An analysis of the usefulness to investors of managers' fair value estimates of firm assets: Evidence from IAS 36 "Impairment of Assets" and IAS 40 "Investment Property"
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1 Introduction

1.1 Research motivation

1.1.1 Worldwide prominence of IFRS

The International Financial Reporting Standards (IFRS) set by the International Accounting Standards Board (IASB) have gained global importance over the last few years due to accounting regulation harmonization and the transparency requirements of capital markets (Schipper 2005). In 2005 publicly traded firms adopted IFRS in more than 100 countries, including countries of the European Union (EU) (Ball 2006). The Council of the EU adopted IFRS in June 2002. The adoption requires firms listed on EU stock exchanges to prepare consolidated financial statements in accordance with IFRS. These firms must have adopted IFRS no later than in the fiscal year starting in 2005 or if they reported financial statements under U.S. General Accepted Accounting Principles (GAAP), in 2007.¹ As a result, about 7,000 European firms are affected by the adoption of IFRS (Hoogendoorn 2006).

The IASB aims to promulgate one set of high-quality, globally accepted standards to enhance the comparability of operating performance across firms (IASB 2010). Thus, the IASB has been encouraging the U.S. Securities and Exchange Commission (SEC) to permit U.S. issuers of securities to apply IFRS instead of the U.S. GAAP issued by the U.S. Financial Accounting Standards Board (FASB). A first milestone was achieved in 2007 when the SEC removed the reconciliation requirements to U.S. GAAP for cross-listed firms that apply IFRS and are listed in the

¹ EU member states could allow listed firms that were additionally listed outside the EU to prepare their financial statements in accordance with U.S. GAAP until 2007 (Schipper 2005).
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Improving the quality of IFRS and U.S. GAAP are aims of the joint IASB–FASB projects. The joint projects intend to align IFRS and U.S. GAAP to form a single unit of global standards (Schipper 2005; Kothari et al. 2010). The SEC supports the convergence process and is considering direct incorporation of IFRS into the U.S. financial reporting regime (SEC 2010).

1.1.2 Fair value estimates

With the adoption of IFRS, fair value reporting became more pervasive than under local GAAPs and is likely to become increasingly important over the coming years (Schipper 2005; Ball 2006; Barth 2006; Cairns 2006). The U.S. FASB has also moved toward fair value accounting in the last decades but restricts upward adjustments to assets’ fair value to financial instruments only (Hitz 2007). The U.S. FASB has addressed concern about the faithful representation of fair value estimates of nonquoted assets that are based on managers’ judgments (Barth 1994; Barth and Landsman 1995; Cotter and Zimmer 2003).²

The fair value hierarchy of the U.S. FASB and the IASB reflects the degree of managers’ judgments in a descending order. Specifically, fair value measures, according to the Statement of Financial Accounting Standards (SFAS) 157 “Fair Value Measurements” and IFRS 13 “Fair Value Measurement,” are classified using a three-level hierarchy that

² In September 2010, the IASB and U.S. FASB completed their joint project on the objectives and qualitative characteristics of financial reporting incorporated in the financial frameworks of IFRS and U.S. GAAP. Within this project, the U.S. FASB and IASB substituted the term “faithful representation” for “reliability,” as they expect the former to capture more clearly than the latter the intended meaning that accounting information represents what it purports to represent (FASB 2010).
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depends on the availability of market data. Level one refers to quoted prices in active markets (marked-to-market). Level two prices are based on input components that are observable for other similar assets. Level three is based on inputs that cannot be observed in markets (marked-to-model) (FASB 2006; IASB 2011). Accordingly, the IASB and U.S. FASB categorize estimates of fair values into level two and level three of the fair value hierarchy.

Levels two and three fair values have caused much debate in recent years (Schipper 2005; Hitz 2007; Lapointe-Antunes et al. 2009) due to their potential misuse by managers, which has been observed in a number of accounting scandals (e.g., in the Enron scandal, see also Watts 2003). Thus, opponents of fair value accounting argue that managers can opportunistically use discretion when reporting operating income (e.g., Holthausen and Watts 2001; Watts 2003; Ramanna 2008; Kothari et al. 2010; Ramanna and Watts 2012). Notwithstanding this argument, fair value based estimates are less arbitrary and relatively more precise in portraying the economic picture of assets than historical cost measurements (Dietrich et al. 2001; Barth 2006; Herrmann et al. 2006).

