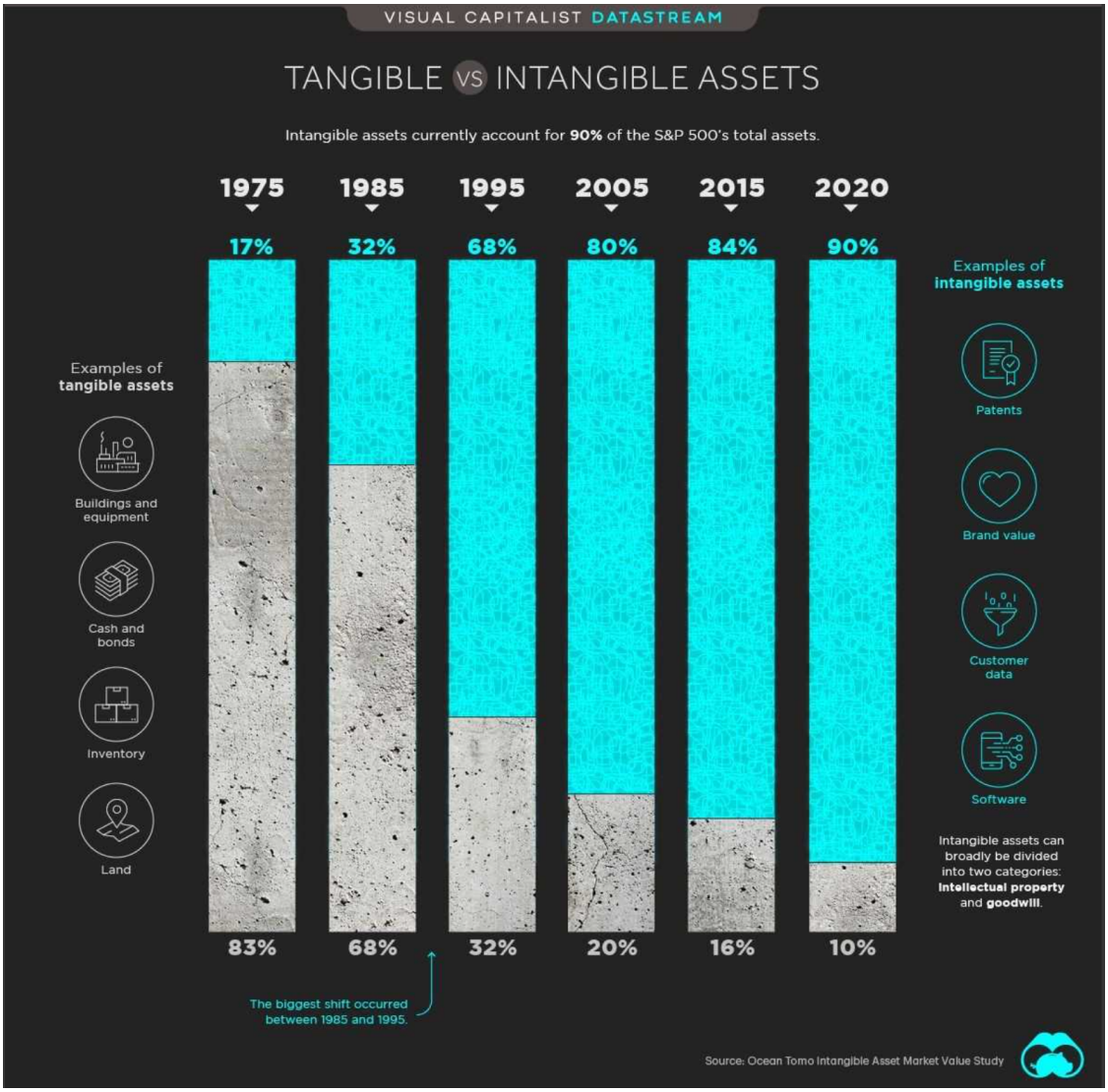
Intangible versus tangible assets

Entities spend money on buying, developing or enhancing intangible resources. In recent years, the importance of intangible resources exceeds the importance of tangible resources by far as the following figure shows:



But not all research and development activities lead to intangible assets.

Definition of IA

In IFRS, accounting for IA requires recognizing if a business transaction leads to an IA ("classification"). IAS 38 defines an intangible asset as follows:

"An intangible asset is an identifiable non-monetary asset without physical substance."

