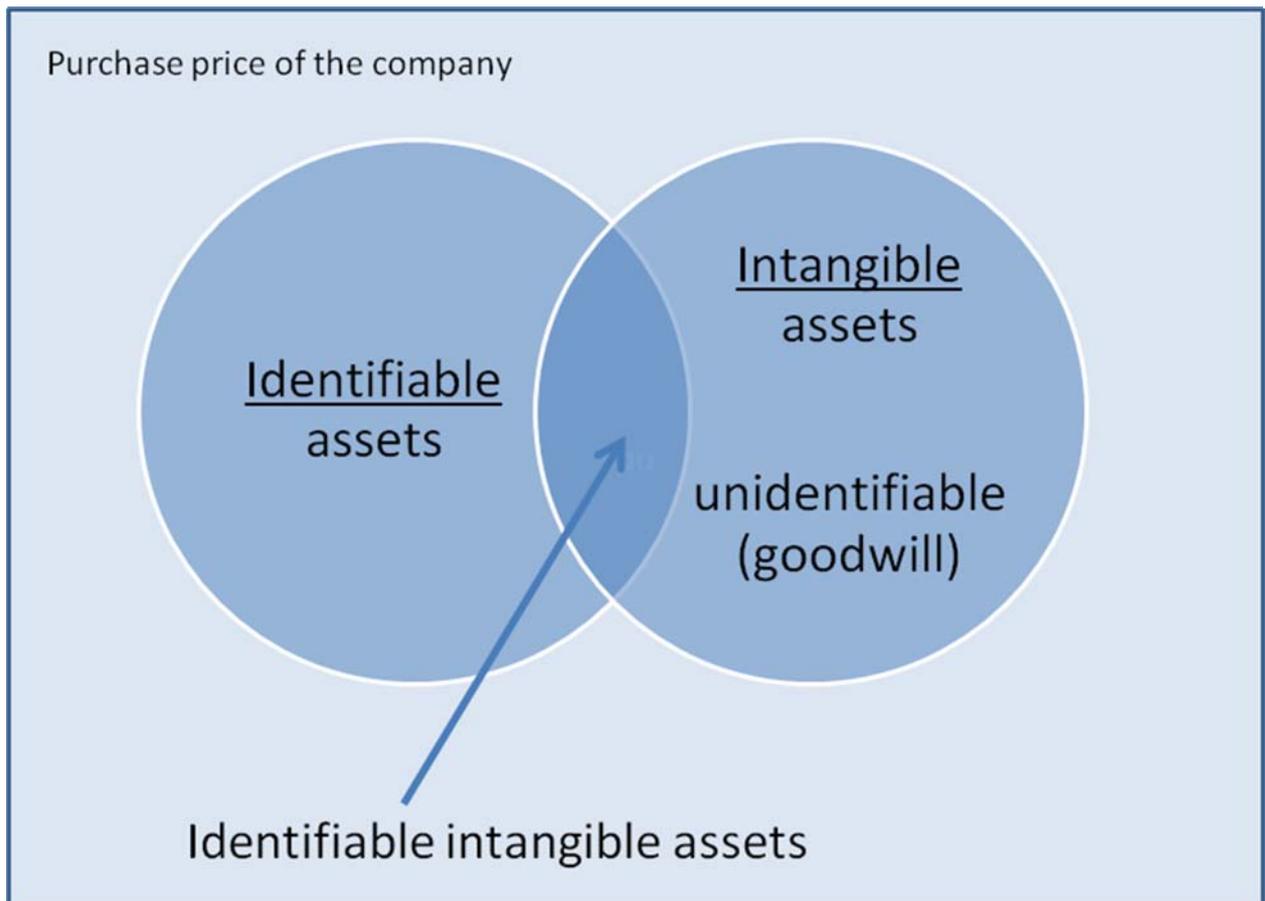


Figure 3: Identification of intangible assets

### 3.2.3 IFRS

In 2001 the International Accounting Standards Committee (IASC) formed and founded the International Accounting Standards Board (IASB) with the aim “to provide the world’s integrating capital markets with a common language for financial reporting”<sup>8</sup>. The IASB consists of 14 members<sup>9</sup> that are professionally competent and practically experienced. Their selection does not follow obligatory geographically structures, still dominating positions shall be avoided. In 2003 the IASB issues its first new standard the International Financial Reporting Standard (IFRS) 1. The IASC formerly issued International Accounting Standards (IAS). The name “international *financial reporting* standards” contributes to investors demand for transparency. Since questions concerning taxations stay national issues, this new name also stresses to whom it is addressing: investors. By making annual reports comparable

<sup>8</sup> International Accounting Standards Board, <http://www.iasb.org/About+Us/A+guide+to+the+IASB+and+the+IASC+Foundation.htm>, (accessed April 02, 2008)

<sup>9</sup> IASC Foundation Constitution, article 18, article 19

on an international level the European Union attempts to encourage international investors to invest in European companies more frankly.

Whoever wants to give an annual financial statement according to IFRS is free to do so. This can be favourable in order to provide transparency for those who are obliged to close the yearly accounts according to other terms of accounting. And transparency in this case can go along with lower cost of equity.

The chart “IFRSs – Highlights” shows some important milestones toward internationally uniform accounting:

IFRSs - Highlights <sup>10</sup>	
2003	IASB issues first new standard – IFRS 1 Australia, Hong Kong and New Zealand commit to adoption of IFRSs
2005	In Europe nearly 7,000 listed businesses in 25 countries switch to IFRSs
2006	IASB and FASB agree roadmap for convergence between IFRSs and US GAAP China adopts accounting standards substantially in line with IFRSs
2007	US SEC removes reconciliation requirement for non-US companies reporting under IFRSs, and consults on IFRSs for domestic companies Brazil, Canada, Chile, India, Japan and Korea all establish timelines to adopt or converge with IFRSs

**Table 2: IFRSs highlights**

### 3.2.4 How does it handle Intangible Assets?

IAS 38 states that an intangible asset is an “identifiable non-monetary asset without physical substance held for use in the production or supply of goods or services, for rental to others, or for administrative purposes.”<sup>11</sup> It also holds the rules for accounting for intangibles. When they enter and fulfil the definition they have to be reported at purchasing or production cost with subsequent depreciation. In the following periods IAS 38 allows to choose between the cost and revaluation model. The criterion of identifiably – like in US-GAAP – differs between those intangibles that can be separated from goodwill and those that cannot. Unlike other GAAP, IAS 38 allows development costs to be capitalised after the technical and commercial feasibility stage is entered. Research costs still are charged as expense under every circumstance. IAS 36 demands at least annually tests for impairment for goodwill and other intangibles with indefinite lives.

### 3.2.5 HGB

<sup>10</sup> [http://www.iasb.org/NR/rdonlyres/0C6DB4B3-4F56-431C-8E76-3CEF205741A1/0/WhoWeAre\\_Final12508.pdf](http://www.iasb.org/NR/rdonlyres/0C6DB4B3-4F56-431C-8E76-3CEF205741A1/0/WhoWeAre_Final12508.pdf) , accessed July 22, 2008

<sup>11</sup> International Accounting standards Board, International Financial Reporting Standards (IFRSs) 2006, 2006

The Handelsgesetzbuch (HGB) gained legal validity in 1900.<sup>12</sup> In some cases we rely on precedence cases, which speaks for a case law and we can also find influences of common law. But it is basically a code law and its regulations base on superior standards or principles that have been established due to tradition. Most principles<sup>13</sup>, like assuming a going concern, balance sheet identity, single evaluation and declaration date, accrual and balance sheet continuity can be found in either IFRS or US-GAAP as well. But since the main goal of financial reporting according to HGB is the protection of creditors, the principles of prudence, realisation and imparity (or recognition-of-loss) incline to understatement rather than giving a fair presentation. The idea is that the presentation makes no empty promises so to say. Independent from the probabilities the tendency is to show gains only when they are realized and to anticipate losses generously.