In summary, assets and operating income based on IFRS are influenced increasingly by managers’ estimates of fair values. Use of fair value estimates in a firm’s financial statements represents a new measurement paradigm by replacing cost and transaction based accounting by market value and event based accounting (Herrmann et al. 2006; Penman 2007). In this dissertation, I conduct three standalone analyses of the usefulness to investors (and thus also to other financial statement users) of managers’ fair value estimates of firm assets.

First, I model the requirements of International Accounting Standard (IAS) 36 “Impairment of Assets” and analyze whether a firm’s reporting
environment affects managers’ use of discretion inherent in the requirements. Specifically, I examine which discretionary IAS 36 requirements are used opportunistically by managers in a weak reporting environment and whether a stringent reporting environment encourages managers to use discretion prudently in estimating IAS 36 fair values.

Second, I examine whether fair values reported under IAS 36 is informative to investors when reported in the absence of managers’ exploitation of discretion inherent in the impairment guidelines. Finally, I investigate whether fair values reported under IAS 40 “Investment Property” summarize information that is used by investors to value a firm’s equity base to a higher extent than historical cost accounting that includes impairments.

Before presenting in more detail the three standalone analyses in subsection 1.2, I outline the motivation to conduct these analyses in subsections 1.1.3 (IAS 36) and 1.1.4 (IAS 40).

1.1.3 IAS 36 “Impairment of Assets”

Under IFRS, firms are allowed or required to estimate levels two and three fair values for property, plant, and equipment, intangible assets, and investment properties. Whereas managers have the option to report fair values above historical cost (unrealized gains) for these assets in financial statements, they are required to report fair values when these assets are impaired. An impairment loss is to be reported in a firm’s financial statements when the book value of an asset is not recoverable (i.e., the book value is above the fair value). In this case impairment charges—the difference between the old and “new” book values (where the new book value is the current fair value)—are to be taken to the income statement (IASB 2003a, 2003b, 2004a, 2008).
Asset impairment charges and other items (e.g., restructuring charges) became more prevalent in the last decades of the 1900s (Elliott and Hanna 1996). The abolishment of amortization of goodwill and other intangible assets with indefinite lifetimes in 2004 by the IASB, and the global financial crisis of 2008–2009 further increased the influence of asset impairment losses in a firm’s income statements. Consequently, it is worthwhile to analyze the usefulness of IFRS asset impairments, as they are an important income statement component.

Impairments of tangible fixed assets (i.e., property, plant, and equipment, and investment property) and intangible fixed assets (i.e., goodwill and other intangibles, such as patents, software, and trademarks) are covered under IAS 36. IAS 36 requires an impairment test at least once a year for intangible assets with an indefinite life (e.g., goodwill) and for all tangible and intangible assets when indicators signal that they are impaired. An impairment test compares the book value with the recoverable amount, which is the higher of an asset’s fair value less cost to sell and its value in use. The value in use of an asset (or asset group) is estimated by discounting projected future net cash flows. As cash flows on individual assets are not easily identified, tangible and intangible assets are evaluated within cash generating units (CGUs); a CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets (IASB 2004a).

3 Before March 2004, IAS 38 “Intangible Assets” viewed goodwill and other intangible assets as having a useful life. Thus, they were to be amortized. According to IFRS 3 “Business Combinations,” goodwill acquired in a business combination has now an indefinitely useful life. Other intangible assets need to be analyzed to determine whether they generate unlimited periods of cash flows. In connection with IFRS 3 and IAS 38, IAS 36 requires an impairment test at least once a year for intangible assets with an indefinite life, but they are not subject to systematic amortization (IASB 2004a, 2004b, 2008).
The value in use of CGUs—predominantly applied by firms (see e.g., Beumer 2006; Heintges and Herre 2007; Carlin et al. 2010; Carlin and Finch 2011)—is based on level three fair values. That is, managers need to define CGUs, project future net cash flows from CGUs, and estimate discount rates that reflect the risk of the CGUs. Thus, there is substantial discretion in estimating the values in use of CGUs.