What does that mean:

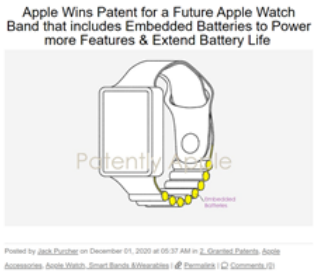
The easiest element is the last part of the definition: **without physical substance**. Compared to tangible assets like machines or buildings, intangible assets have no physical substance, i.e. **we cannot grab them**. In some cases intangible assets (see examples below), like a computer program, may be stored on a physical (i.e. tangible) object like a DVD or flash drive. However, it is not possible to grab a computer code itself.

The other elements of the definition are a bit more challenging. **Identifiable** requires an IA to be separable or to arise from contractual/ legal rights. An IA is separable if it is **capable of being sold or transferred individually** [regardless of whether the entity intends to do so]. At first sight, any (intangible) asset should be capable of being sold or transferred individually. But, under IFRS, there is an important exception, which we will not discuss at the current stage (so-called **Goodwill**). Goodwill is a specific IA that results from business combinations, i.e. if a firm acquires another firm. IA that arise from contractual or legal rights are, for example, temporary licenses, construction permits, franchise agreements, etc.

Last, **non-monetary** ensures distinction to another class of intangible assets - financial instruments. Financial instruments, like stocks, are without physical substance too, but are regulated under a different IFRS standard.

Common examples of IA are:

Patented technologies



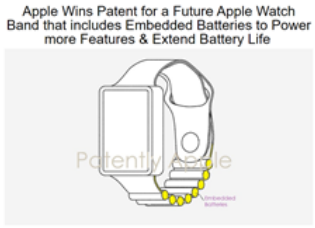
Trademarks, i.e. recognizable insignia, phrase, word, or symbol that denotes a specific product or **brand**.

Please note: 'trademark' and 'brand' are not interchangeable terms. While your brand represents your reputation and business in the public eye, a trademark legally protects those aspects of your brand that are unique and specific to your company [Source: upcounsel.com]. A brand name (e.g., Coca-Cola) is an intangible asset, too.

Licenses (e.g. a tax license)**, royalties, franchise agreements**

Computer software and **databases**

Patented technologies



Internet domains

Video and audiovisual materials (e.g. motion pictures, television programs)

Customer lists or customer data (e.g. Facebook's data on its users)

Evaluating a firm's potential for innovation

Our everyday's life is increasingly digitized and firms invest large amounts to develop new products and services. For example, **BMW invested 7.6 billion euros in research and development (R&D expenses in income statement) in 2024.**

However, the capitalized IA, which are disclosed under non-current assets in balance sheet, actually increased by 0.2 billion euros compared to 2023. In 2024, IA amounted to 20 bn. € or approximately 7.6% percent of total assets. The lower net increase in IA assets than R&D expense shows that most of R&D expenses could not have been capitalized. Moreover, capitalized R&D costs from prior periods need to be regularly depreciated/amortized (see extra line in P&L statement), thus increasing R&D expenses.

BALANCE SHEET FOR BMW GROUP AT 31 DECEMBER 2024

		Group		Automotive (unaudited supplementary information)		Motorcycles (unaudited supplementary information)		Financial Services (unaudited supplementary information)		Other Entities (unaudited supplementary information)	
in € million	Note	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
ASSETS											
Intangible assets	21	20,220	20,022	19,630	19,439	220	216	369	366	1	1
Property, plant and equipment	22	39,581	35,266	38,909	34,639	588	533	84	94	–	–
Leased products	23	48,838	43,118	–	–	–	–	57,249	50,415	–	–
Investments accounted for using the equity method	24	553	443	553	443	–	–	–	–	–	–
Other investments		1,099	1,197	14,662	14,697	–	–	25	28	23,187	23,084
Receivables from sales financing	25	55,149	50,517	–	–	–	–	55,299	50,657	–	–
Financial assets	26	834	1,387	315	588	–	–	192	256	471	643
Deferred tax	13	3,244	2,431	3,336	3,216	–	–	597	506	57	22
Other assets	28	1,827	1,537	2,061	2,296	18	18	2,906	2,852	41,499	35,249
Non-current assets		171,345	155,918	79,466	75,318	826	767	116,721	105,174	65,215	58,999
Inventories	29	24,387	23,719	22,372	22,121	919	905	1,096	693	–	–
Trade receivables	30	2,834	4,162	2,449	3,875	132	102	252	184	1	1
Receivables from sales financing	25	38,569	36,838	–	–	–	–	38,569	36,838	–	–
Financial assets	26	2,565	4,131	1,561	2,888	–	–	613	558	423	692
Current tax	27	1,316	1,199	715	911	–	–	154	102	447	186
Other assets	28	7,429	7,596	23,152	24,925	17	7	4,375	3,753	64,227	57,638
Cash and cash equivalents		19,287	17,327	14,853	13,590	21	36	3,103	3,090	1,310	611
Current assets		96,387	94,972	65,102	68,310	1,089	1,050	48,162	45,218	66,408	59,128
Total assets		267,732	250,890	144,568	143,628	1,915	1,817	164,883	150,392	131,623	118,127