Every German company, trust and corporation has to follow the German Code of Commercial Law or Handelsgesetzbuch (HGB) concerning financial reporting standards. This makes it significant, since Germany is the third largest economy of the world.<sup>14</sup> Germany has the pole position concerning export, according to the World Trade Organisation (WTO)<sup>15</sup>. As mentioned in the IFRS section European - and thus German - concerns whose securities are traded on an organised European stock market, have to audit according to international standards since 01/01/2005<sup>16</sup>. 3 percent of all German companies<sup>17</sup> are listed in stocks. Small and medium sized companies form the rest, for them the HGB annual report is still obligatory. They additional may choose, but do not have to take IFRS as basis, and the new "Bilanzreformgesetz"<sup>18</sup> (GER: balance sheet reform law) intends to modify the HGB so that a cost-intense total rearrangement towards international standards will not be necessary. Thus, differentiated knowledge about HGB allows a deeper insight into German companies now and in the long-term.

---

<sup>12</sup> HGB seite 1

<sup>13</sup> § 252 HGB „abs. 1-6“

<sup>14</sup> Grinblatt-Titman: Financial Markets and Corporate Strategy, 2nd ed., The McGraw-Hill Companies, 2002, page 19

<sup>15</sup> World Trade Organization, „trade profiles 2007“, Switzerland, World Trade Organization, 2007

<sup>16</sup> Eur-lex.europa.eu "Regulation (EC) No 1606/2002 of the European Parliament and of the Council of July 2002", Art. 4, Brussels, 2002

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:243:0001:0004:EN:PDF> (August 17, 2008 accessed)

<sup>17</sup> <http://www.prcenter.de/IFRS-fuer-deutschen-Mittelstand-ohne-Belang.2730.html>, 06/08/2007

<sup>18</sup> BilReformGEsetz

### 3.2.6 How does it handle Intangible Assets?

In the following, it will be assumed that all assets are either self-produced or bought; other ways of capital growth will be neglected. Tangible assets have to be booked as assets firstly either at the purchasing costs or at production costs<sup>19</sup>. In the following they get depreciated according to the selected model of depreciation. In case the assets gain value, their historically production or purchase costs form the top limit of the book value, i.e. they can never have higher book value than they had on their very first entry<sup>20</sup>. When we consider intangible assets, some special rules have to be followed. In case of purchasing an intangible asset, e.g. software, the purchasing costs are the amount stated. Whereas intangible assets that have their origin within the same enterprise<sup>21</sup> must not be reported as assets at all. Explanation for this might be that internal costs which even if they may be allotted directly and undoubtedly, shouldn't form the mayor base of the declaration of an asset. Expenses on research and development both are only expenses and cannot be declared as assets under any circumstances.

---

<sup>19</sup> § 255 HGB

<sup>20</sup> § 253 I HGB

<sup>21</sup> § 248 II HGB

### 3.3 Ongoing Research

For financial reporting, it is only necessary to define the extent and value of intangibles. Their very special features can be neglected in that context, because the main goal to give a picture of the assets and liabilities of a company. Researchers do the job of trying to define intangibles never forgetting their underlying features and network effects and always trying to approach their methodologies towards the sound evaluation of a relevant and value driving aspects. Reilly (1998) differs 10 groups of intangible assets according to the area to which they are related:

<b>A common categorization of intangible assets<sup>22</sup></b>	
<b>1. Marketing-related intangible assets</b>	trademarks, trade names, brand names, logos
<b>2. Technology-related intangible assets</b>	process patents, patent applications, technical documentation, such as laboratory notebooks, technical know-how
<b>3. Artistic-related intangible assets</b>	literary works and copyrights, musical compositions, copyrights, maps, engravings
<b>4. Data processing – related intangible assets</b>	proprietary computer software, software copyrights, automated databases, integrated circuit masks and masters
<b>5. Engineering-related intangible assets</b>	industrial design, product patents, trade secrets, engineering drawings and schematics, blueprints, proprietary documentation
<b>6. Customer-related intangible assets</b>	customer lists, customer contracts, customer relationships, open purchase orders
<b>7. Contract-related intangible assets</b>	favourable supplier contracts, license agreements, franchise agreements, noncompete agreements
<b>8. Human capital- related intangible assets</b>	a trained and assembled workforce, employment agreements, union contracts
<b>9. Location-related intangible assets</b>	leasehold interests, mineral exploitation rights, easements, air rights, water rights
<b>10. Goodwill-related intangible assets</b>	institutional goodwill, professional practice goodwill, personal goodwill of a professional, celebrity goodwill, general business going-concern value

<sup>22</sup> Compare: Reilly, Robert F. *Valuing Intangible Asset*, Blacklick, OH, USA: McGraw-Hill Professional Publishing, 1998. p 19-20

**Table 3: A common categorization of intangible assets, compare Reilly, 1998**

In matters of accounting, this classification would only be a sufficient guide, if there were active markets for each segment. Until such markets come out on top, many of these nominated assets stand alone without a scale or benchmark.

### **3.3.1 Overview of Intangible Assets**

Intangibles will be approached as follows: After a short depicting of what cannot be called an intangible asset, we will address real intangibles from identifiable to unidentifiable intangibles.

That is not considered as an intangible asset<sup>23</sup> even though they are often conceptually mistaken: A competitive advantage, market share, added value, efficiency, repeat business and customer loyalty. These phenomena are results of superior sets of assets, whereby it is likely that intangibles form a relevant section within this allocation. None of these are reported in balance sheets and it is ok, as long as their roots can be localised in it. Each company can communicate any such superior position in the market within their investor relations. At the end of the day, it are the absolute figures that make or break the company and not their performance relative to its competitors in narrow and arbitrary defined partial aspects.

#### **3.3.1.1 Identifiable Intangible Assets**

They can be separated and bought or sold apart from the rest of the company. For being well-defined, i.e. there are legally regulated treatments; these are the intangibles that make their way straight into the balance sheet. Identifiable intangible assets form the intellectual property of a company. They consist of patents, copyrights, trademarks, trade secrets, brands, naming rights and software code.

*Patents* are the legal possibility to gain a temporary monopoly, thus it shall be favourable for a company to do socially valuable research and discoveries that are costly and would not generate sufficient cash if somebody else exploits them right away. Main part of getting a patent is to make the idea publicly available. Thus it gets vulnerable for design- and engineer-around assaults. Violation against the patent have to be monitored and persecuted, this costs time and effort, as well as patenting itself.

---

<sup>23</sup> Cohen, Jeffrey. *Intangible Assets : Valuation and Economic Benefit*, Hoboken, NJ, USA: John Wiley & Sons, Incorporated, 2005. p 27 et seq.

*Trade secrets* would be the alternative; they are also more openly defined. Subject for this treatment is the way a company does what it does - secretly. In contrast to a patent there is no guarantee that the same knowledge is not being used twice. Therefore the knowledge advantage can get competed away.

*Copyrights* are the most easily established form of intellectual capital. For instance, as this thesis develops, the author creates intellectual property. This source is relevant for companies that relate to creative works, mostly the entertainment industry. It is a mostly calm district with low expected returns, but it can become incalculable in case of coincidences and following litigations. Another aspect that threatens the profitability of copyright related assets is the fact that modern copy technologies enable consumer's piracy at very low costs. Time will show if fiscal restrictions will put an end to this or if the industry will find different ways of generating return on their creative output.