Managers can exploit discretion such that reports of impairment charges are avoided, resulting in an overstatement of assets in financial statements (e.g., Li et al. 2011; Li and Sloan 2011; Ramanna and Watts 2012). It has been suggested that an overstatement of assets can be curbed by a stringent reporting environment (Ball et al. 2000; Ball et al. 2003; Leuz et al. 2003; Kim et al. 2003). In chapter 2 of this dissertation, I provide evidence that a stringent reporting environment restricts a manager’s tendency to overstate a firm’s asset base by encouraging the manager either to adjust the asset base frequently or to report large impairment losses. Specifically, after modeling the guidelines of IAS 36, I find that in a weak reporting environment managers tend to identify CGUs opportunistically to mask impaired assets, and in a stringent reporting environment managers are induced to use discretion prudently to avoid the overstatement of assets.

Prior research finds that impairment losses in general provide little information about a firm’s expected future operating performance (e.g., Strong and Meyer 1987; Elliott and Shaw 1988; Francis et al. 1996; Bartov et al. 1998; Hirschey and Richardson 2002, 2003; Bens et al. 2011). The low informativeness of impairment charges can be attributable to managers’ opportunistic use of discretion (Watts 2003; Ramanna 2008; Ramanna and Watts 2012). In chapter 3, I provide evidence that impairment charges estimated in the absence of managers’ opportunistic behavior reduce only in part investors’ uncertainty about a firm’s asset quality (value) when
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investors are not well informed by analysts. When investors are well informed by analysts, my results imply that the information content of nonopportunistic impairment losses is completely anticipated. I argue that managers provide little or no new information to investors to reduce a firm’s costs, which can be in the interest of investors, as explained in more detail below. Thus, not only managers’ opportunistic behavior—that is likely of interest to managers only—can reduce the informativeness of impairment losses (as suggested by prior literature), but also managers’ cost considerations.

1.1.4 IAS 40 “Investment Property”

Upward adjustments of property, plant, and equipment (IAS 16 “Property, Plant and Equipment”), intangible assets (IAS 38 “Intangible Assets”), and investment properties (IAS 40) can be reported in financial statements under IFRS (fair value option) (IASB 2003a, 2003b, 2008). However, applying the revaluation (fair value) model for property, plant, and equipment, and actively traded intangibles is not common in practice (Christensen and Nikolaev 2009; Cairns et al. 2011). In particular, the requirements of IAS 38 that fair values of intangibles must be backed by market values are not easily satisfied due to the uniqueness of intangibles. Upward adjustments, however, are frequently observed in financial statements for investment properties (Christensen and Nikolaev 2009; Cairns et al. 2011), one of the largest asset classes (including own-occupied properties) in the world (Muller et al. 2011).[^4]

[^4]: IAS 40 defines investment properties as properties that are held and used for rental income and/or capital appreciation. While IAS 40 provides a fair value option, fair values are to be disclosed for investment properties when the historical cost model is applied. This is not required for property, plant, and equipment, and intangibles. Under the historical cost model, investment properties are to be depreciated and IAS 36 impairment charges are to be reported.
U.S. GAAP requires firms to apply the historical cost model for investment properties (PWC 2009). Thus, in theory and practice the accounting treatment of investment properties differs between firms that report under IFRS and firms that report under U.S. GAAP.

Under the U.S. GAAP historical cost model, a firm must report impairment losses (fair value decrements) for investment properties in accordance with SFAS 144 “Accounting for the Impairment or Disposal of Long-Lived Assets.” The guidelines of SFAS 144 for properties held and used are similar to those of IAS 36. A major difference exists in the definition of impaired assets. Whereas IAS 36 requires an impairment loss to be reported when discounted future net cash flows are below the book value, SFAS 144 impairment losses are triggered based on an analysis of nondiscounted future net cash flows. Yet, SFAS 144 impairment losses reported for held for sale investment properties are triggered by discounted future net cash flows (IASB 2004a; FASB 2001b).

In summary, the U.S. FASB requires firms to report fair value decrements of investment properties in financial statements through impairment charges to avoid overstating assets but forbids firms to report fair value increments (unrealized gains). That is, fair values of investment properties are estimated by managers based on their judgment and hence are subject to estimation errors (levels two and three fair values) that decreases their faithful representation (Fields et al. 1998; Danbolt and Rees 2008). Yet, if U.S. listed firms adopt IFRS in the foreseeable future, they will report presumably fair value increments for investment properties in financial statements.

