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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5 Summary and conclusions

5.1 Overview

IFRS financial statements are released by firms worldwide, including firms in the EU. Broadly speaking, the application of IFRS increases a firm’s use of fair value accounting over local GAAP. Thus, managers’ estimates of a firm’s expected future operating performance have become an important component in income statements (Schipper 2005; Ball 2006; Barth 2006; Cairns 2006). This has changed the measurement paradigm from realized income to unrealized income (Herrmann et al. 2006; Penman 2007). This dissertation examines the usefulness to investors of managers’ fair value estimates based on two standards of the IASB, IAS 36 “Impairment of Assets” and IAS 40 “Investment Property.”

In this chapter, I present the summary and conclusions of my three empirical analyses outlined in research chapters 2–4. This chapter is organized as follows. In section 5.2, I provide an overview of the dissertation including research objectives, contributions to the literature, and findings of the three studies. The research questions that motivated the three analyses are presented in subsection 5.2.1. Summaries of the two studies presented in chapters 2 and 3 on IAS 36 impairment losses are provided in subsections 5.2.2 and 5.2.3, respectively. A summary of the study outlined in chapter 4 on IAS 40 fair values is provided in subsection 5.2.4.

The implications of the research are discussed in section 5.3. In section 5.4, I present limitations of the research and suggest avenues for future investigation. General limitations and opportunities for future research are provided in subsection 5.4.1. In subsections 5.4.2–5.4.4, I
discuss limitations and directions for future research that are specific to the three studies.

5.2 Summary of the dissertation

5.2.1 Research questions

I conduct three standalone capital market based studies. Accordingly, I address three research questions that are tackled by a quantitative approach. The three research questions addressed in research chapters 2–4 are outlined below:

1. Research chapter 2: Does the reporting environment impact on managers’ use of discretion in applying impairment guidelines?

2. Research chapter 3: Are impairment losses that are reported in the absence of managers’ exploitation of discretion informative to investors?

3. Research chapter 4: Is fair value based income sufficiently faithfully represented to be more value relevant to investors than historical cost income including impairments?

The first two research questions are related to IAS 36. The third research question is based on IAS 40. In the following, I summarize my research study by study (chapter by chapter).

5.2.2 Summary of research presented in chapter 2: IAS 36

“Impairment of Assets”

Whereas reporting fair value increments of tangible and intangible fixed assets in IFRS financial statements is optional and to some extent restrictive, reporting fair value decrements below historical cost book values (i.e.,
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impairment losses) of these assets is required according to IAS 36 (IASB 2003a, 2003b, 2004a, 2008). Estimates of IAS 36 impairment losses of tangible and intangible fixed assets are in general based on discounted projected future net cash flows (i.e., the estimated value in use) of a firm’s identified CGUs and a comparison of the derived value in use of each identified CGU with its book value (impairment test) (IASB 2004a). Thus, the estimation procedure involves substantial discretion in identifying CGUs, projecting CGUs’ future net cash flows, and estimating CGUs’ discounts rates.

Managers might exploit discretion to prevent reporting impairment losses (bad news about a firm’s asset quality) in a firm’s financial statements or they might apply impairment guidelines systematically to avoid an overstatement of a firm’s asset base (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). In chapter 2, I supplement those studies by analyzing whether the reporting environment impacts managers’ use of discretion in applying IAS 36 requirements.

The objective of this study is to examine which element(s) of the value in use approach managers exploit in a weak reporting environment to overstate a firm’s asset base. In this context, I examine whether a stringent reporting environment restricts managers’ exploitation of discretion to mask impaired assets. Another objective of this study is to analyze whether managers are encouraged to use discretion prudently in a stringent reporting environment. When discretion is used nonopportunistically and prudently, it is likely that assets would not be overstated, an outcome aligned with the intended purpose of IAS 36. Finally, I examine how an overstatement of assets is avoided in a stringent reporting environment. That is, a stringent
reporting environment can encourage managers to report large impairments or frequent impairments so that assets are not overstated.