As we can see, purely focusing on the balance sheet or income statement does not provide sufficient insights to evaluate a firm's research and development activities.

Moreover, for many firms, research and development expenditures do not lead to IA ("capitalized R&D expenses") but to expenses which are summarized under Cost of Goods Sold in the Income Statement (see below):

BMW Group cost of sales

in € million	2024	2023	Change in %
Manufacturing costs	75,680	82,549	– 8.3
Cost of sales relating to financial services business	30,277	27,764	9.1
thereof interest expense relating to financial services business	4,902	3,554	37.9
Research and development expenses	7,642	7,538	1.4
thereof amortisation of capitalised development costs	2,089	2,387	– 12.5
Expenses for service contracts, telematics and roadside assistance	2,885	2,780	3.8
Warranty expenditure	1,964	3,782	– 48.1
Other cost of sales	1,037	1,396	– 25.7
Cost of sales	119,485	125,809	– 5.0

Thus, in the case of BMW, **most research and development activities didn't lead to capitalized expenses (IA in balance sheet) and, thus, are recognized as expenses in the income statement. Those expenses lead to lower profits (and not to intangible assets).**

If a company could capitalize all research and development activities, the following effects on key ratios occur [examples]:

	100% capitalization	**100% expense**
Fixed asset structure [(IA + PPE + Leased assets) / Current assets	↑ [increase in IA, no change in current assets]	./. [no change in the numerator or denominator]
Golden balance sheet rule [Fixed assets / Total equity]	↑ [increase in fixed assets]	↑ [decrease in total equity]
Profit (current period)	↑ [capitalization of research expense in current period]	↓ [higher research expense]
Profit (future periods)	↓ [amortization of intangible assets in future periods]	↑ [no amortization in future periods]

On the next pages, you will learn to what extent firms may influence whether or not research and development leads to an intangible asset.

Research versus development phase

In the next video, Professor Ernstberger will outline why differentiating between research and development phase and, thus, differentiating between research and development costs is challenging.

Below, you find a summarized explanation of the legal requirements concerning the research and development phase.

Research phase: An entity **cannot demonstrate** that an intangible asset exists that will generate probable future economic benefits. Therefore, this **expenditure is recognized as an expense** when it is incurred (IAS 38.55)

Development phase: An entity can, in some instances, **identify an intangible asset** and **demonstrate that the asset will generate probable future economic benefits**. This is because the development phase of a project is further advanced than the research phase (IAS 38.58).

An IA will generate future economic benefits if the company (IAS 38.57):
(a) ... has the technical feasibility of completing the intangible asset so that it will be available for use or sale.
(b) ... has the intention to complete the intangible asset and use or sell it.
(c) ... has the ability to use or sell the intangible asset.
(d) ... can show how the intangible asset will generate probable future economic benefits. Among other things, the entity can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset.
(e) ... has adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.
(f) ... has the ability to measure reliably the expenditure attributable to the intangible asset during its development.

--> All six requirements must be fulfilled! If only one of these criteria is not fulfilled, the development activities are expensed.

Measurement of IA

The measurement of IA is similar to the measurement of property, plant and equipment.