in a firm’s financial statements when the property is impaired (IASB 2003a, 2003b, 2004a, 2008).
In chapter 4, I provide evidence that the concern of the U.S. FASB that levels two and three fair value appreciations are insufficiently faithfully represented to be capable of being decision useful (relevant) to investors is not justified. Fair value appreciations of investment properties reported by real estate firms in financial statements on average are more value relevant to investors than historical cost income. I also find that around the severe real estate crisis (2007–2009), unrealized losses are not more useful in explaining market fluctuations than impairments. Since in good times book values of investment properties are adjusted upward under the fair value model, the findings might imply that managers are reluctant to report large unrealized losses in bad times, decreasing the value relevance of unrealized losses over impairments. I argue that this compensates for the fact that in contrast to impairments, unrealized losses are likely reported immediately with the economic downward trend of the investment properties in a real estate firm’s financial statements and estimated in a routine fashion, as explained in more detail below.

1.2 Research summary including objectives and contributions

1.2.1 General overview

In this dissertation, I conduct three standalone capital market based analyses of the usefulness to investors of managers’ fair value estimates. My methodology to conduct the three studies is based on positive accounting research. I use a quantitative approach to carry out my research. Thus, in all

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5 Value relevance of fair value estimates suggests that they explain share prices and/or share price returns and hence are capable of being decision useful (relevant) to investors. When fair values are sufficiently faithfully represented, they should be value relevant to investors (e.g., Barth et al. 2001).

6 Capital market research is any study that analyzes the usefulness of accounting information (including fair values) to security market participants who are the major focus of my studies.
three studies, I develop hypotheses and relate them to econometric regressions that test the hypotheses.

The first two studies outlined in chapters 2–3 are conducted in a European setting and cover a post-IFRS period from 2006 to 2010. I use a large sample of European countries to test drivers and the informativeness of IAS 36 impairments reported for CGUs in financial reports. This supplements prior studies that either focused on U.S. GAAP (e.g., Francis et al. 1996; Riedl 2004; Boone and Raman 2007; Bens et al. 2011; Muller et al. 2012) or reported evidence from a single asset (e.g., IAS 36 goodwill impairments: Knauer and Wöhrmann 2012) or a single country (Australia: Cotter et al. 1998; Vanza et al. 2011). The third study, presented in chapter 4, focuses on U.S. real estate firms—applying the historical cost model—and U.K. real estate firms—using the fair value model for investment properties—and a time period from 2005 to 2011. To my knowledge, this is the first study to apply a sample of U.S. GAAP historical cost income and IFRS fair value based income reported by common law countries for investment properties to test their relative usefulness in explaining market fluctuations.

Figure 1.1 provides an overview of the dissertation by exhibiting the three research questions that are addressed in chapters 2–4. The first two research questions are linked to IAS 36 and represent the first two empirical studies (chapters 2–3 of the dissertation). The third research question is based on IAS 40 and represents the third study (chapter 4 of the dissertation).
Specifically, in chapter 2, I examine the impact of the reporting environment on managers’ use of discretion in defining CGUs and estimating the value in use of the defined CGUs. The research objectives of chapter 2 are to analyze whether managers are motivated to use discretion inherent in IAS 36 opportunistically (nonopportunistically) and aggressively (prudently) in a weak (stringent) reporting environment. By using discretion opportunistically and aggressively, information about impaired assets is likely not provided to investors in a timely manner and assets are overstated. This is not aligned to the intended purpose of IAS 36 which is to avoid an overstatement of assets.

Prior studies indicate that discretionary asset impairments are aligned to economic factors, but also to managers’ desire to avoid reporting impairment losses (bad news) in financial statements (e.g., Francis et al.)
1996; Cotter et al. 1998; Riedl 2004; Beatty and Weber 2006; Boone and Raman 2007; Vanza et al. 2011; Li et al. 2011; Li and Sloan 2011; Ramanna and Watts 2012). My research in chapter 2 supplements that literature by providing further evidence on managers’ use of discretion in impairment reporting.

By modeling the IAS 36 impairment guidelines, I am able to analyze which guidelines are opportunistically used by managers in a weak reporting environment. In addition, by controlling for the IAS 36 impairment guidelines, I am able to examine whether discretion is used prudently in a stringent reporting environment.

An impact of the reporting environment on managers’ use of discretion in estimating impairments reduces the comparability of operating performance across firms and time periods. Increasing the comparability of firms’ operating performance is one of the IASB’s major goals (IASB 2010). Thus, this research should be of interest to the research community, standard setters, accountants, and users of financial statements.