*Trade marks* and *trade dress* form intellectual capital that is customer related. They can result in *brands*, which justify for instance that a higher price can be demanded. The value of a brand can be huge. According to Interbrand's<sup>24</sup> ranking 2007 Coca-Cola is the most valuable brand, again. Only the brand's worth was \$ 65,324m<sup>25</sup>. It is especially recognisable that Interbrand forms a portfolio out of the companies with the 100 highest valued brands, which consistently outperforms the S&P 500 index.<sup>26</sup> It might seem redundant because those brands are the worthiest because of their performance and thus enter the portfolio, but this is effectively evidence for the intangible asset called brand as an indicator for returns above the normal level.

The last identifiable intangible is found in *research and development* (R&D). So far as that the outcomes shall result in any of the discussed components of intellectual property.

### **3.3.1.2 Unidentifiable Intangible Assets**

Accounting rules only know one kind of unidentified intangible assets: goodwill; and it is not even possible to report for own goodwill as long as a company is not taken over from another one. In the following we split up the origin for goodwill in human.

---

<sup>24</sup> Interbrand ranks the 100 most valuable brands on a yearly basis. It is the leading ranking organisation concerning brands and their value.

<sup>25</sup> Interbrand, *Best global Brands 2007*, [http://www.ourfishbowl.com/images/surveys/BSB\\_RANKING\\_07.pdf](http://www.ourfishbowl.com/images/surveys/BSB_RANKING_07.pdf) (accessed April 27, 2008)

<sup>26</sup> Interbrand, *Top Performing European Retail Brands 2008*, [http://www.ourfishbowl.com/images/surveys/Interbrand\\_EuroRetailReport\\_030408\\_web.pdf](http://www.ourfishbowl.com/images/surveys/Interbrand_EuroRetailReport_030408_web.pdf), (accessed April 27, 2008)

Hurwitz et al<sup>27</sup> differ intangibles into human capital, organization capital, customer capital and intellectual property. The latter was already subject of the section of identifiable intangibles, but some knowledge-related capital was not yet examined, this follows under the title knowledge capital.

*Human capital* contains the manpower resources that lead to the operating result.

It contains the expert knowledge, commitment, know-how and the skills of the people that are working in a company. We can divide it into operative and strategic components. The former would be formed by the people that “do the job”. They engineer, research, develop, sell, advice or whatsoever is the business. It is self-evident that the human resources are business and company unique. In the battle for the best workforce, recruiting, human resource management and related activities can become a real asset. At latest if we consider the stock-market reaction, if a real prominent and successful manager/engineer/designer changes the company, we can relate a monetary value to parts of the human capital. In case of the mentioned manager we can identify the other important part of human capital, i.e. the overhead or management. Stewart cited a leading executive that has worked at J.H. Heinz:

“It was a truism at Heinz, he said, that you could always find one food processing line that produced 400 bottles of ketchup a minute while an identical line produced 350, and the difference was always management, never machinery.”<sup>28</sup>

This difference also determines the success of a company. As we can see, it may differ even within a company, but all in all the question whether the management is a low or high performer would be interesting for a company’s stakeholders.

*Organization capital*: It is the sum of each and every detail of the company. It could be the history, philosophy, creative environment, infrastructure, communication, mission or lack of any of them. After the question who does it? Organization capital is the answer to: “How is it done?” And the way business is run, or rather how the framework is designed influences the welfare of a company. The organization capital influences every station of the value chain. For example, only if the environment is motivating, the company can unfold all its human capital and expect a high level of

---

<sup>27</sup> J. Hurwitz, S. Lines, B. Montgomery and J. Schmidt: *The linkage between management practices, intangibles performance and stock returns*, Towers Perrin, New York, USA; In: Chatzkel, Jay (Editor). *Advances in the measurement of intangible capital: Papers from the 4th NYU Intangibles Conference*, Bradford, UK, Emerald Group Publishing Limited, 2002, p. 56

<sup>28</sup> Stewart, Thomas A., *Wealth of Knowledge: Intellectual Capital and the Twenty-first Century Organization*, Westminster, MD, USA, Doubleday Publishing, 2003, p xi

engagement. Insufficient organizational support can slow down every department of a company and cause inefficiencies among the whole value chain.

*Customer capital:* It contains (beyond identifiable brands, trademarks) customer relationships, origins for the brand or market position, potentially customer lists. Relationship management gains more and more importance. If a strong brand is established, its true value can differ extremely from the book value.

*Knowledge capital:* That would sum up all the benefit created by the knowledge workers that doesn't lead to legally protected assets. It is stored and made useful for the organisation. We could classify this asset as that kind of organizational knowledge or know-how that stays in the company, when the workforce goes home.

*Relation capital:* this includes the relationships that a company has towards its stakeholders. This overlaps with customer relations, but companies also address suppliers, network partners, the public and investors.

### 3.3.2 Characteristics of Intangible Assets

This parts draws heavily on Cohen(2005)<sup>29</sup>

- *low marginal costs*, i.e. once invented the price of further units of output decreases as the number of units increases. If an intangible has such a trait of character, it is referred to as *scalable*. Sometimes the marginal costs even approach zero extra costs for one single unit more.
- *high initial investment*, i.e. the fact that creative masterpieces, innovations, pharmaceuticals and similar intangibles do not come out of the blue, but demand a lot of input and efforts.
- *economics of scale*, i.e. if a company manages to find new ways of doing something/improving processes, all departments can make use of it. That means intangible assets are capable of enabling multiplier effects.
- *joint consumption*, i.e. the non-rivalry of intangibles. The old saying to have a cake and eat it, too, finally can come true with intangible assets. Only because one person is using a certain intangible doesn't hinder another do make use of just the same asset. In other words: There are no opportunity costs caused by unavailability due to use by others.

---

<sup>29</sup> Cohen: „Intangible Assets: Valuation and Economic Benefit“, John Wiley & Sons, Incorporated, 2005, p. 29 et seq.

- *imperfect substitution*, an intangible is all the more valuable, if it cannot (easily – or even better: not at all) be copied. Tangibles can be copied more easily in general, for their appearance betrays all that makes them<sup>30</sup>.
- *network effects*, i.e. the position of intangibles as meta-assets. Whenever the relevance of an intangible increases with the velocity it is being used. Examples could be standards for roosters or spreadsheets, intranet or community communication enhancing elements. This characteristic makes the distinction between different or the same asset difficult. Reason is that the same mechanism or infrastructure might have favourable effects for one cash generating unit as well as a superior unit or even in the organisation as a whole. Therefore a good definition of an intangible asset has to prevent double-(ac)counting.
- Not only can the mentioned characteristics themselves have value driving effects: Their true potential unfolds, when those features enhance each other and co-react with each other and also with the tangible assets so that they can unfold in a *going concern*. In case that these assets have to be put in action in the 2<sup>nd</sup> best place, that is outer company or in another company, intangible assets can face a huge loss of value between the 1<sup>st</sup> and 2<sup>nd</sup> best usage. In the worst case, the *2<sup>nd</sup> best solution* has no value left, because it is not applicable in the new environment.
- Many intangibles assets depend on *secrecy*. If we think of unprotected trade secrets that become public, it is very likely that the competitive advantage will be competed away instantly. This fragility is the reason testing for *impairments* on a regular base that has smaller intervals and don't need an occasion – unlike their tangible pendants.
- *Partial excludability*: If we own a tangible asset or a financial asset, we can claim that no one else can put a finger on it. Lev<sup>31</sup> claims that this is not the case, if we think of human capital. If well-trained and skilful employees leave, they take some intellectual capital with them. Some intangible assets lack of management control.

---

<sup>30</sup> If you screw on a dish-washer for instance, you can see all the components, copy them and sum them up to a pretty similar duplicate with a similar trade-able value. But on the other hand writing the name of your refreshing lemonade in a curved font on a brush colour will not be the same as when Coca-Cola would do so.