In contrast to previous research that focused on noncomprehensive systematic determinants of impairments (Francis et al. 1996; Riedl 2004; Boone and Raman 2007; Cotter et al. 1998; Vanza et al. 2011), I start my analysis by identifying determinants of impairment losses that capture the elements of the value in use approach. The determinants are identified to show that European firms on average report impairment losses systematically (i.e., in accordance with IAS 36 requirements). Subsequently, the determinants are applied as control variables.

After controlling for IAS 36 requirements, I find that in a stringent reporting environment reports of impairments in financial statements are more likely to occur than in a weak reporting environment. In a stringent reporting environment a firm’s financial reporting is carefully scrutinized by, for instance, regulators, analysts, and/or auditors so that an overstatement of assets is likely to be detected. As a result, managers’ and firms’ risk of litigation presumably increases so that managers understate rather than overstate a firm’s asset base in a stringent reporting environment (see e.g., Ball et al. 2000; Ball et al. 2003; Kim et al. 2003). Thus, my results suggest that a stringent reporting environment curbs managers’ tendency to overstate the asset base, which supplements the findings in Vanza et al. (2011).

Vanza et al. (2011) find (unexpectedly) that investors’ uncertainty of impairers’ asset quality is lower than investors’ uncertainty of nonimpairers’ asset quality. This suggests that managers are not motivated by investors’ uncertainty about a firm’s asset quality to report impairment charges in financial statements. My findings provide evidence that managers are
encouraged to impair CGUs in a stringent reporting environment in which a firm’s financial reporting is carefully scrutinized.

Specifically, I find that managers report impairment losses more systematically in a stringent reporting environment than in a weak reporting environment. I provide evidence that in a weak reporting environment managers define CGUs opportunistically to mask impaired assets. For instance, CGUs can be defined opportunistically by defining fewer CGUs than required to establish CGUs with (large) unrecognized economic values. As impaired assets can be hidden in CGUs with (large) unrecognized economic values, reports of impairment charges (i.e., bad news about a firm’s asset quality) can be prevented in a firm’s financial statements. As a result, a firm’s asset base is opportunistically overstated. My findings suggest that this is a common practice in a weak reporting environment and that a stringent reporting environment curbs managers’ opportunistic use of discretion in overstating the asset base. My findings supplement prior literature that finds, based on descriptive results, that some managers opportunistically define CGUs and/or aggressively use low discount rates for CGUs to overstate a firm’s asset base (e.g., Finch 2006; Carlin et al. 2010; Petersen and Plenborg 2010; Carlin and Finch 2011; Ball et al. 2000; Ball et al. 2003; Kim et al. 2003).

Additionally, I find that a stringent reporting environment encourages managers to use discretion prudently in defining CGUs and estimating the value in use of the defined CGUs. Thus, a stringent reporting environment tends to induce managers to release impairment charges (bad news about a firm’s asset quality) at an early stage of the decline in value of the firm’s asset base so that an overstatement of assets is avoided. The estimation of impairment charges is more an art than a science, thus, impairment losses are subject to estimation errors (see also Hoogendoorn
This increases the possibility that assets are overstated, which can increase managers’ and firms’ risk of litigation. To decrease the likelihood of an asset overstatement, I argue that in a stringent reporting environment managers estimate a firm’s asset base prudently (see also Ball et al. 2000; Ball et al. 2003; Kim et al. 2003).

Furthermore, I analyze the effect of the reporting environment on the magnitude of impairment losses to provide further evidence on how managers prevent overstating the asset base. A stringent reporting environment can encourage managers to report large amounts of impairment losses in a firm’s financial statements to account for previously unaccounted economic losses. Alternatively, such an environment might induce managers to adjust the asset base frequently, resulting in reports of small amounts of impairment charges in financial statements. I find that managers are encouraged to report large amounts of impairment charges in periods of intense scrutiny over a firm’s financial reporting. In contrast, firm-specific determinants related to a stringent reporting environment induce managers to report small amounts of impairment losses in a firm’s financial statements. Some evidence is found that managers understate assets, in particular, when the country-level enforcement system is strict, consistent with the view of prior studies (Ball et al. 2000; Ball et al. 2003). Overall, the findings in chapter 2 suggest that managers’ various uses of the discretion inherent in the guidelines set forth in IAS 36 reduce the comparability of operating performance across firms and time periods.
5.2.3 Summary of research presented in chapter 3: IAS 36