In chapter 3, I analyze the informativeness of impairment charges of CGUs that are reported nonopportunistically in a firm’s financial statements. The research objective of chapter 3 is to examine whether IAS 36 impairment charges estimated in the absence of managers’ exploitation of discretion reduce information asymmetry between managers and investors.

Contemporaneous research finds that managers tend to exploit the discretion inherent in impairment guidelines by estimating the value of assets opportunistically when issuing financial statements (e.g., Zucca and Campbell 1992; Francis et al. 1996; Riedl 2004; Beatty and Weber 2006). As a result, impairment charges often provide little information to investors (Watts 2003; Ramanna 2008; Ramanna and Watts 2012). It is, however, not
well understood whether factors other than managers’ opportunistic behavior affect the informativeness of impairment losses to investors.

When managers nonopportunistically report expectations about a firm’s future earnings, private information about the quality of assets should be released in a timely manner. Yet, the provision of timely and qualitative information about impaired assets engenders costs to a firm (through the direct cost of impairment tests and the disclosure of proprietary information) that is ultimately borne by investors. Thus, the low informativeness of impairment losses might not be attributable only to managers’ opportunistic behavior, but can also reflect managers’ cost considerations. Whereas managers’ opportunistic behavior is detrimental to investors, managers’ cost considerations can benefit investors. Thus, reducing the informativeness of impairment losses might be aligned to investors’ interest when at the same time a firm’s costs are reduced.

This analysis aims to determine whether the informativeness of impairment charges is reduced by managers’ cost considerations. This is the first research (to my knowledge) that includes managers’ cost considerations in producing and disseminating information about a firm’s asset quality to investors, thus, the findings should interest the research community, standard setters, accountants, and users of financial statements.

In chapter 4, I compare the value relevance of the historical cost model that requires firms to report fair values of investment properties when impaired (downward adjustments only) and the fair value model that allows upward adjustments (unrealized gains) and downward adjustments (unrealized losses) to the fair value of investment properties. The research objective of chapter 4 is to analyze whether fair value based income for investment properties is sufficiently faithfully represented to be capable of being more decision useful (relevant) to investors than historical cost
income including impairment charges. To compare the usefulness of both models, I apply a value relevance study. Value relevance of accounting data implies that the data summarize information, regardless of the source, that is used by investors in valuing a firm’s net assets (e.g., Barth et al. 2001). This concept is to some extent aligned to the concept of relevance defined by the U.S. FASB and IASB. According to the definition of the U.S. FASB and IASB, an accounting amount is relevant if it is sufficiently faithfully represented to be “capable” of being decision useful (relevant) to investors (FASB 2010; see also Sloan 1999; Barth et al. 2001; Herrmann et al. 2006). As the U.S. FASB and IASB work together toward greater convergence between their accounting requirements and their accounting models for investment properties differ markedly, the results of this study might be of particular interest to the standard setters.

In summary, the focus of the dissertation is to analyze the usefulness to investors of managers’ fair value estimates that are based on two standards of the IASB: IAS 36 and IAS 40. In subsections 1.2.2–1.2.4, I describe the three studies presented in chapters 2–4 in more detail.

1.2.2 Overview of research presented in chapter 2

In chapter 2, I model the IAS 36 requirements. Whereas prior studies relate impairment charges to economic returns and asset (or equity) risk (Francis et al. 1996; Riedl 2004; Boone and Raman 2007; Cotter et al. 1998; Vanza et al. 2011), I propose and validate comprehensive determinants that should drive impairment losses systematically with respect to IAS 36 requirements. Subsequently, I examine whether after controlling for IAS 36 requirements, a stringent reporting environment curbs managers’ overstatement of assets. The stringent reporting environment is captured by three groups: (i) strict country-level enforcement systems, (ii) periods of intense scrutiny over a
firm’s financial reporting, and (iii) firm-specific determinants that increase
the quality of accounting data.

A stringent reporting environment should encourage managers to use
discretion in identifying CGUs, projecting CGUs’ future net cash flows, and
estimating CGUs’ discount rates systematically and/or prudently. That is, in
a stringent reporting environment a firm’s financial reporting is carefully
scrutinized by, for instance, regulators, analysts, and/or auditors.