Initial measurement

Initially, an intangible asset shall be **measured at cost.** Thereby, it depends if an IA is either purchased or self-generated (i.e. self-constructed). For purchased IA, the same principles as for tangible assets apply (please watch the videos in the tangible assets learning path for repetition purposes). For self-generated IA, only costs incurred during the development phase (see prior pages) are considered for initial measurement.

Subsequent measurement
For subsequent measurement of IA, IAS 38 offers two distinct approaches:

(1) **Cost model**: i.e. subsequent measurement at cost less any subsequent accumulated amortization and any subsequent accumulated impairment losses

(2) **Revaluation model**: i.e. subsequent measurement at fair value less any subsequent accumulated amortization and any subsequent accumulated impairment losses

These approaches are very similar to the subsequent measurement of Property, Plant and Equipment. However, there are three differences:

1) For IA we do not use the term depreciation but the term **amortization**. However, the concept is the same.

2) To apply the revaluation model, we need an active market. On an active market, identical items are frequently traded to provide reliable pricing information on an ongoing basis [IFRS 13]. **For IA, an active market is uncommon.** For example, in some jurisdictions, an active market may exist for freely transferable taxi licenses, fishing licenses or production quotas. An active market cannot exist for brands, newspaper mastheads, music and film publishing rights, patents or trademarks, because such assets are unique [IAS 38.78].

3) There are IA with a definite and **indefinite useful life**. Indefinite useful life indicates that there is no foreseeable limit to the period over which an IA is expected to generate new cash inflows [IAS 38.88]. However, indefinite is not equal to unlimited useful life! Examples of indefinite assets are trademarks because they do not end after a specified period of time (as patents do). In case of indefinite useful life, IAS 38 requires an impairment-only approach, i.e. no regular amortization, but impairment tests annually and upon indications (please watch the videos regarding asset depreciation and impairment in the tangible assets learning path for repetition purposes)

Initial and subsequent measurement - Case

Try to solve the following case. The solution is presented on the next slide.

Since 20X1, AlphaTUM AG invests 120 Tsd. € each year to develop a new product. Since the beginning of 20X3, they made major progress and are convinced to get the product ready for the market in 20X4. At the beginning of 20X4, AlphaTUM finalizes the product and applies for a patent, which is granted shortly after (patent duration = 4 years). There is no active market for the patent.

What are the booking entries for the periods 20X2 to 20X5? Please assume a straight-line amortization method.

Help for solving the case:

- Before capitalizing any development expenditures, you need to initially recognize them as expenses during the year and then recognize ("capitalize") them in the balance sheet at the end of the fiscal year as IA (by canceling the expenses made before).
- Using the cost model: amortization is recognized in the same way as depreciation for tangible assets (e.g., a machine).

Solution

To recap, self-generated intangible assets are not capitalized as long as it is not possible to explicitly differentiate between the research and development phases. In the given example, until 20X3 future economic benefits are not probable. Thus, until 20X3 it is not possible to capitalize any research expense. As of 20X3, all development expenses are capitalized.

As of 20X4, AlphaTUM AG must choose between the revaluation model and the cost model. In the given example, there is no active market. Thus, it is not possible to use the revaluation model. Instead, the IA is amortized over a 4-year period using the straight-line amortization method. There are no indications of a potential, additional impairment loss.

Booking entries are as follows:

20X2:

D: Research expense 120 Tsd. € C: Other assets: 120 Tsd. €

Please note: 'Other assets' is an asset-side T-account. Due to the limited scope of the example, we do not know which resources (i.e. assets) are used during the research process. Thus, we use 'Other assets' as a placeholder.

20X3:

D: Development expense 120 Tsd. € C: Other assets: 120 Tsd. €

D: IA 120 Tsd. € C: Development expense 120 Tsd. €

First, recognition of development expense and then capitalization of development expense.

20X4:

D: Amortization 30 Tsd. € C: IA 30 Tsd. €

Straight-line amortization over a 4-year period. Amortization = 120 Tsd. € / 4 = 30 Tsd.

20X5

D: Amortization 30 Tsd. € C: IA 30 Tsd. €

Comparison between IFRS and German GAAP

Since a reform of German GAAP in 2009, accounting for IA is similar to IFRS. The main differences between IFRS and German GAAP are summarized below.

