



*European Economy*

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**ACCOUNTING FOR RESEARCH  
AND DEVELOPMENT COSTS  
AND SIMILAR COSTS:  
DIFFERENCES AND SIMILARITIES  
BETWEEN US GAAP, IFRS  
AND GERMAN COMMERCIAL CODE**

**Abstract**

Owing to their very nature which makes evidence elusive, accounting for intangibles involves many problems. Within the context of US GAAP, there are many standards providing guidance in the financial reporting treatment of specifically identifiable intangibles, for instance standards on accounting for research and development costs, computer software costs, advertising costs, and costs of start-up activities. In this paper, all these standards are analyzed and compared with the relevant financial reporting treatment according to IFRS and German Commercial Code.

Regardless of the different financial reporting goals of US GAAP and IFRS on the one hand and German Commercial Code on the other, this paper reveals that accounting for R&D costs and similar costs is always dominated by conservatism. This result can be explained with the agency theory. Moreover, in comparison with IAS/IFRS and German Commercial Code, US standards on accounting for these intangibles implicitly offer more alternative accounting treatments.

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**Key words:**

R&D costs, computer software costs, advertising costs, costs of start-up activities, IAS/IFRS, US GAAP, German Commercial Code, financial reporting, agency theory.

JEL: M37, M41.

**1. Introduction**

In view of the continuing development of high-technology industries and global service markets, intangibles take on increasing importance. For instance, computer software costs exceed the costs of fixed assets for automated production facilities in many enterprises. Besides, e. g., advertising costs are getting more significant.

Due to their very nature which makes evidence elusive, accounting for intangibles involves many problems. Especially, one of the main issues is whether these costs should be treated as assets placed on the balance sheet, or as expenses appearing on the income statement. Within the context of US GAAP, there are many standards providing guidance in the financial reporting treatment of specifically identifiable intangibles, for example standards on accounting for research and development costs, computer software costs, advertising costs, and costs of start-up activities. In this paper, these standards are analyzed critically and compared with the relevant financial reporting treatment according to IFRS and pursuant to German Commercial Code. Particularly, due to the different goals of US GAAP and IFRS on the one hand and German financial reporting on the other, this analysis seems to be important. Finally, the results will be explained with agency theory.

**2. Accounting for Research  
and Development Costs  
and Other Costs Similar to These Costs****2.1. Research and Development Costs**

Within the context of US GAAP, SFAS No. 2 «Accounting for Research and Development Costs» specifies accounting for research and development costs. As a general rule, paragraph 12 of SFAS No. 2 prescribes that research

and development costs should be expensed as they are incurred. Certainly, research and development costs often benefit future periods. However, the decision to require expensing them was made primarily to enhance comparability and to avoid reliability problems<sup>1</sup>. Yet, it should be stressed that SFAS No. 2 does not apply to research and development costs incurred for others under a contractual agreement or to costs that are incurred in activities which are unique to the extractive industries. Due to the difficulty to demonstrate a direct relationship between research and development costs and specific future revenue generated and owing to the high degree of uncertainty about the future benefits of research and development projects, capitalization of research and development costs is not allowed according to SFAS No. 2.

Under IAS/IFRS, accounting for research and development costs is addressed by IAS 38 «Intangible Assets». Paragraph 54 of IAS 38 stipulates that research costs have to be expensed immediately. In contrast to this, pursuant to paragraph 57 of IAS 38, intangible assets arising from development or from the development phase of an internal project have to be capitalized under certain conditions. For instance, the entity has to demonstrate the technical feasibility of completing the intangible asset, the intention to complete the intangible asset and the ability to use or sell the intangible asset. Furthermore, the entity has to demonstrate how the intangible asset will cause probable future economic benefits. In addition, the entity must be able to measure reliably the expenditure which is attributable to the intangible asset during its development (IAS 38.57). Since the development phase of a project is generally further advanced than the research phase, this approach has been chosen in IAS 38 (IAS 38.58).

Subject to German Commercial Code, there is one crucial provision concerning accounting for intangibles: Paragraph 248 II of German Commercial Code prescribes that recognition of noncurrent intangible assets which are not acquired from another party in return for payment is not permitted. Therefore, noncurrent intangible assets have to be capitalized only if they are acquired externally against payment. Otherwise, the costs of intangible assets have to be expensed immediately. This general rule is founded on the principle of conservatism (Adler/Düring/Schmaltz (1998, 383)). Pursuant to German Commercial Code, research and development costs have to be expensed as they are incurred. Mainly, owing to the principle of conservatism, capitalization of these costs is not allowed. Hence, since the criterion «external acquisition against payment» expressed in paragraph 248 II of German Commercial Code is not satisfied in these cases, research and development costs cannot be capitalized as an invention or as know-how (Niemann (1999, 164)). Generally, accounting for research and development costs under German Commercial Code closely corresponds to accounting for research and development costs according to SFAS No. 2.