<sup>31</sup> Lev, Baruch. *Intangibles: Management, Measurement and Reporting*, Washington, DC, USA: Brookings Institution Press, 2001. p. 36

- *No markets:* and therefore no comparables. Intangible assets are hardly traded, e.g. the valuation of patents (not to talk about human capital) costs a lot of effort, because there are no active markets. It is not so likely that those markets will emerge - if we think about brands: they either are successful, then the companies will try to keep it, avoid jeopardizing its value and milk it on their own, or they are not successful, which will make it hard to find a buyer. Buyers are also very hard to find. Even if Google would sell its brand to Mercedes Benz – what should the latter do with it. As mentioned in the network effects: Intangibles fit exactly into their surrounding. We can imagine them as a missing puzzle piece that is cut in shape by the company that invented it. To find a buyer that misses just this piece is difficult, because the high degree of specialty would not allow standards.

### **3.4 Hints of Intangible Assets in today's balance sheets**

In the following the collection of all information on intangibles shall be complete by the residual insights. This means that the ongoing insufficiencies of financial reporting have had impact on the utilization of the given information. We take what we are told via financial statements plus what we know about the nature of intangible assets themselves and look for missing information on intangibles between the lines. Brainpower and innovation capacities are related to R&D expenditures, goodwill can give ex post information on the final market value of the intangibles all in all and at last impairment testing could be useful for defining an intangible asset in that regard that its treatment of the already defined intangible assets can have implications on not yet defined intangible assets.

#### **3.4.1 Expenses on R&D**

All successful Research aims at developing superior goods, formulas, processes or comparables in order to achieve a competitive advantage that cannot easily be copied. Not necessarily every research succeeds. In fact, the earlier the research stage the riskier are those activities. And the search for new intangibles is always riskier than classical tangible related activities.<sup>32</sup> But the risk is connected with a chance. Here it is the chance of discovering a sound improvement whatsoever with

---

<sup>32</sup> Lev, Baruch. *Intangibles : Management, Measurement and Reporting.*, Washington, DC, USA: Brookings Institution Press, 2001. p 42

the potential to increase returns or reduce costs. As we saw above IFRS allows expenses on development to be capitalized as soon as the stage of technical and economical feasibility is achieved. This is a compromise between playing the oracle concerning the return on expenses on research and ignoring those potential excess return generating expenses completely.

At present the expenses on R&D are the only source/sign of innovation potential. It is not so easy to understand why which asset should be capitalised from the outside.

### **3.4.2 Goodwill**

Goodwill as mentioned above is a residual. This makes sense, if we rethink of the real contribution of all components of a company. We have a bundle of assets and they lead to a certain due diligence. The internal cost calculation gives relatively precise data as to what value derives from what tangible asset. Financial assets literally have their yield written on their forehead – namely the face value. So, the difference between them should be just the amount of value that is caused by intangibles. How else should the discrepancy between the acquisition price and the book value of the company be explained? The reason can also be found in bargaining power as well as future profits that are foreseen by the buyer that lead to an “enhanced value”<sup>33</sup>. The relation towards the true percentage of intangible assets is vague. But beside considerations of the acquiring strategy and goals, it should regularly not be willing to pay significantly more than justifiable or more than they consider the company is worth. After all, it is a market price.

So, all in all the first time that goodwill enters a balance sheet, it can give the scope concerning the value of the acquired firm’s summed intangible assets. A closer analysis, with an intersection into its components could deliver what kind of values we are facing and thus enable progress in the area of defining from the other way around.

Despite the given possibility of learning from historical data, current information that shows where goodwill derives from is not sufficient. If we assume that there is what then is called goodwill, it has to have been there far before the acquisition of the company.

---

<sup>33</sup> Russell L. Ackoff, *A major mistake that managers make*, in: Coate, Patricia(Editor). *Handbook of Business Strategy 2006*, Bradford, UK: Emerald Group Publishing Limited, 2005, p 227

On the one hand, it's the goal of delivering definitions for intangible assets so that all of these assets are reflected on the balance sheet, so that the future goodwill should diminish increasingly.

One position of the residual explaining position could be a modification of the goodwill-concept. It could also be considered to include bad will, i.e. allow accounting for value destruction from intangible assets. This is, because suboptimal use of intangibles can thus lead to the destruction of value,<sup>34</sup> if the performance is either worse than it usually has been in the organisation, or if it is below the branch average. This could be another residual estimation for self-generated goodwill.

### 3.4.3 Impairment testing

Impairment is more likely to occur than an appreciation<sup>35</sup>, therefore impairment testing is a reliable and important tool in financial accounting. The IAS 38 stipulates that intangible assets with infinite useful lives (including goodwill) shall not be amortized, but that these shall be tested for impairment annually. The impairment test is regulated in IAS 38. This standard makes sure that the book value of infinite intangible assets does not exceed the recoverable amount. The recoverable amount is identified after the comparison of value in use and fair value less costs to sell; the recoverable amount is the higher value of both.

This could be another approach for defining an intangible asset, via analysing what is already measured. The recoverable amount could also be found for intangibles that are not yet reported. Or in other words, a suitable definition identifies intangible assets that later on fit into the concept of impairment. This means there should also be some way of finding the fair value and the value in use.

---

<sup>34</sup> Ante Pulic. *Intellectual capital - does it create or destroy value?*, in: Marr, Bernard(Editor). *Measuring Intangible Assets - The State of the Art*, Bradford, UK: Emerald Group Publishing Limited, 2004. p 67.

<sup>35</sup> Just imagine if a trade secret or valuable secret information becomes public (→ industrial espionage). The former information advantage vanishes instantly and all expected rents on that information will get competed away.

## **4 Discussion of concepts towards defining intangible assets**

So far, we know the treatment and needs of financial reporting, got an idea of what is meant by intangible assets and we know what we don't know. The definition of intangible assets differs according to the view-points of the ones that define it: the more than numerous sides of the same medal shall now be revised; concepts shall be compared and enlightened for accounting purposes and could help to finally put intangibles onto balance sheets.

### **4.1 Strategy approach**

Some concepts do not try to define an asset first, but to measure it first. Intangible assets in that approach are the contribution of recognised intangible phenomena towards the successful implementation of their strategy.

In 2004, Kaplan and Norton<sup>36</sup> integrated intangible assets to their Balanced Scorecard (BSC) - impersonated by the degree of strategic readiness. Marr and Adams<sup>37</sup> critique the variances from established terminology.

Be it as it may, in the BSC we can identify three categories of essential intangible assets are human capital, information capital and organization capital. Hereby the information capital is the most concrete and consists of the company's databases, information systems, networks and technology infrastructure. It is remarkable that the content of information is not meant by this.

The human capital is summed up by the skills, talent and knowledge possessed by a company's employees. It is remarkable that it is stressed from the authors that it is not the company that – directly or indirectly – owns what is supposed to be its capital. Finally, the organization capital contains the company's culture and leadership; how aligned its people are with its strategic goals as well as the ability of the employees to share knowledge.

If we try to deduct the underlying definition for this understanding of intangible assets, we see that it is not holistic.

---

<sup>36</sup> R.S. Kaplan, D.P. Norton, Measuring the strategic readiness of intangible assets; Harvard Business Review, Feb. 2004, p.10

<sup>37</sup> B. Marr, C. Adams, The balanced scorecard and intangible assets: similar ideas, unaligned concepts, in Measuring Business Excellence, vol. 8 No. 3, 2004, Emerald Group Publishing Limited, p. 23

The concept does not include intangible assets like patentable knowledge and technologies as intangible outcomes.