	IFRS	**German GAAP**
Capitalization of self-generated IA	**Mandatory**, if activities occur in the development phase (and thus it is possible to clearly differentiate research and development phase) and future economic benefits are probable (i.e. the six criteria are fulfilled).	**Choice** to capitalize development costs or to recognize them as expenses in the income statement if it is possible to differentiate between the research and development phases.
Subsequent measurement	Cost or revaluation model. Impairment-only approach for IA with indefinite useful life.	Amortization over the expected useful life. In case of indefinite useful life, assumption of a 10 years duration. No revaluation at fair value.

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Capitalizing Research & Development: Signaling or Earnings Management?

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ABSTRACT This paper analyzes the capitalization of Research & Development (R&D) expenditures under International Financial Reporting Standards (IFRS). Discretionary R&D capitalization can be exercised by managers to signal private information on future economic benefits to the market. It can, however, also serve as opportunistic earnings management. We analyze a unique, hand-collected sample of highly R&D intensive German IFRS firms during 1998–2012. We find that market values are not associated with capitalized R&D for the overall sample, indicating that earnings management may be a concern. We identify firm-years for which R&D capitalization is possibly used for pushing their earnings above a specific threshold (e.g. analysts' forecasted earnings, prior year's earnings). Our results show that both the decision to capitalize and how much to capitalize are strongly associated with benchmark beating. Consistently, we find that market values are negatively associated with capitalized R&D for firms who are likely to use capitalization for benchmark beating (about one third of the overall sample). On the other hand, the market values R&D capitalization positively for well-performing firms, for which capitalizing does not matter to beat an earnings benchmark (about half of the overall sample). This finding is robust to controls for endogeneity, various deflators, and different measures for earnings management.

1. Introduction

The accounting for Research & Development (R&D) remains a controversial issue. While some argue that R&D expenditures are investments and should be capitalized (e.g. Lev & Sougiannis, 1996), others question the reliability of such information (e.g. Kothari, Laguerre, & Leone, 2002). The International Accounting Standards Board (IASB) prescribes capitalization when economic benefits can be demonstrated. However, other standard setters (e.g. Financial Accounting Standards Board (FASB)) fear possible earnings management and prefer the immediate expensing of R&D, implying that they believe 'the cost of possible misstatement to exceed the benefits of signaling' (Ahmed & Falk, 2006, p. 234). The extant literature has found conflicting evidence in different settings.

Proponents of R&D capitalization suggest that managers can use discretion to signal their private information about the expected success of R&D ventures and the related future benefits

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to the market (Abrahams & Sidhu, 1998; Oswald & Zarowin, 2007; Ritter & Wells, 2006). In some settings, capitalizing R&D has been found to be informative (e.g. Ahmed & Falk, 2006 under Australian generally accepted accounting principles (GAAP); Oswald & Zarowin, 2007 under UK GAAP). In other settings, research has found evidence that the discretion involved in R&D capitalization can be used for opportunistic earnings management, resulting in capitalization being uninformative (Cazavan-Jeny & Jeanjean, 2006; Markarian, Pozza, & Prencipe, 2008; Prencipe, Markarian, & Pozza, 2008).

While R&D capitalization was historically allowed on a discretionary basis in some countries under domestic GAAP (e.g. Australia, France, and the UK), R&D capitalization under IAS 38 is mandatory when meeting the restrictive conditions in IAS 38.57.[1] By imposing these restrictions, the IASB arguably reduces the discretion involved in R&D capitalization (Markarian et al., 2008; Matolcsy & Wyatt, 2006). The criteria in IAS 38.57 test for technical and commercial feasibility are intended to evaluate the likelihood that future economic benefits (FEBs) will flow to the firm as a consequence of the project. Applying such restrictive conditions would lead us to expect that, under International Financial Reporting Standards (IFRS), only development expenditures from those R&D projects, which are highly likely to be successful, are capitalized. However, since the application of these conditions requires managers to make judgment, R&D capitalization[2] under IAS 38 remains subject to managerial discretion and possible earnings management. In fact, the recognition criteria are almost identical to those in SFAS 86 (now ASC 350−40) for software development under US GAAP. Aboody and Lev (1998), Ciftci (2010), and Mohd (2005) analyze the determinants driving this decision and confirm the discretion involved. Since R&D can involve even more uncertainty than software development, we expect capitalization under IAS 38 to be subject to substantial discretion.