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<sup>1</sup> See Nikolai/Bazley (2003, 460). For further details, see Jeter/Chaney (2004, 44).

## 2.2. Computer Software Costs

Under US GAAP, SFAS No. 86 provides guidance regarding accounting for the costs of computer software to be sold, leased, or otherwise marketed as a separate product or as part of a product or a process. SFAS No. 86 specifies – concerning software developed internally for sale (or lease, etc.) to others – that costs incurred prior to the point at which technological feasibility is established have to be expensed immediately as research and development costs. Pursuant to paragraph 4 of SFAS No. 86, technological feasibility is established upon completion of a product design and detail program design or (in the absence of a detail program design) upon completion of a working model. Thereafter, software production costs have to be capitalized. Nevertheless, capitalization has to cease when the software product is available for release to customers. Subject to SFAS No. 86, purchased computer software which has an alternative use has to be capitalized when acquired and subsequently accounted for in accordance with its intended use. Yet, the cost of purchased software which lacks any alternative future use is accounted for like internally developed computer software.

On the other hand, SOP 98-1 specifies accounting for the costs of computer software for internal use. According to SOP 98-1, the process of computer software development has to be divided into three stages: preliminary project stage, application development stage, and postimplementation/operation stage (SOP 98-1.17). While costs of computer software which are incurred in the preliminary project stage should be expensed as incurred, once the computer software is at the application development stage, capitalization of costs is prescribed if management having the relevant authority approves and commits to funding the software project and if it is probable that the project will be completed and that this computer software will be used as originally intended<sup>2</sup>. In opposition to this, costs incurred in the postimplementation/operation stage should be expensed immediately.

Within the context of IAS/IFRS, the crucial regulation regarding accounting for the costs of computer software is IAS 38. Accordingly, the costs of internally developed computer software – whether for use or sale – have to be capitalized if – and only if – all of the following conditions are satisfied (IAS 38.57): The entity has to demonstrate the technical feasibility, the intention to complete the computer software and the ability to use or sell the software. Moreover, the entity has to demonstrate how the software will generate probable future economic benefits. In addition, the entity must be able to measure reliably the expenditure that is attributable to the software during its development. Otherwise, the costs of internally developed computer software have to be expensed as incurred. In opposition to this, under IAS 38, the costs of purchased computer software have to be capitalized if «it is probable that the expected future eco-

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<sup>2</sup> See SOP 98-1.27. For some reasons to justify this rule, see Lev (2001, 91) For details, also see Epstein/Nach/Bragg (2006, 389–393).

conomic benefits that are attributable to the asset will flow to the entity; and ... the cost of the asset can be measured reliably» (IAS 38.21). Since these key criteria for recognition of intangible assets – identifiability and control<sup>3</sup> – are principally satisfied in the case of purchased computer software, the costs of purchased computer software generally have to be capitalized.

Subject to German Commercial Code, computer software costs have to be capitalized if the software is acquired externally by purchase. The criterion «acquisition from another party in return for payment» is intended to serve as an evidence of the value of intangibles. Consequently, regardless of whether technological feasibility is established or not, the costs of purchased computer software to be sold, leased, or otherwise marketed should be capitalized and amortized over the estimated useful life of the software. In contrast to this, the costs of internally created computer software have to be expensed immediately. Since internally created software is not acquired externally against payment, capitalization of the costs of internally developed computer software is not allowed pursuant to paragraph 248 II of German Commercial Code. Owing to the principles of conservatism and objectivity, the costs of internally developed computer software must be expensed as they are incurred.

### 2.3. Advertising Costs

SOP 93-7 «Reporting on Advertising Costs» specifies accounting for advertising costs within the context of US GAAP. Pursuant to SOP 93-7, in general, the costs of advertising should be expensed either as they are incurred or the first time the advertising takes place (SOP 93-7.26). This conservative approach is required because future benefits from advertising are usually not measurable with the degree of reliability that is necessary to capitalize these costs<sup>4</sup>.