The concept does not leave the micro-cosmos of one single company. One key aspect of their view in intangible assets is non-tradability. They consider it unavoidable and thus their consideration only affects measuring intangible assets within a company. The method of measuring thus is only company-wide useable, because standards for scope and concrete assets are missing. But the concept itself could not be integrated into accounting principles; nor does it provide a concrete definition of intangible assets. It is rather a description of the highest personal intangible *characteristics* of a firm. In normal speech we would call a talented workforce that is able to share its knowledge an *asset*, but this is too sloppy to write it on a balance sheet. All in all, the strategy map could be a useful practical tool to recognise and monitor the performance of soft aspects, but does not answer the questions concerning a definition for reporting intangible assets.

#### **4.2 Lev's economics of intangibles: Claims to future benefits**

Baruch Lev puts an even stronger emphasize on the future-relatedness of intangible assets, when he states that:

“Assets are claims to future benefits, such as the rents generated by commercial property, interest payments derived from a bond, and cash flows from a production facility. An intangible asset is a *claim to future benefits that does not have a physical or financial (a stock or a bond) embodiment*. A patent, a brand, and a unique organizational structure (for example, an Internet-based supply chain) that generate cost savings are intangible assets.”<sup>38</sup> [emphasis by the author]

And:

“To summarize: intangible assets are nonphysical sources of value (claims to future benefits) generated by innovation (discovery), unique organizational designs, or human resource practices. Intangibles often interact with tangible and financial assets to create corporate value and economic growth”<sup>39</sup>

This explanation – or definition is very broad and makes it hard to put the finger on an exact intangible asset. Again, we have the legally protected intangible assets, which are making it easier to identify the claim. But the definition seems to make it very difficult – even (or especially) internally - to identify what really is an intangible asset.

---

<sup>38</sup> Lev, Baruch, *Intangibles: Management, Measurement and Reporting*, Washington DC, USA, Brookings Institution Press, 2001, p. 5

<sup>39</sup> Lev, Baruch, *Intangibles: Management, Measurement and Reporting*, Washington DC, USA, Brookings Institution Press, 2001, p. 7

An absurd example: A company annually throws half of their financial resources out of the window – literally. The next year – after months of research - the management instructs the personnel to throw away only a third. Would this behaviour justify capitalizing an intangible asset? Obviously it does not.

Obvious practise improvement – like constraint of waste – should not find its way onto the balance sheet, but also more elaborated strategic decisions and concepts could cause future claims for the company. The identification by the company leaves a lot of place for individual considerations and thus accounting choices. Enabling these aspects to find their way into the balance sheet would not lead to more clarity concerning the true value of the organizational capital.

The quantification of the future claim would demand some restrictions, too. The idea of future claims would demand variants of the net present value method to transform future claims into present values. Here we have the usual problems of finding appropriate parameters and justifying them. In contrast to tangible assets we have the non- rivalry, network effects and potential infinity of intangible assets – these aspect enable potential unlimited benefits.

But the question here is: can the company actually enforce the claim them and if yes: from whom? Internal claims or claims against oneself are not a convincing answer for the questions that are related to the identification of assets. As mentioned above, the market for intangibles is very rudimentary, a trade of claims for future benefits on intangible maybe will establish in the future. So far, we have to stay in the companies boundaries. Again, the aim of the integration of intangibles onto the balance is to make more clarity and not (only) to capitalize more. The expressiveness and credibility of reporting for intangible assets can only be granted, if there is some connection to actual markets and market prices. This could be the costs one the one hand or the revenues on the other end of the value chain.

If we come back to tangible assets and their treatment, we see that they are more often capitalized according to their costs and not to their future claims. Financial assets are that category of assets where the (traded) value can be put on a level with the connected claims, neglecting values from ownership considerations. This is a result of the efficiency of capital and finance markets.

These market mechanisms also prevent from unjustified and exorbitant amounts, that infinitely and joint consumption of intangible assets would imply.

The future-oriented view-point adds further uncertainty, because the future is unknown. But it also offers inspiration for empirical research; meaning that what is past now, was the future decades ago. Historical analysis of what could have been capitalized - as a sum of expected future claims - against what claims were actually turned over could serve as a plausibility check for defining concepts. Since there is consensus that financial reporting on intangible assets is not sufficiently, data gathering could focus on merger and acquisition transactions, which would also include some price adjustment from the market.

**4.3 Intellectual Capital Approach**

The intellectual capital (IC) approach is the approach towards intangible assets that is most accepted. It extends the definition of capital as we know it from tangible and financial assets and integrates IC. Roos illustrates this approach in his holistic classification framework:

		Resource Form				
		(Traditional) Economic		Intellectual capital		
		Monetary	Physical	Relational	Organizational	Human
Asset recognition	Tangible	<ul style="list-style-type: none"> <li>* Cash</li> <li>* Investments</li> <li>* Receivables/ Debtors</li> <li>* Payables/ Creditors</li> </ul>	<ul style="list-style-type: none"> <li>* Property</li> <li>* Equipment</li> <li>* Plant</li> <li>* Inventory v (Finished Goods, WIP, Raw Materials)</li> </ul>	<ul style="list-style-type: none"> <li>* Customer Contracts</li> <li>* Formal Alliances; JVs Supply Agreements</li> </ul>	<ul style="list-style-type: none"> <li>* Systems</li> <li>* Formalized Knowledge</li> <li>* Codified Knowledge</li> <li>* Patents</li> <li>* Brands</li> <li>* Mastheads</li> </ul>	<ul style="list-style-type: none"> <li>* Management Contracts</li> <li>* Documented Accessible Skills Inventories</li> </ul>
	Intangible	<ul style="list-style-type: none"> <li>* Credit Ratings</li> <li>* Receivables Certainty</li> <li>* Undrawn facilities</li> <li>* Borrowing capacity (relative to like companies – based on character)</li> <li>* Borrowing Covenants Slack</li> <li>* Accruals</li> <li>* Convertibility</li> </ul>	<ul style="list-style-type: none"> <li>* Plant Flexibility</li> <li>* Plant Modernity</li> <li>* Infrastructure Surrounding Plants</li> <li>* Stranded Assets? Assets?</li> <li>* Tradability of Assets?</li> <li>* Access Rights</li> <li>* Balance Sheet strengths</li> <li>* Inventory ( Good and Useable, Obsolete, Redundant)</li> </ul>	<ul style="list-style-type: none"> <li>* Customer Loyalty (Behavioural Attitudinal)</li> <li>* Quality of Supply Contracts</li> <li>* Right to tender, Right to Compete, Right to Design</li> <li>* Strength of Stakeholder Support (incl. Opinion leaders)</li> <li>* Networks</li> <li>* Regulatory Imposts</li> </ul>	<ul style="list-style-type: none"> <li>* Structural Appropriateness</li> <li>* Informal Processes</li> <li>* Organizational Reputation</li> <li>* Brand meaning (strength, stature)</li> <li>* Productivity of R&amp;D Process</li> <li>* Quality of Corporate Governance</li> <li>* Know How, Show How</li> <li>* Tacit knowledge</li> <li>* Maturity HC Development</li> </ul>	<ul style="list-style-type: none"> <li>* Top Mgmt Quality</li> <li>* Top Mgmt Experience</li> <li>* Ability to execute on Strategy</li> <li>* Leadership capabilities</li> <li>* Problem Solving Capabilities</li> <li>* Employee Loyalty (Behavioural, attitudinal)</li> <li>* Personnel Reputation</li> <li>* Workforce Adaptability</li> <li>* Employee Engagement</li> </ul>

**Table 4: Holistic classification framework, compare Roos 2004**

IC is segregated into three groups, as we can see: Relational, organizational and human resources. What is amazing is the fact that these three groups are (just like

these traditional economic pendants) differed into intangible and tangible asset recognition.