Accordingly, an overstatement of a firm’s asset base is likely to be
identified, possibly increasing managers’ and firms’ risk of litigation; thus,
managers tend to understate rather than overstate assets to avoid litigation
(see e.g., Ball et al. 2000; Ball et al. 2003; Kim et al. 2003). Therefore, I
expect that managers are more likely to report impairment charges in a
firm’s financial statements in a stringent reporting environment than in a
weak reporting environment. I use a probit regression to test my hypothesis.
Results of the probit regression should show that all three groups that
capture a stringent reporting environment increase the occurrence of
impairment reports.

Subsequently, I analyze whether managers are encouraged by a
stringent reporting environment to apply IAS 36 requirements
systematically (second analysis in chapter 2) and/or prudently (third
analysis in chapter 2) to avoid overstating assets. The second analysis will
reveal which element(s) of the value in use approach set forth in IAS 36 are
used opportunistically by managers in a weak reporting environment to
mask impaired assets. Based on descriptive results, prior literature suggests
that some managers opportunistically define CGUs and/or aggressively use
low discount rates for CGUs to mask impaired assets (Finch 2006;
Ramanna 2008; Carlin and Finch 2009; Carlin et al. 2010; Petersen and
Plenborg 2010; Carlin and Finch 2011; Ramanna and Watts 2012). I do not
predict which element(s) of the discretionary requirements are exploited by managers in a weak reporting environment. I expect, however, that managers report impairment charges more systematically in a stringent reporting environment than in a weak reporting environment to avoid an overstatement of a firm’s asset base that is likely to be detected in a stringent reporting environment.

The third analysis will reveal whether a stringent reporting environment encourages managers to release bad news about a firm’s asset quality earlier rather than later (or not at all). In a stringent reporting environment managers should be motivated to estimate impairment losses prudently because the estimation of level three fair values for CGUs is more an art than a science and is subject to error (see also Hoogendoorn 2006; Petersen and Plenborg 2010) that might cause a firm’s asset base to be overstated. An overstatement of assets can increase firms’ and managers’ risk of litigation, particularly in a stringent reporting environment (see e.g., Ball et al. 2000; Ball et al. 2003; Kim et al. 2003). To reduce risk of litigation in a stringent reporting environment, I expect that managers apply IAS 36 requirements prudently, which can lead to an understatement of assets.

To find evidence for my second and third hypotheses, I construct an index that captures an increasingly stringent reporting environment (i.e., I add determinants that are summarized in the three groups that facilitate stringent reporting environments). Next, I interact this index with the determinants of impairments that capture the IAS 36 requirements. The interacting variables test whether the stringency of the reporting environment affects manager’s exploitation of the element(s) of the IAS 36 requirements. The results of the probit regression should show that the occurrence of impairment charges is systematically aligned to IAS 36
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guidelines in an increasing fashion to the stringency of the reporting environment. This part of research adds to our knowledge of whether a stringent reporting environment induces managers to apply IAS 36 requirements systematically to avoid an overstatement of assets and which part of the IAS 36 requirements are used opportunistically by managers in a weak reporting environment.

Using the constructed index on a standalone basis tests whether a stringent reporting environment induces managers to define more rather than fewer CGUs and estimate lower rather than larger values in use of the identified CGUs to avoid overstating assets. Accordingly, the results of the probit regression should show that the occurrence of impairment charges increases as the stringency of the reporting environment increases. This part adds to our knowledge of whether a stringent reporting environment induces managers to apply IAS 36 requirements prudently to avoid an overstatement of assets.

Finally, I examine in chapter 2 whether a stringent reporting environment impacts the magnitude of impairment charges. The move to a more stringent reporting environment might induce managers to report large impairment charges to account for previously unaccounted economic losses. In contrast, a steady stringent reporting environment can result in reporting small amounts of impairment charges in a firm’s financial statements, which would indicate that the asset base is frequently adjusted. I leave as an open empirical question in which direction determinants that capture a stringent reporting environment affect the magnitude of impairment losses.

Using impairers only and applying an ordinary least squares (OLS) regression, I expect the magnitude of impairment charges is affected by determinants that facilitate stringent reporting environments. The final analysis of chapter 2 helps to identify how stringent reporting environments
influence the magnitude of (nonzero) impairment charges and curb managers’ tendencies to overstate the asset base.