However, there is one important exception to this general rule. SOP 93-7 prescribes that the costs of direct-response advertising should be capitalized if both of the following conditions are met: First, the main purpose of the advertising must be to elicit sales to customers who can be shown to have reacted specifically to the advertising (SOP 93-7.33a). Second, the direct-response advertising must generate future economic benefits (SOP 93-7.33b). Demonstrating that direct-response advertising will result in probable future economic benefits requires persuasive evidence that its effects will be similar to the effects of past direct-response advertising activities of the entity that caused future benefits. In order to determine if results will be similar, attributes to consider include the

<sup>3</sup> For a thorough discussion of the key criteria for recognition of intangible assets according to IAS 38, see Alexander/Archer (2005, 21.08–21.10).

<sup>4</sup> See SOP 93-7.69. This argument is also stressed by Kieso/Weygandt/Warfield (2004, 588).

demographics of the audience, the method of advertising, the product, and the economic conditions<sup>5</sup>.

Pursuant to paragraph 69 of IAS 38, all the expenditures on advertising and promotional activities should be expensed as incurred. According to paragraph 69 of IAS 38, in these cases, «expenditure is incurred to provide future economic benefits to an entity, but no intangible asset or other asset is acquired or created that can be recognized». Furthermore, paragraph 63 states that «(i)nternally generated brands, mastheads, publishing titles, customer lists and items similar in substance shall not be recognised as intangible assets». Such items do not qualify for recognition as intangible assets, since expenditure on internally created brands, mastheads, publishing titles, customer lists, and items similar in substance normally «cannot be distinguished from the cost of developing the business as a whole» (IAS 38.64). In this respect, it is worth emphasizing that IAS 38 «set a rather conservative approach to recognition and measurement of intangibles» (Epstein/Mirza (2004, 326)).

According to German Commercial Code, advertising costs generally have to be expensed immediately. The crucial accounting provision in this area is paragraph 248 II of German Commercial Code. Capitalization of advertising costs is not permitted under paragraph 248 II of German Commercial Code, since the privileges or benefits derived from these costs are not acquired externally in return for payment<sup>6</sup>. Again, the decisive criterion «external acquisition by purchase» is generally not satisfied. Owing to the principles of objectivity and conservatism, advertising costs have to be expensed as they are incurred.

## 2.4. Costs of Start-Up Activities

Many companies incur start-up costs as they expand their activities. Under US GAAP, SOP 98-5 addresses the issue of financial reporting of start-up costs. Subject to SOP 98-5, start-up costs are defined very broadly<sup>7</sup>, since they include not only preoperating costs, but also costs incurred in the organizing of a new entity, such as legal and state fees of various types – commonly referred to as organization costs. Paragraph 12 of SOP 98-5 prescribes that costs of start-up activities should be expensed immediately. Certainly, start-up costs are generally incurred with the expectation that future revenues will occur. Yet, a conservative approach – expensing these costs as they are incurred – is required, because determining the amount and timing of future benefits is very difficult

<sup>5</sup> See SOP 93-7.37. For details and critical comments, see Weiss/Williams/Carcello (2005, 3.04–3.05); Moody (2003, 20-13–20-14); Tanenbaum (1993, 79–80); Tanenbaum/Finger (1994, 36).

<sup>6</sup> See, for instance, Weber-Grellet (2004, 457).

<sup>7</sup> For a discussion of the definition of start-up costs under SOP 98-5, see McDonald/ Noll (1998, 65); Burke (1998, 52); Steinberg (1998, 58).

(SOP 98-5.35-36; Kieso/Weygandt/Warfield (2004, 587)). Therefore, capitalization of start-up costs is not permitted.

Paragraph 69 of IAS 38 deals with the issue of accounting for start-up costs. Subject to paragraph 69 of IAS 38, start-up costs have to be expensed as they are incurred «unless this expenditure is included in the cost of an item of property, plant and equipment in accordance with IAS 16 «Property, Plant and Equipment»» (IAS 38.69). Besides, it is worth stressing that in IAS 38, start-up costs are also defined very broadly, because they comprise not only preoperating costs, but also «legal and secretarial costs incurred in establishing a legal entity» (IAS 38.69(a)). Although the «expenditure is incurred to provide future economic benefits to an entity, ... no intangible asset or other asset is acquired or created that can be recognised» (IAS 38.69). As a result, start-up costs have to be expensed immediately. Hence, a conservative approach has been chosen in this respect.