“Impairment of Assets”

Overall, prior studies find that impairment losses provide little information to investors (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). Managers’ opportunistic use of discretion often reduces the informativeness to investors of impairment charges (Watts 2003; Ramanna 2008; Ramanna and Watts 2012). The research objective of my second study outlined in chapter 3 is to explore whether IAS 36 impairment losses estimated in the absence of managers’ opportunistic behavior are informative to investors, an aspect of capital markets that is not well understood.

After identifying reports of nonopportunistic impairment charges, I analyze their informativeness in 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) because analysts thoroughly process available market, industry, and firm data and disseminate the processed data to investors (Lang and Lundholm 1996; Barker 1998; Piotroski and Roulstone 2004). In a low analyst coverage environment investors tend to rely on managers’ reports of a firm’s asset quality (see Botosan 1997).

I find that the information content of nonopportunistic impairment losses is fully anticipated in a high analyst coverage environment. This indicates that in a high analyst coverage environment nonopportunistic impairment charges are reported with a delay in a firm’s annual financial statements. In addition, I find that when investors are not well informed
about a firm’s asset quality (i.e., in a low analyst coverage environment),
investors’ uncertainty about a firm’s asset quality increases (i.e., the
information asymmetry between managers and investors increases) before
nonopportunistic impairment charges are reported in a firm’s annual
financial statements. This indicates that nonopportunistic impairment
charges are reported with a delay and since available data are not
thoroughly processed by analysts, investors’ uncertainty about a firm’s asset
quality increases. Finally, I find that the increase in investors’ uncertainty is
only partly eliminated through reports of nonopportunistic impairment
losses in a low analyst coverage environment. This suggests that reports of
nonopportunistic impairment charges contain information and investors rely
on reports of managers’ expectations about a firm’s future operating
performance in a low analyst coverage environment (see also Botosan 1997).
Yet, the results also indicate that nonopportunistic impairment losses
provide limited information to investors.

These findings supplement results in Vanza et al. (2011), Bens et al.
(2011), and Muller et al. (2012). Vanza et al. (2011) show that in an
Australian setting IAS 36 impairment charges of CGUs decrease investors’
uncertainty on average. My results imply that in a European setting
nonopportunistic impairment losses provide information only in a low
analyst coverage environment. Bens et al. (2011) and Muller et al. (2012)
find that in a high analyst coverage environment goodwill write-offs
reported under U.S. GAAP are more highly anticipated than in a low analyst
coverage environment. My study provides evidence that IAS 36
nonopportunistic impairments of CGUs are fully anticipated in a high
analyst coverage environment. In a low analyst coverage environment
information asymmetry increases in the prereporting period and is reduced
in the reporting period.
In summary, I provide evidence that reports of impairment charges estimated in the absence of managers’ opportunistic behavior are released in a nontimely manner (at the end of the fiscal year) and are of low quality. I argue that managers compromise disseminating qualitative information about impaired assets in a timely manner to achieve the cost reductions realized by delaying and reducing the quality of the information. Providing information about impaired assets is costly. Thus, managers tend to conduct impairment tests for all CGUs at the end of the fiscal year with the external audit and (year-end) internal planning process, regardless of the time of year that economic losses trigger impairments of CGUs (see also Elliott and Shaw 1988; Zucca and Campbell 1992). As a result, managers reduce direct costs to sustain fiscal year earnings but delay the information provided through reports of nonopportunistic impairment charges until the fiscal year end. In addition, managers prefer to avoid disclosing sensitive data to competitors (see also Holland 2005). As a result, they cut indirect (proprietary) costs to sustain a firm’s future earnings (competitive advantage), which reduces the quality of information released to investors about impaired assets. The reduction in direct and indirect costs sustains fiscal year earnings and maintains the competitive advantage of the firm, providing benefits to investors, but the delay in information delivery until the fiscal year end and the exclusion of proprietary material reduce the informativeness of impairments to investors.