Apart from the fact that recognition is rather intangible, this puts some concepts ad absurdum. Suddenly, tangible resources are intangible, too? Let us consider the credit ratings. Are these intangible assets? If we keep in mind the above elaborated opinion of what is NOT an intangible asset, we see that credit ratings would fit into this terminology much better. That is, because the credit rating is a result of a set of assets. The interdependencies and processes blur the frontiers. Due to the adverse recognition of originated intangible assets when they arise they become input before they were identified as output, not to mention the intangible throughput.

Similar to this argumentation are all intangibles that are based on comparables. It is crucial for the company to be better, faster and/or stronger than others in order to survive in competition. But we shall not forget that the *assets* are what the company has to do so and that the position they therefore achieve in relation to the rest is one of the outcomes. This would not be appropriate for the concept of balance sheets.

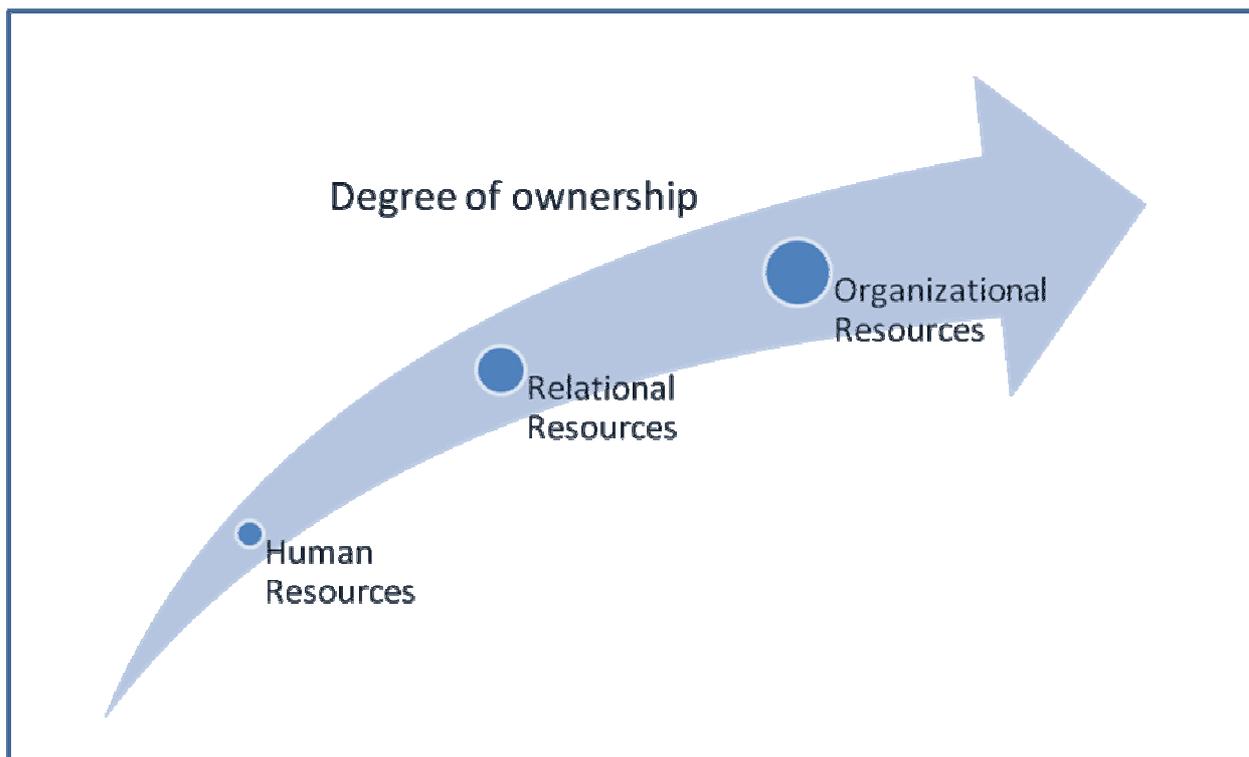
Another aspect that should be mentioned concerning the intangible component of tangible assets: their prices already contain their percentage of intangibles. Also a supplier of companies can have a brand for which its customer are willing to pay, or high technology articles have a higher value that is also traded. From this point-of-view the purchase price of a tangible asset should reflect all value of that asset.

When we then consider that these assets are used differently, it does not lie in the nature of that asset, do it should have the same entry in the books of both companies. This difference will manifest in the outcomes.

Coming back to the contents of IC, we can find them not only grouped functionally, but into their degree of ownership<sup>40</sup>.

---

<sup>40</sup> Göran Roos, *Intellectual capital and strategy: a primer for today's manager*; in: Coate, Patricia(Editor), *Handbook of Business Strategy 2005*, Bradford, UK, Emerald Group Publishing Limited, 2004. p. 124



**Figure 4: Degree of Ownership of human relational and organizational resources, compare Roos 2004, original design**

The highest degree of ownership can be found in organizational resources, these are intellectual property, brands, image, culture, documented information and the systems, structures, processes that are used to run the business. The least controlled resources are human resources; the company does not own its employees nor their knowledge, competence, attitude, relationship ability or intellectual agility. It just borrows or rents their time. But it is not only to own or not to own, relational resources form some kind of hybrid. They are partly owned by the company, depending on the related party. This resource connects the business to the outer forces and stakeholders like customers, suppliers, media, strategic partners and alliances who can influence respecting resources.

The terminology refers to resources, not to assets; which is not an accounting term. Capital is used as contemporary vocabulary. This shows, it does not aim at defining intangibles for reporting purposes, but it shows different facets that unite to a holistic view, which is the goal of financial statements, too. This approach is more semantic but the least requirement for accounting terms is the ability of justification.

## 5 Implications

### 5.1 Outcomes of defining approaches

We saw that there are many opinions of what is – or could be - an intangible asset. During the last years, the confusion did not disappear, but increased.

Hazard has it that companies might tend to neglect realizing intangibles as assets and therefore do not take care of their management. Interbrand states that “when the value of a brand is recognised by its owner it becomes a self-fulfilling prophecy”<sup>41</sup>. That means that it is not only that intangible assets are not reported appropriately, but that they can also be neglected or not perceived by the companies’ internal reporting or management system. If the mentioned deficiencies in external reporting would decrease this might enable companies to identify all of their assets and thus make responsible use of all available resources.

Another aspect would be the debt capital acquisition: If all intangibles are assets, companies and banks have more collateral to issue debt. Surely, all intangibles are not able to be cut out off a business and provided to others. But those intangibles that are capable or rather tradable (e.g. branch-intern) should be able to serve as a collateral and thus satisfy the needs of a highly liquid financial market. Financial reporting has to ensure the best communication between the company and its capital supplier, too, so, it should enable companies to capitalize all their assets.

The outcomes of approaches might not have been satisfying, because the researchers expect too much. It would be desirable to know who is the actual top-performer, for everybody, who uses its resources in the best way and thus has the highest organisational capital?

Which expenses will be spent in vain, which are the 5 out of 100 songs that make profit? Who is going to hit the jackpot this and the following five years?

Another reason is that the accountability is not the main goal on the area of defining intangibles. The above mentioned questions are too much information - even if it were measurable – for a balance sheet. A balance sheet is the complete listing of all the assets and liabilities a company owns, nothing more and nothing less.

Nevertheless, the interdisciplinary research can help to push things forward. So that intangible assets are no longer widely ignored.