Under German Commercial Code, companies must differentiate between organization costs and preoperating costs. While organization costs comprise costs incurred in the organizing of a new entity, for instance, legal fees in various types, preoperating costs are costs incurred in the start-up phase of a company, such as costs related to introducing a new product or service. Since assessments of future economic benefits of organization costs are extremely uncertain (Winnefeld (2002, 438)), paragraph 248 II of German Commercial Code requires organization costs to be expensed immediately.

On the contrary, subject to paragraph 269 of German Commercial Code, preoperating costs are capitalizable. German Commercial Code offers an alternative regarding capitalization of these costs. Capitalization of these costs is permitted, because preoperating costs are essential to the formation of a company. Nevertheless, if preoperating costs are capitalized, there is a stoppage of distribution of company profits to the extent of the amounts of preoperating costs capitalized required under paragraph 269 II of German Commercial Code. For that reason, in spite of capitalizing preoperating costs, the income which is available for distribution is not higher than without capitalizing these costs. In effect, this stoppage of distribution serves the protection of creditors<sup>8</sup>.

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<sup>8</sup> For more general remarks on this argumentation, see Hense/Lawall (2003, 914); Winnefeld (2002, 442).

### 3. Critical Analysis

#### 3.1. Implicit Offer of More Alternative Accounting Treatments within the Context of US GAAP

Actually, it is apparent that – compared to IAS/IFRS and especially compared to the accounting regulations under German Commercial Code – US standards on intangibles implicitly offer more alternative accounting treatments. For example, subject to SFAS No. 86, the amount of cost which is capitalized largely depends on the organization of the programming process and mainly on «the date on which technological feasibility is established»<sup>9</sup>. The technological feasibility definition under SFAS No. 86 can be considered ambiguous, «creating inconsistency in its application» (Lenk (1998, 183)). Thus, an enterprise can control the amount of software costs which it capitalizes «by establishing technological feasibility at a designated time during the production process»<sup>10</sup>. Principally, considerable «judgment is required to determine when technological feasibility has been established» (Stice/Stice/Skousen (2004, 732)).

Moreover, substantial judgement is included in determining whether the costs of direct-response advertising meet the criteria for capitalization pursuant to SOP 93-7. As discussed above, in order for costs of direct-response advertising to be capitalized, the direct-response advertising has to generate probable future economic benefits. Demonstrating that direct-response advertising will cause probable future economic benefits requires persuasive evidence that its effects will be similar to the effects of past direct-response advertising activities of the entity which resulted in future benefits. As already emphasized, to determine if the results will be similar, attributes to consider include the demographics of the audience, the method of advertising, the product, and economic conditions. Nevertheless, these features are not concretised under SOP 93-7. Mainly, it is not substantiated how much the specifications of these attributes can differ in order to assume that they are still «similar». Therefore, judgement often greatly affects if costs of direct-response advertising are capitalized.

Furthermore, there is an ample scope for the entities concerning what can be capitalized as deferred charges. Within the context of US GAAP, the term «deferred charge» is a general classification of an expenditure for a service that

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<sup>9</sup> Nikolai/Bazley (2003, 466). For a similar comment, see Swindle/Burckel (1992, 44).

<sup>10</sup> Williams/Carcello (2005, 7.06). For a severe criticism on the technological feasibility criterion under SFAS No. 86, see Williams/Carcello (2005, 7.05–7.06); Stice/Stice/Skousen (2004, 732); Spiceland/Sepe/Tomassini (2004, 495–497); Fox/Ramsower (1989, 98); Stickney/Brown/Wahlen (2004, 471).



is expected to contribute to the creation of future benefits<sup>11</sup>. Examples of deferred charges comprise not only long-term prepaid insurance premiums, but also rearrangement costs, stock insurance costs, and relocation costs. In this respect, US GAAP often implicitly offer an accounting alternative, since there is no exact definition of the term «deferred charges» under promulgated US GAAP<sup>12</sup>.

Within the context of IAS/IFRS, IAS 38 also implicitly offers some alternative accounting treatments. For example, since there is no exact definition of «technological feasibility» in IAS 38, judgement can often greatly affect if development costs or costs of internally developed computer software are capitalized. Compared with US GAAP, IAS/IFRS offer less of these alternative accounting treatments.

On the other hand, the provisions regarding accounting for intangibles under German Commercial Code include hardly any implicit offer of accounting alternatives – at least, they include less of these implicit alternatives. As already pointed out, the accounting rules pursuant to German Commercial Code do not permit capitalization of internally generated noncurrent intangibles. Hence, there are – if at all – only very few implicit offers of alternative accounting treatments. Besides, there is no parallel of «deferred charge» in the accounting regulations according to German Commercial Code.