As Oswald and Zarowin (2007, p. 705) point out, 'whether or not capitalization provides information benefits to the market, resulting in more informative prices, is ultimately an empirical question'. So far, no empirical study that we are aware of has analyzed the trade-off between signaling and earnings management for R&D capitalization under IFRS. This paper seeks to fill this gap.

Our analysis is based on the 150 largest German publicly listed firms between 1998 and 2012. We choose the German setting for the following reasons. First, R&D is a significant activity for many German firms, which largely rely on R&D as a source of economic success. The average R&D intensity in our sample is 3.8%, which is high compared to the average R&D intensity of the German economy (2.5%) and the European average of 2% (OECD, 2009). Second, the accounting for R&D under IAS 38 is considered highly discretionary in Germany (Baetge & von Keitz, 2006; Leibfried & Pfanzelt, 2004). The application of the criteria for R&D

[1]IAS 38 prescribes a general expensing rule for research expenditures. Development expenditures need to be capitalized if the entity can demonstrate all of the following (IAS 38.57):
(a) the technical feasibility of completing the intangible asset so that it will be available for use or sale.
(b) its intention to complete the intangible asset and use or sell it.
(c) its ability to use or sell the intangible asset.
(d) how the intangible asset will generate probable future economic benefits. Among other things, the entity can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset.
(e) the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.
(f) its ability to measure reliably the expenditure attributable to the intangible asset during its development.

[2]Note that only development expenditures can be capitalized under IAS 38. Research expenditures generally have to be expensed. Development expenditures are only capitalized from the point in time when the criteria are met. Development expenditures which occurred before that date are expensed. For brevity, we refer to 'R&D capitalization' as the fact that some portion of the overall R&D expenditures is capitalized. Hence, 'capitalized R&D' in this context includes development expenditures only.

capitalization in IAS 38.57 has been one of the main areas of material misrepresentations detected by the German Financial Reporting Enforcement Panel (Meyer & Naumann, 2009). For example, firms within the same industry and with similar structures have capitalized very different percentages of R&D. We can therefore expect to find large variation in the application of the standard and that there is a need for the market to thoroughly analyze the underlying economic fundamentals.

In our first set of analyses, we study the determinants of R&D capitalization. In addition to variables that have been found relevant in prior literature (e.g. Oswald, 2008), we include measures for benchmark beating (e.g. analysts' forecasted earnings, prior year's earnings). We identify firm-years for which R&D capitalization is relevant in pushing their earnings above a specific threshold; that is, when the benchmark falls into the range between earnings assuming R&D expensing and earnings assuming R&D capitalization. We expect that firm-years falling within this range (the 'suspect group') may be more inclined to use R&D capitalization as a means for earnings management.

We find that the pressure to beat past year's earnings and analysts' forecast of earnings increases the probability of a firm capitalizing R&D in the current period. In addition, we also find that firms are capitalizing higher amounts of R&D when they have lower growth opportunities and higher leverage. This evidence is in line with the notion of firms opportunistically managing earnings via R&D capitalization. The findings are consistent for both the decision to capitalize and how much to capitalize.

Second, we analyze market prices regarding the question of how investors interpret R&D capitalization when earnings management is likely (the suspect group). For the overall sample, we find that the market does not price capitalized R&D. For the suspect group (about one third of the overall sample), we find that R&D capitalization is negatively associated with market values, while for the non-suspect firm-years it is not significantly priced by the market. When analyzing the 'non-suspect group' in more detail, we observe a positive association between R&D capitalization and market values for a subsample of firms that are performing well independent of the R&D accounting (positive earnings before R&D). Our results are robust to various sensitivity checks and controls for self-selection and endogeneity of the capitalization decision.

We contribute to the debate regarding the accounting for internally generated intangibles, an area where major differences between US GAAP and IFRS still exist. Our results show that the capitalization of R&D under IAS 38 is informative under certain conditions, but the presence of earnings management counteracts the signaling value of capitalization.