---

<sup>41</sup> Interbrand, *Top Performing European Retail Brands 2008*, [http://www.ourfishbowl.com/images/surveys/Interbrand\\_EuroRetailReport\\_030408\\_web.pdf](http://www.ourfishbowl.com/images/surveys/Interbrand_EuroRetailReport_030408_web.pdf) (accessed April 27, 2008) p.25

## **5.2 Implications for the integration of intangible assets into balance sheets**

As earlier mentioned in Lev's economics of intangibles, we can only recognise the true value of an asset retrospectively. Remember the time and effort put in R&D that did not lead to commercial success in the end. But no one knows the future until it is too late. This should not lead to a concealment of what we can tell today.

This thesis is and stays focussed on the definition and not the quantification of intangible assets, albeit the considerations of the area of defining deliver qualitative implications for quantitative aspects, too.

### 1<sup>st</sup> relative performance:

It is understandable that the stakeholders of a company would like to know all about the company, if not even more. This – like everything in economical surroundings – has to be related to its costs.

First of all, huge extraordinary expenses would occur, that are not connected to any benefits for the company – in case of the low-performers these costs are even connected to disadvantages – and the benefits of the stakeholders cannot compensate this.<sup>42</sup> Secondly, companies have to cope with even more and regular espionage assaults to their most fragile goods. Thirdly, the expressiveness of relative performance is limited. It is likely that there will not be another rating than we can get from the overall performance, and it would be very difficult to define appropriate models, which can cause new reasons for myopia. Fourthly, if we define branches and different industries for grouping the samples, it will get complicated if a company is active in various areas and at last it is not possible to integrate comparables systematically into the balance sheet ( - except when the model-based results become even more biased by transforming ranking values into financial figures).

### 2<sup>nd</sup> soft intangibles – raw material for intangible assets:

The biggest position in this group of intangible assets should be expenses for staff, paid for their work which contains the employee's ideas, experience, know-how and contribution to the success of a company and its strategy. The straight capitalization

---

<sup>42</sup> I dare to say this without further studying how the individual stakeholders appreciate intangible assets due to the fact that intangible assets are able to be neglected and not reported for such a long time and so all-embracing.

of all expenses like salaries, training-on-the-job and incentives is not so easily to be conducted.

The non-rivalry of intangibles is one problem here. If we take employees as knowledge-carriers, it would be hard to justify that the same knowledge counts extra for every head, and it would be unthinkable for a bank to accept it as collateral. What is more, knowledge advantages lose their value, when they get public. Another reason is the managerial control – we can only accept this on a temporary base. Work contracts bring with them some control over a time horizon. Expenses for salaries on the other side have a claim for the employees' time, but the "going-the-extra-mile" values like motivation, identification and true dedication cannot be certified, albeit they are prerequisite for business excellence. Also, there are indications that salaries do not necessarily reflect values of the work they are paid for.<sup>43</sup> Thus, human capital for itself is conceptually unsuitable for balance sheets. Sometimes values stay merits, which are priceless.

Still, even if we cannot show what a certain company's workforce is capable of in contrast to another from their work contracts and the expenses they cause (some are just expenses, like social security contributions), → we can try to capitalize the work. At the latest at the point of purchase, we can see the merits turned into cash. This can be the idea for a technology, the higher level of technological readiness or brand strength that at the end of the day are rendered in higher or lower willingness to pay. This is of course too late to report for intangibles, because the sold items are still mostly tangible. But the discrepancy between the production costs (that regularly only mind costs of tangibles and labour expenses from others) and the price can decrease, if intangibles from human capital are reported. An idea for the quantification could be a knowledge or experience premium. After the assimilation of these costs into production costs it would not retrospectively be possible to identify the intangible portion on first sight, which underlines how organic this approach is.

The other big position in the area of soft intangibles is organizational capital. This really should be integrated as well. This is because it could show the time and effort that is put in the own strategic and operational performance and over time these efforts can be put in relation to the overall performance. This position should be a mixture of tangible and intangible assets. Those assets that are held to improve the

---

<sup>43</sup> (Maybe a company has to pay more for mediocre workers, because it has hard working conditions; or the 30% difference for the same work according to different gender-membership)

organization-wide communication, systems and structures, the composition of the workplaces, expenses to keep secret knowledge confidential and also to save, share and enlarge it. Due to the fact that a handbook has a higher value than the paper on which it is written, the concept of human capital premium could help out.<sup>44</sup> If these actually paid extra amounts of money, next to the doubtless and documented expenses and costs for organizational purposes are capitalized as a position called “organisational capital” as a sub-component of the property, plant and equipment, this gives useful insights into the renewal capabilities and activities of companies. They are credible, plausible and justifiable. What is more, in the long run they allow comparison between and within branches and industries, for this position could easily be transformed into financial ratios. These ratios then would later on allow conclusions of the efficient use of resources (e.g. It could be more difficult then to drain away consumption on the job in the expenses) and they also would show larger investments in organizational capital, which normally should have positive repercussions on the organization.

### 3<sup>rd</sup> hard intangibles

Identifiable intangible assets - containing intellectual property - are assets:

The company has documented control over these kinds of assets and they hold them for a reason. Exposed to depreciation, related to outcomes, results of money, time and efforts, they can be called what is an asset in the traditional way. Even though they have no physical embodiment, they are well-documented. This is the first prerequisite for tradability. In the case of patents, their documentation is even public.<sup>45</sup> If all patents were capitalized, they would have to contribute to the corporate success in order not to lower the return on assets and other ratios.

An example for this could be a patent that is only held to keep competitors away. The repercussion of reporting these self-generated patents could be its justification.<sup>46</sup>

---

<sup>44</sup> The knowledge- idea-, innovation or whatsoever premium could also work as an incentive for the employer to bare his or her knowledge, big amounts of money could go to the personal pensions or the individuals concerned.

<sup>45</sup> Building on this; it should be possible to make remarks next to the entry of the patent that show for whom they serve as collateral. This could be a convincing argument for banks that shall grant a loan on a patent.

<sup>46</sup> Maybe some patents will be kept sleeping, but maybe there will be some incomes from royalties. This would create a win-win situation. The company that has the patent has relief(s), the other company would have a higher technology equipment and brings the patent to life – and the result to market so that the society can draw its utility from it. Independent from the person that use the patented technology (the company or someone else who pays royalties), it would be socially

The only problem in accounting here is the origin. It seems as if, the lack of a purchase price justifies that intangible assets fall from heaven. The earlier section about impairment testing containing the concept of recoverable amount could help this. At the end of the day the value in use would not differ for identical items like technology if it were acquired from the outside, generated from the inside or sold and leased back. What differs would be the expenses or costs that let the technology enter the company. As already mentioned, intangible assets have high initial investments. That is, because of the trial and error process the company has to go through before the desired success occurs, whereas this success is not necessarily the originally intended result. But in the case of “hard intangibles” the company already went through this process successfully and also has a specific expense history. This would also have to be documented properly and labelled according to the one and only R&D project that caused innovation product. Here expenses became assets and they are some kind of market price, because they are actually paid. But it is questionable, if the company would have been willing to pay these amounts, if they knew them from the beginning. So, these expenses are only very rough hints of value and have to be re-checked for plausibility.

All in all, the definition for soft intangible assets lays in the documentation. The legally securitising of assets has to cause the immediate capitalization of them.

#### 4<sup>th</sup> not intangible assets

Recalling that balance sheets only represent all assets and liabilities of a company, the position “intangible assets” should not become a gathering place for all intangible, but for all intangible assets. Direct performance indicators like strategic readiness, efficiency, creativity, optimal use of resources - though desirable – are not identical with assets or liabilities and therefore cannot be reported in the balance sheet.

#### 5<sup>th</sup> (hidden) potential

Unrealized opportunities are very likely, if you deal with something that is not even defined. Sometimes the identification of intangibles is the ignition that gets the process going. Regulations that demand instant capitalizations for defined circumstances force identification.