### **3.2. Predominating Influence of Conservatism and Objectivity**

Arguably, as the discussion of accounting for research and development costs and other costs similar to R&D costs demonstrates, not only the traditionally conservative German Commercial Code, but also IAS/IFRS and US GAAP generally favour conservatism and objectivity. Since it precludes all internally developed intangibles from capitalization, paragraph 248 II of German Commercial Code is considered a very conservative general rule (Adler/Düring/Schmaltz (1998, 378)). As already emphasized, subject to paragraph 248 II of German Commercial Code, the costs of internally developed intangibles have to be expensed immediately. This general rule has to be applied to all internally generated intangibles. Owing to the protection of creditors which is a fundamental aim of German financial reporting, the principle of conservatism is traditionally very important in Germany.

Of course, US GAAP on accounting for research and development costs and other costs similar to R&D costs are generally also governed by conserva-

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<sup>11</sup> For some general remarks on the capitalization of deferred charges, see, for example, Dyckman/Davis/Dukes (2001, 596); Ingram/Albright/Baldwin/Hill (2005, 420).

<sup>12</sup> See, for instance, Schildbach (2002, 82).

tism and objectivity. For example, SFAS No. 2 which prescribes that all research and development costs should be expensed as they are incurred, is dominated by the principle of conservatism (Kieso/Weygandt/Warfield (2004, 589)). This solution avoids reliability problems of how much to capitalize and over what period to amortize capitalized costs<sup>13</sup>. Furthermore, this solution enhances comparability and it ensures consistency in practice. In addition, under SFAS No. 86, the FASB has also chosen a conservative position in regard to the costs of computer software to be sold, leased, or otherwise marketed. SFAS No. 86 commonly results in most computer software costs being expensed as incurred, since, for many companies, the detail program design occurs after the detailed logic of the program is complete and after coding has already started<sup>14</sup>. Besides, SOP 93-7 and SOP 98-5 are also governed by the principle of conservatism. Pursuant to the general rule under SOP 93-7, advertising costs should be expensed either immediately or the first time the advertising takes place. In view of the uncertainty of the associated future benefits, capitalization of advertising costs and also capitalization of start-up costs is generally not allowed.

Moreover, IAS/IFRS on accounting for research and development costs and other costs similar to R&D costs are mainly dominated by conservatism and objectivity. For instance, under IAS 38, capitalization of research costs, advertising costs, and costs of start-up activities is not permitted owing to the uncertainty of the generated future benefits. As pointed out by the discussion of the accounting standards on intangibles, not only under German Commercial Code, but also within the context of US GAAP and IAS/IFRS, the overall «rule of thumb is that when there is significant uncertainty about whether an expenditure should be capitalized or expensed, expense it»<sup>15</sup>. This is in line with the principles of conservatism and objectivity in accounting.

Certainly, this conservative solution also seems to cause some detriments. For example, some critics argue that these standards on accounting for research and development costs and similar costs favour conservatism and objectivity at the expense of matching and relevance.<sup>16</sup> To preclude capitalization of many (or all) internally generated intangibles «removes from the balance sheet what may be a company's most valuable asset» (Kieso/Weygandt/Warfield (2004, 590)). Accordingly, this conservative approach can result in a substantial «understatement of the economic assets of a com-

<sup>13</sup> To avoid reliability problems is very important in this context: see Weygandt/Kieso/Kimmel (2005, 421); Needles/Powers/Crosson (2005, 501); Nikolai/Bazley (2003, 460); Herzig (2004, 99); Rees/Rees (2004, 191).

<sup>14</sup> «The costs incurred before technological feasibility is established can be considerable; because feasibility may not be assured until late in the expenditure cycle, there may be few costs left to capitalize (Revsine/Collins/Johnson (2005, 521). Also, see Kieso/Weygandt/Warfield (2004, 595); Nikolai/Bazley (2003, 466).

<sup>15</sup> Albrecht/Stice/Stice/Swain (2005, 430); Stice/Stice/Diamond (2003, 455). For the discussion of capitalize-or-expense decisions in this context, see Albrecht/Stice/Stice/Swain (2005, 430).

<sup>16</sup> See, for instance, Lenk (1998, 182).

pany» (Diamond/Stice/Stice (1999, 440)). While some companies only have few especially valuable intangibles, other companies have many of these intangibles. The current provisions concerning accounting for research and development costs and other costs similar to research and development costs under US GAAP, under IFRS, and under German Commercial Code do «not allow one easily to distinguish between the two conditions» (Hartman/Harper/Knoblett/Reckers (1995, 600)).