We also contribute to the literature on the consequences of earnings management. Prior studies have found evidence for both positive and negative consequences of benchmark beating (e.g. Athanasakou, Strong, & Walker, 2011; Bartov, Givoly, & Hayn, 2002; Herrmann, Hope, Payne, & Thomas, 2011; Hribar, Jenkins, & Johnson, 2006; Skinner & Sloan, 2002). Different responses to benchmark beating may be explained by the fact that some types of earnings management are more easily detected than others (Dechow, Ge, & Schrand, 2010; De Jong, Mertens, Van der Poel, & Van Dijk, 2014). De Jong et al. (2014) find that while analysts view all earnings management actions to reach a benchmark as value destroying, they are not able to unravel earnings management (Burgstahler & Eames, 2003; Eames & Kim, 2012). Our analysis provides a setting in which market participants seem to be able to distinguish between the cases of earnings management and signaling. We show that while R&D capitalization in the context of benchmark beating is punished by the market, investors seem to be able to identify cases of 'truthful' R&D capitalization.

Our findings also contribute to the literature on accounting choice. The research question analyzed is at the heart of the accounting choice literature: generally, accounting choice can be informative or self-serving. 'In practice, it is difficult to distinguish between these two situations, but it is the presence of such mixed motives that makes the study of accounting choice

interesting' (Fields, Lys, & Vincent, 2001, p. 259). Our study sheds light on this distinction and provides evidence for both fundamental and opportunistic drivers of R&D capitalization in conjunction with benchmark beating. Our findings have important implications for future studies: we establish that the market can identify cases of earnings management and acts accordingly, implying a need to control for the degree of earnings management when studying the informativeness of accounting choice.

The remainder of the paper is organized as follows. Theoretical background and research questions are provided in Section 2. Section 3 explains our research design. Section 4 describes the sample and presents the main empirical results. Concluding remarks are in Section 5.

2. Theoretical Background and Research Questions

2.1. R&D Capitalization and earnings management

Various studies provide evidence for the value relevance of R&D capitalization from different institutional settings where capitalization was permitted under national GAAP, pre-IFRS adoption. For example, Abrahams and Sidhu (1998), Ahmed and Falk (2006), and Ritter and Wells (2006) all demonstrate the value relevance of R&D capitalization for Australian firms; Smith, Percy, and Richardson (2001) for a sample of Canadian and Australian firms; Callimaci and Landry (2004) for Canadian firms; and Oswald and Zarowin (2007) for UK firms.

For other settings, the literature finds that managers use the discretion involved in R&D capitalization for opportunistic earnings management. For example, Cazavan-Jeny and Jeanjean (2006) find a negative association between capitalized R&D and stock prices in a sample of French firms and attribute the results to an opportunistic use of R&D capitalization. In addition, Cazavan-Jeny, Jeanjean, and Joos (2011) show that the decision to capitalize is associated with a negative or neutral impact on future performance. For an Italian sample, Prencipe et al. (2008) and Markarian et al. (2008) find that discretionary accounting for R&D is used as a tool for managing earnings, resulting in lower explanatory power of earnings. They attribute the negative coefficient on capitalized R&D to the fact that investors are concerned with, and react negatively to, capitalization of R&D. For a German sample, Dinh, Eierle, Steeger, and Schultze (2015) find that R&D capitalization under IAS 38 increases individual analyst forecast errors. For a US sample, Ciftci (2010) shows that the capitalization of software development under SFAS 86 (now ASC 350−40) reduces earnings quality.

In the earnings management literature, R&D is a prime example used for both real and accounting earnings management (e.g. Dechow & Skinner, 2000). Real earnings management exists in multiple forms, but the most frequently cited form is the reduction of discretionary spending on R&D, advertising and maintenance (Graham, Harveya, & Rajgopal, 2005). Several studies have analyzed how the capital market responds to reductions in R&D investments for meeting earnings goals (Baber, Fairfield, & Haggard, 1991; Bushee, 1998; Dechow & Sloan, 1991; García Osma & Young, 2009; Mande, File, & Kwak, 2000; Perry & Grinaker, 1994). For example, García Osma and Young (2009) find that earnings increases, accompanied by unexpected cuts in R&D spending, receive a lower valuation, depending on the perceived reason for the cut.

Real and accounting earnings management are used interchangeably by managers (Zang, 2012). Given that real earnings management is costly due to its negative effects on the future prospects of the firm, managers may prefer accounting earnings management (Bushee, 1998; Mande et al., 2000). By using discretionary accounting rather than discretionary spending, managers may be able to achieve the same results in a less costly manner. In the current study, we therefore focus on accounting earnings management related to benchmark beating, but control for real earnings management.