1.2.3 Overview of research presented in chapter 3

Prior studies analyzed the informativeness of impairment losses as reported (e.g., Strong and Meyer 1987; Elliott and Shaw 1988; Francis et al. 1996; Bartov et al. 1998; Hirschey and Richardson 2002, 2003; Bens et al. 2011). Yet, the informativeness of nonopportunistic impairment losses is not well understood. I propose a method to identify nonopportunistic impairments. By identifying nonopportunistic impairment losses, I am able to shed light on whether factors other than managers’ exploitation of discretion affect the (decision) usefulness of asset impairments to investors.

Besides exploiting the discretion inherent in IAS 36 requirements, managers may consider direct and indirect costs of producing and disseminating information about a firm’s asset quality (value) to investors. Impairment tests are costly to implement. To reduce the direct costs, managers might conduct impairment tests for all CGUs during the year end external audit and internal budgeting process (see also Elliott and Shaw 1988; Zucca and Campbell 1992). As a result, nonopportunistic impairment charges are reported at the fiscal year end, irrespective of the time of year that economic losses trigger asset impairments.

The disclosure of sensitive data to competitors in financial statements imposes indirect (proprietary) costs to a firm. To reduce these proprietary costs, managers might reduce the quality of disclosures.

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7 Impairment charges are defined as nonopportunistic when the following three conditions are satisfied: impairment losses are (1) reported along with fiscal year negative returns (proxy for economic losses), (2) reported by a firm that operates at least two CGUs if the firm’s market-to-book ratio (MtB) before impairments is above 1 at the fiscal year end (this condition is relaxed if the MtB before impairments is equal to or below 1), and (3) approved by large auditors.
(information quality) about impaired assets (see also e.g., Petersen and Plenborg 2010; Carlin and Finch 2011). In summary, the reduction of direct costs and indirect costs maintains a firm’s fiscal year earnings (benefiting the investor) but delays the provision and reduces the quality of information about impaired assets (depriving the investor).

To analyze the timeliness and the quality of information provided by nonopportunistic impairments, I use high and low analyst coverage environments. In a high analyst coverage environment investors are well informed in a timely manner about a firm’s asset quality (Bens et al. 2011; Muller et al. 2012; see also Brennan et al. 1993). That is, analysts act as intermediaries between firms and investors by processing market, industry, and firm data and disseminating the processed data to investors (Lang and Lundholm 1996; Barker 1998; Piotroski and Roulstone 2004). Thus, in a high analyst coverage environment the information content of nonopportunistic impairment losses should be anticipated during the fiscal year when the losses are reported with a delay at the end of the fiscal year (Bens et al. 2011; Muller et al. 2012). Consequently, the use of a high analyst coverage environment enables me to provide evidence on whether nonopportunistic impairments charges are reported in a firm’s financial statements in a timely manner.

In a low analyst coverage environment investors are not well informed by analysts about a firm’s asset quality. That is, available market, industry, and firm data that indicate an impairment of assets are not thoroughly processed by analysts. Accordingly, when nonopportunistic impairments are reported with a delay in a firm’s annual financial statements, investors’ uncertainty about a firm’s asset quality should increase during the fiscal year in a low analyst coverage environment.
In a low analyst coverage environment investors’ uncertainty should decline through reports of nonopportunistic impairment charges, even when they are reported in a nontimely manner at the fiscal year end. That is, investors tend to focus on managers’ reports of impaired assets when the analyst coverage environment is low (see Botosan 1997).

The use of a low analyst coverage environment enables me to provide insight into the information quality of impairment charges released by managers in financial statements. I expect that in a low analyst coverage environment investors’ uncertainty increases during the fiscal year (as discussed previously). If fiscal year end reports of nonopportunistic impairments only partially eliminate the uncertainty, this indicates that the information quality of the nonopportunistic impairments is low.

To test these hypotheses, I use an OLS regression that relates the bid-ask spread capturing the construct of information asymmetry to nonopportunistic impairment losses reported in low and high analyst coverage environments. A decline of the bid-ask spread indicates that investors’ uncertainty about a firm’s asset quality decreases. Accordingly, such a decline should be observed in a high analyst coverage environment before nonopportunistic impairment losses are reported in a firm’s financial statements and in a low analyst coverage environment through reports of impairments. An increase of the bid-ask spread signaling an increase of investors’ uncertainty about a firm’s asset quality should be found before nonopportunistic impairments are reported in a firm’s financial statements and throughout the reporting year of accounting data in a low analyst coverage environment.