This analysis of the informativeness of nonopportunistic impairment losses complements prior literature (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). Prior research suggests that managers’ opportunistic behavior—behavior that is likely in the interest of managers
only—reduces the informativeness to investors of impairment charges. My study provides evidence that also managers’ cost considerations—that might be in the interest of investors—can reduce the informativeness to investors of impairment losses. To my knowledge, this is the first study to address the effect of managers’ cost reductions on the informativeness of impairment losses.

### 5.2.4 Summary of research presented in chapter 4: IAS 40

**“Investment Property”**

The IASB and U.S. FASB are in the process of converging their guidelines (Schipper 2005; Kothari et al. 2010). IFRS and U.S. GAAP guidelines for financial reporting are similar in reporting fair value decrements (impairment losses) of nonfinancial fixed assets (i.e., property, plant, and equipment, intangibles, and investment properties) and fair value decrements and increments of financial assets. However, large differences still persist with respect to the use of fair value increments of nonfinancial fixed assets. The IASB allows (under certain conditions) firms to revalue nonfinancial fixed assets above their historical cost (fair value option). This option is, however, rarely used in practice for property, plant, and equipment, and intangible assets by European firms. However, reporting IAS 40 fair values for properties that are held and used for rental income and/or capital appreciations (i.e., investment properties) through the income statement is common practice, particularly, by U.K. real estate firms (Christensen and Nikolaev 2009; Cairns et al. 2011).

The U.S. FASB forbids the reporting of fair value increments of investment properties (and other nonfinancial fixed assets) because of the concern that managers’ fair value estimates might not be sufficiently
faithfully represented to be capable of being decision useful (relevant) to investors (PWC 2009). Yet, SFAS 144 “Accounting for the Impairment or Disposal of Long-Lived Assets” (U.S. GAAP) requires firms to report fair value decrements in financial statements when an investment property is impaired (FASB 2001b).

In chapter 4, I use different accounting treatments to compare the value relevance of U.S. GAAP historical cost income that includes impairments of investment properties estimated in accordance with SFAS 144 with IAS 40 fair value based income that includes upward adjustments (unrealized gains) and downward adjustments (unrealized losses) to the fair value of investment properties. Specifically, the research objectives aim to analyze whether unrealized gains are more value relevant to investors than historical cost income, whether unrealized losses convey more value relevant information to investors than impairments, and whether the fair value model is more useful in explaining market fluctuations than the historical cost model. This study addresses an area that requires further convergence efforts of the U.S. FASB and IASB, as their guidelines differ considerably with respect to investment properties.

To conduct this study, I use hand collected data regarding impairment charges of investment properties reported by U.S. real estate firms in financial statements and unrealized gains and losses on investment properties reported by U.K. real estate firms. Descriptive results show that unrealized gains and unrealized losses to a reasonable extent link a U.K. firm’s operating income to the real estate market’s upward and downward trends over 2005–2011. However, the descriptive results also document that unrealized losses—primarily reported around 2007–2009—lag and do not fully capture the severe economic losses of 2007–2008.
Furthermore, descriptive results document that unrealized gains link the book value to the market value of investment properties. In addition, I find that under the historical cost model, the book value of properties is understated relative to the market value, even when impairment charges are reported in a U.S. firm’s financial statements around the severe real estate crisis of 2007–2009. This indicates that unrecognized fair value increments (unrealized gains) are not fully absorbed so that even around the severe crisis of 2007–2009 some investment properties that suffered economic losses are not impaired. When unrealized losses are reported in a U.K. firm’s financial statements, I find that the book value of properties is overstated relative to the market value. This might indicate that unrealized losses were not faithfully represented around the severe crisis of 2007–2009.