---

favourable, if the monopoly caused by the patent rewards the innovation and its actual realization and not its obstruction.

It would be interesting to unmask a value creating as well as a value destroying “asset” before their exploitation. (Is it a hit or a flop?) The key issue is to find evidence for the extent of the best possible.

Again, we have to face high degrees of uncertainty, because even the experts from the inside of the company do not know what exactly would be their true and unexpected maximum.

Apart from the uncertainty related to the achievement of goals, they do not know, what they do not know and subsequently cannot report it. For instance, organizational capital that arises from emergent strategies (possibly even without extra expenses) is naturally unpredictable and therefore unable to report in advance on balance sheets.

All in all, assets that are written in black and white on the balance sheet leave less space for the potential to hide.

## 6 Conclusion

This thesis has shown that the ongoing research lacks a coherent concept concerning intangible assets that contains each and every notion in their value driving character that is applicable for the integration of intangible assets onto the balance sheet. Nevertheless these assets need to be reported in order to limit adverse information. This is especially important, since they will gain more and more importance over time. Therefore financial reporting standards should focus more on the asset – component than the intangible side of intangible assets.

IFRS took steps into the right direction, i.e. on the one hand the capitalisation and amortisation of expenses on R&D in well-defined cases and on the other hand the concept of impairment testing. The former would be a support for R&D intense companies, because the liable equity increases, as well as it serves the information needs concerning the success rate of R&D activities. The impairment testing procedure can be conducted as well for original intangible assets. It is important in this context that what is not an intangible asset is left out consequentially.

In the end there will always be an information gap caused by intangibles (not at last, because companies themselves do not always recognise them), but it can and should be narrowed. The inability of figures for intangible assets to incorporate information concerning their relative performance should not lead to irritation, because the integration of expressive absolute figures of intangible assets on the balance sheet gives the data necessary to build comparables. The resulting indirect measurement of intangible assets is flexible and – compared to the alternatives of attempts of direct measurements – cheap, general and credible tool to gain insights on intangible assets and the interdependencies with other assets, branches and time. Goodwill should not be treated as an intangible asset, rather should this residual of the purchase price allocation stand alone. Since all tangible, financial and intangible assets are already allocated goodwill only shows the scope of mispricing, which does not qualify as an intangible asset.

## **References**

Ackoff, R.,L.:“A major mistake that managers make” in: Coate, Patricia(Editor).  
“Handbook of Business Strategy 2006”, Bradford, UK: Emerald Group Publishing  
Limited, 2005

Bundesministerium für Bildung und Forschung (BMBF) Referat Öffentlichkeitsarbeit,  
[GER: Federal Ministry of Education and Research (...) department public  
relations]2006, Germany

[http://www.bmbf.de/pub/forschung\\_und\\_innovation\\_in\\_deutschland\\_2006.pdf](http://www.bmbf.de/pub/forschung_und_innovation_in_deutschland_2006.pdf)

(accessed: April 07, 2008)

Cohen, Jeffrey “Intangible Assets: Valuation and Economic Benefit”, Hoboken, NJ,  
USA, John Wiley & Sons, Incorporated, 2005

Eur-lex.europa.eu “Regulation (EC) No 1606/2002 of the European Parliament and of  
the Council of July 2002”, Art. 4, Brussels, 2002

<http://eur->

[lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:243:0001:0004:EN:PDF](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:243:0001:0004:EN:PDF)

(August 17, 2008 accessed)

Fact Treuhand GmbH, „IFRS für deutschen Mittelstand ohne Belang“, Nuremberg,  
Germany 2007, [GER: „IFRS not a matter of concern for German middlestand”]

<http://www.prcenter.de/IFRS-fuer-deutschen-Mittelstand-ohne-Belang.2730.html>,

(accessed June 08, 2007)

Fortune, the May 5, 2008 issue,

<http://money.cnn.com/magazines/fortune/global500/2007/countries/US.html>,

(accessed April 03, 2008)

Grinblatt-Titman: Financial Markets and Corporate Strategy, 2nd ed., The McGraw-  
Hill Companies, 2002

Hurwitz, J., Lines, S., Montgomery, B., and Schmidt, J.: “The linkage between  
management practices, intangibles performance and stock returns”, Towers Perrin,

New York, USA; In: Chatzkel, Jay (Editor): "Advances in the measurement of intangible capital: Papers from the 4th NYU Intangibles Conference", Bradford, UK, Emerald Group Publishing Limited, 2002

Hüegh-Krohn, N. E. J., Knivsfla, K. H., "Accounting for Intangible Assets in Scandinavia, the UK, and by the IASC: Challenges and a solution, in The International Journal of Accounting", Vol. 35, No 2, 2000, University of Illinois

HGB (German commercial law):, §§ 252 paragraph (1)-(6); 255, 253 I, 248 II DTV-Beck (publisher), 61<sup>st</sup> ed., 2008

Interbrand, "Best global Brands 2007", London, GBR, 2007

[http://www.ourfishbowl.com/images/surveys/BSB\\_RANKING\\_07.pdf](http://www.ourfishbowl.com/images/surveys/BSB_RANKING_07.pdf) (accessed April 27, 2008)

Interbrand, "Top Performing European Retail Brands 2008", London, GBR, 2008

[http://www.ourfishbowl.com/images/surveys/Interbrand\\_EuroRetailReport\\_030408\\_web.pdf](http://www.ourfishbowl.com/images/surveys/Interbrand_EuroRetailReport_030408_web.pdf), (accessed April 27, 2008)

International Accounting Standards Board, "A guide to the IASB and the IASC Foundation", London, GBR, 2008

<http://www.iasb.org/About+Us/A+guide+to+the+IASB+and+the+IASC+Foundation.htm>, (accessed April 02, 2008)

International Accounting standards Board (publisher), "International Financial Reporting Standards (IFRSs®) 2006", 2006

- IASC Foundation Constitution, article 18, article 19

Kaplan, R.S., Norton, D.P., "Measuring the strategic readiness of intangible assets", Harvard Business Review, Feb. 2004

Lev, B.:, "Intangibles: Management, Measurement and Reporting" Washington DC, USA, Brookings Institution Press, 2001

Marr, B., Adams, C.: "The balanced scorecard and intangible assets: similar ideas, unaligned concepts", in: "Measuring Business Excellence", vol. 8 No. 3, 2004, Emerald Group Publishing Limited

O'Leary, Z., "Essential Guide to Doing Research", London, GBR, Sage Publications, Incorporated, 2004

Pulic, A.: "Intellectual capital - does it create or destroy value?", in: Marr, B.(Editor): "Measuring Intangible Assets - The State of the Art" ,Bradford, UK: Emerald Group Publishing Limited, 2004

Reilly, R. F., "Valuing Intangible Assets", Blacklick, OH, USA: McGraw-Hill Professional Publishing, 1998

Roos, G.: "Intellectual capital and strategy: a primer for today's manager"; in: Coate, Patricia(Editor), "Handbook of Business Strategy 2005", Bradford, UK, Emerald Group Publishing Limited, 2004

Stewart, T. A., "Wealth of Knowledge: Intellectual Capital and the Twenty-first Century Organization", Westminster, MD, USA, Doubleday Publishing, 2003

Tarantino, A., "Manager's guide to Compliance", John Wiley & Sons.Inc., New Jersey, 2006

World Trade Organization, „trade profiles 2007“, Switzerland, World Trade Organization, 2007

[http://www.wto.org/english/res\\_e/statis\\_e/its2007\\_e/its07\\_toc\\_e.htm](http://www.wto.org/english/res_e/statis_e/its2007_e/its07_toc_e.htm) (accessed April 2, 2008)