This study generates knowledge about whether managers trade-off the benefit of providing timely and qualitative information about impaired assets for the benefit of cost reductions derived from delaying and reducing
the quality of the information. My research supplements prior studies (e.g., Strong and Meyer 1987; Elliott and Shaw 1988; Francis et al. 1996; Bartov et al. 1998; Hirschey and Richardson 2002, 2003; Bens et al. 2011; Watts 2003; Ramanna 2008; Ramanna and Watts 2012) by examining whether besides managers’ opportunistic behavior, managers’ cost considerations—that might be in the interest of investors—reduce the informativeness of impairment losses.

1.2.4 Overview of research presented in chapter 4

In chapter 4, I use U.S. and U.K. real estate firms that are highly invested in investment properties to test my hypotheses. While U.S. real estate firms apply the historical cost model under U.S. GAAP to report the financial status of investment properties, U.K. real estate firms use the fair value model under IFRS. By comparing the value relevance of the fair value model with the historical cost model for investment properties, I assess the relative value relevance of impairment losses versus unrealized losses, which is not well understood.

I follow prior literature that suggests that the fair values of investment properties reported in financial statements are at least vaguely representative of the economic values of the investment properties whereas the historical costs of these properties are to a high extent arbitrary (see Dietrich et al. 2001; Barth 2006; Herrmann et al. 2006). Accordingly, I predict that fair value increments for investment properties are sufficiently faithfully represented in financial statements and are thus more value relevant to investors than historical cost income.

When fair value increments are represented sufficiently faithfully to be value relevant, the usefulness of unrealized losses in explaining market fluctuations should be higher than the usefulness of impairment losses.
Under historical cost accounting, fair value increments are not recognized. Thus, before an impairment loss is triggered in a downward trend of an investment property’s value, unrecognized fair value increments of the investment property need to be absorbed. As a result, even in severe real estate crises, it is possible that impairments are either not triggered for all investment properties that suffer economic losses or that the reported impairment charges do not fully capture the economic losses of the impaired properties. In addition, impairment tests are likely to be conducted in a nonroutine fashion for which the valuation process still needs to be established and audited (Goncharov et al. 2013). In contrast, under the fair value model, fair value increments of an investment property are recognized. Thus, unrealized losses are reported immediately with the downward trend of the investment property’s value in a real estate firm’s financial statements and possibly estimated in a routine fashion. Accordingly, I expect that unrealized losses are capable of being more decision useful (relevant) to investors than impairment charges. Taken together, I predict that fair value increments and fair value decrements reported for investment properties are more useful in explaining market fluctuations than historical cost income including impairment losses.

To test my hypotheses, I use hand collected impairment and fair value data on investment properties. Based on the data, I apply value relevance regressions. That is, I relate share prices and share price returns to impairments (and depreciation) or unrealized gains and unrealized losses. I then compare the explanatory power (adj. R²’s) of the value relevance regressions for each of five subsamples: (1) historical cost income excluding impairments, (2) historical cost income including impairments, (3) fair value based income related to unrealized gains, (4) fair value based income related to unrealized losses, and (5) fair value based income related
to both unrealized gains and unrealized losses. Comparing the explanatory power across the five subsamples enables me to infer the relative value relevance of historical cost income including impairments versus fair value based income.

Specifically, the research platform enables me to provide evidence on whether unrealized gains are sufficiently faithfully represented to sustain their value relevance to investors over historical cost income. In addition, I am able to analyze whether unrealized losses convey more value relevant information to investors than impairments, and whether fair value based income is of higher value relevance than historical cost income.

To my knowledge, this is the first analysis that contrasts the value relevance of SFAS 144 impairment charges with IAS 40 unrealized gains and IAS 40 unrealized losses on investment properties. In addition, whereas I analyze the relative usefulness of the U.S. GAAP historical cost model versus the IAS 40 fair value model in explaining market fluctuations, previous research examined the usefulness of (i) voluntarily disclosed fair values in a setting in which assets additionally are depreciated and written-off (Fields et al. 1998) and (ii) mandatorily reported fair values in the pre-IFRS period in which no other property adjustments (i.e., depreciation, impairments, and unrealized gains/losses) are taken to the income statement (Danbolt and Rees 2008).

1.3 Structure of the remainder of the PhD dissertation

In chapter 5, I present a summary and the conclusions of the dissertation. The dissertation closes with a Dutch summary of the dissertation.