Using share price and share price return value relevance regressions, I find that fair value appreciations are more value relevant than historical cost income, which is consistent with prior studies (see Dietrich et al. 2001; Barth 2006; Herrmann et al. 2006). Furthermore, whereas my results imply that fair value decrements (impairments and unrealized losses) are useful in explaining share prices, they also provide some evidence that impairments contain more value relevant information than unrealized losses over 2007–2009. In addition, I find that both kinds of fair value decrements are not informative in explaining in a timely manner the severe economic losses that real estate firms suffered around the severe crisis of 2007–2009.

The results are inconsistent with my prediction. I expected unrealized losses to have higher value relevance than impairments because fair value increments are not reported under the historical cost model and,

111 Dietrich et al. (2001), Barth (2006), and Herrmann et al. (2006) suggest that fair values at least vaguely represent the economic values of investment properties whereas the values of investment properties measured at cost are to a high extent arbitrary.
thus, impairments are triggered after unrecognized fair value increments are fully absorbed. Accordingly, even around severe real estate crises, it is possible that impairments are either not triggered for all investment properties that suffer economic losses (as indicated by the descriptive results) or that the amount of impairment losses reported in a firm’s financial statements does not fully capture the economic losses of the impaired properties. In addition, because the historical cost model allows only downward adjustments (forbids upward adjustments) to the asset’s fair value, impairment tests are possibly conducted in a nonroutine fashion, decreasing the faithful representation of impairment losses. Based on my unexpected results, I argue that these effects are (over) compensated by managers’ reluctance to report large fair value decrements. In contrast to impairments, unrealized losses are based on upwardly adjusted (not based on depreciated cost) property book values. This increases their magnitude relative to impairment charges, in particular, around severe crises. Accordingly, managers might be inclined to reduce the amount of unrealized losses, possibly reducing the faithful representation and value relevance of unrealized losses.

Overall, the findings in chapter 4 suggest that fair values of investment properties are measured with errors, consistent with the results in prior literature (Fields et al. 1998; Danbolt and Rees 2008). Yet, the estimation error of fair value appreciations is on average sufficiently low (i.e., fair value appreciations are on average sufficiently faithfully represented) so that fair value based income is capable of being decision relevant (value relevant) to investors. Accordingly, my findings imply that the fair value based income for investment properties is superior to historical cost income that includes impairment losses. However, care needs
to be exercised by investors in assessing fair value decrements (impairments and unrealized losses) reported in financial statements during severe crises.

Analyzing the relative usefulness of the U.S. GAAP historical cost model versus the IAS 40 fair value model in explaining market fluctuations, supplements the results in prior research (Fields et al. 1998; Danbolt and Rees 2008). Fields et al. (1998) and Danbolt and Rees (2008) find value relevance of fair values reported for investment properties. However, Fields et al. (1998) analyzed voluntarily disclosed fair values in a setting in which assets additionally are depreciated and written-off. Danbolt and Rees (2008) examined 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. In addition, my study is the first (to my knowledge) that contrasts the value relevance of SFAS 144 impairment charges with IAS 40 unrealized gains and IAS 40 unrealized losses on investment properties.

5.3 Implications of the findings of the dissertation

The findings in chapter 4 suggest that under the fair value model, managers’ fair value estimates of investment properties on average increase the usefulness of income numbers in explaining market fluctuations, and that this is particularly true outside of severe crises. Thus, the fair value model set forth in IAS 40 should increase the comparability of operating (accounting) performance across real estate firms and time periods, in particular, in a low analyst coverage environment in which investors tend to rely on managers’ release of information about a firm’s asset quality (see chapter 3).
While my results provide evidence that recognition of unrealized gains for investment properties can benefit investors, I do not suggest reporting values in use of CGUs in a firm’s financial statements when they are above the CGUs’ book values. Values in use of CGUs incorporate fair values of unrecognized intangibles, such as the loyalty of customers, network of suppliers, quality of employees, and effectiveness and efficiency of the organization of a firm. Projected future net cash flows of these assets might never materialize in future years and are difficult to estimate. Managers’ estimates of values in use of CGUs are very subjective and are susceptible to large (unintentional) errors. As a result, requiring firms to report quarterly values in use of CGUs might prove costly and might also be of little use, in particular, when insufficient disclosures about these values in use are released (see chapter 3). Requiring firms to release sufficient disclosures increases the transparency of the firms’ asset quality to investors but imposes indirect costs to the firms that are ultimately borne by investors.