### **3.3. Accounting for Research and Development Costs and Other Costs Similar to R&D Costs against the Background of Agency Theory**

In US financial reporting and within the context of IFRS, the information function is decisive. Compared with this, financial reporting under German Commercial Code has a variety of targets: Apart from the documentation function, the information function and the measurement of income are also crucial objectives of financial reporting according to German Commercial Code<sup>17</sup>. Nonetheless, accounting for research and development costs and other costs similar to R&D costs is always dominated by conservatism and objectivity. Due to the differences in financial reporting goals, this result might be quite astonishing at the first glance.

However, this result can be explained with the agency theory. In general, intangible assets have important characteristics that distinguish them from tangible assets: First, there is normally a higher degree of uncertainty regarding future benefits which are generated. Second, intangible assets may have value only to a particular company. Third, their value is often subject to wide fluctuations, because it generally depends on competitive conditions.

According to the agency theory, financial statements – and also parts of financial statements – can be interpreted as instruments to alleviate the information asymmetry between the investor – as a principal – and the management – as an agent. Owing to the necessary costs, investors are generally not able to monitor the management. Certainly, if the management is forced to publish reliable information, the possibility of income manipulation can be diminished (Schildbach (1989, 128); Hax (1991, 63); Laux (1999, 15-16)). Hence, the crucial function of the balance sheet is to improve the decisions of the investors. For that reason, the problems of moral hazard can also be reduced.

Due to the information asymmetry between management and investors, the information function of financial statements can only be satisfied if the investor can assess reliably the information which is published. Therefore, standard-

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<sup>17</sup> For the variety of targets of financial reporting under German Commercial Code, see Pellens/ Fülbier/Gassen (2006, 10–13).

ized, reliable, and objective accounting standards are necessary in order to eliminate the possibility of income manipulation (Haller (1994, 599)). Concerning specifically identifiable intangible assets, conservative and objective accounting standards are decisive in providing reliable information and eliminating greater opportunities for abuse<sup>18</sup>. That is why, for example, capitalization of research costs, advertising costs, and costs of start-up activities is generally not permitted. Accordingly, the accounting standards on intangibles within the context of US GAAP, IFRS, and German Commercial Code are dominated by conservatism and objectivity. Moreover, reliability is crucial in this respect, since reliability is a prerequisite to providing believable, confidential, and reviewable information. Accordingly, in order to prevent income manipulation, not only German Commercial Code, but also US standards and IFRS on accounting for research and development costs and for other costs similar to R&D costs mainly favour conservatism and objectivity at the expense of matching and relevance.

#### 4. Summary

Regardless of the different financial reporting goals of US GAAP and IFRS on the one hand and German Commercial Code on the other, accounting for research and development costs and other costs similar to R&D is always dominated by conservatism and objectivity. Not only the traditionally conservative German Commercial Code, but also US GAAP and IFRS on accounting for research and development costs and other costs similar to R&D costs – computer software costs, advertising costs, and costs of start-up activities – mainly favour conservatism and objectivity at the expense of matching and relevance.

This result can be explained with the agency theory. Owing to the information asymmetry between management and investors, the information function of financial statements can only be satisfied if investors can assess reliably the information that is published. Accordingly, standardized, reliable, and objective accounting standards are necessary in order to eliminate the possibility of income manipulation. Regarding specifically identifiable intangible assets, conservative and objective accounting standards are crucial to provide reliable information and to eliminate greater opportunities for abuse. Thus, for example, capitalization of research costs, advertising costs, and costs of start-up activities is generally not permitted.

Furthermore, it is worth stressing that in comparison with German Commercial Code and IFRS, US standards on accounting for research and development costs and other costs similar to R&D costs implicitly offer more alternative accounting treatments. For instance, subject to SFAS No. 86, the amount of cost that is capitalized largely depends on the organization of the programming proc-

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<sup>18</sup> For a discussion of the importance of conservatism and objectivity in this context, see Nikolai/Bazley (2003, 460); Hartman/Harper/Knoblett/Reckers (1995, 586).

ess. Hence, an enterprise can control the amount of software costs which it has to capitalize. Besides, substantial judgement is included in determining whether direct-response advertising costs meet the criteria for capitalization under SOP 93-7. Moreover, there is an ample scope for the entities concerning what can be capitalized as deferred charges within the context of US GAAP.

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