Furthermore, requiring firms to conduct impairment tests based on the value in use approach results in heterogeneous reports of impairment charges for CGUs across firms and time periods in at least three ways. First, not only a firm’s economic circumstances, but also the unrecognized economic values of its CGUs affects reports of impairments in financial statements. The unrecognized economic values of CGUs are firm and time specific (see chapter 2). Second, since not all economic values of CGUs are reported, managers can exploit discretion, for instance, by identifying CGUs in a way such that impaired assets are hidden in CGUs with large unrecognized economic values. As a result, impairments are avoided and bad news about a firm’s asset quality is not released to investors in a timely fashion (see chapter 2). Finally, managers can use the discretion inherent in IAS 36 prudently or aggressively, actions that affect reports of impairment.
losses in a firm’s financial statements (see chapter 2). Consequently, the requirements of IAS 36 to value unrecognized assets (in addition to recognized assets) that are included in a firm’s identified CGUs might be ill advised.

Fair values of investment properties are estimated for assets that are recognized in a firm’s financial statements. The recognized fair values are to some extent verifiable, even when insufficient disclosures are provided. That is, investment properties are less opaque than intangible assets (or CGUs) since they are concrete (real) and can be located by investors. In addition, fair values of investment properties are anchored by rent indices and/or values of other properties to some extent. Consequently, the estimation error of fair values of investment properties should be relatively small compared to the estimation error of values in use of CGUs.

Overall, the results of the dissertation support (to some extent) the adoption of the IAS 40 fair value model. The findings, however, call for changes to the complex IAS 36 requirements with respect to defining CGUs and estimating the value in use of the defined CGUs.

5.4 Limitations of the research and avenues for future research

5.4.1 General overview

My results call for changes to the requirements of IAS 36. One way to improve the requirements of IAS 36 would be to impose firms to report fair value increments for CGUs in their financial statements. Yet, as discussed in section 5.3, this might prove costly. The costs of producing and disclosing information about the values of a firm’s CGUs might outweigh the benefits to the firm of a highly transparent asset base. Accordingly, future studies might find ways to calculate costs and benefits that are
aligned with producing fair values and providing disclosures for fair values of fixed assets or fixed asset groups, and subsequently analyze the relation between the costs and the benefits. Such analyses might support standard setters in changing effectively impairment guidelines for tangible and intangible fixed assets.

My findings support the adoption of the fair value model for investment properties, in particular, outside of severe crises. However, cross sectional differences (e.g., firm characteristics) can impact the faithful representation and value relevance of fair value increments and decrements for investment properties. In a similar vein, my results might not be generalizable to other settings. For instance, the results obtained here might be refuted if countries other than common law countries (that have generally strict enforcement systems) were used in the analysis. That is, fair value increments for investment properties might not be faithfully represented and value relevant in countries with weak enforcement systems, as managers in weak enforcement systems might be more highly motivated than managers in strict enforcement systems to exploit discretion (see chapter 2). To increase our knowledge of the relative value relevance of the historical cost model versus the fair value model for investment properties, more research is needed in this area. In the following, I outline the limitations of the findings and avenues for future research of each study (chapter 2–4).

112 In this context, the results might not be valid to assets other than investment properties. The estimation of fair values of assets other than investment properties, such as intangibles, requires considerably more judgment than fair value estimates of investment properties, which might lead to different results.
5.4.2 Limitations and future directions of the research presented in chapter 2: IAS 36 “Impairment of Assets”

My results suggest that managers report impairment charges more systematically in a stringent reporting environment than in a weak reporting environment. Specifically, while I provide evidence that CGUs are exploited in a weak reporting environment to prevent impairments, I find no difference in managers’ opportunistic or nonopportunistic behavior in projecting future net cash flows and estimating discount rates between stringent and weak reporting environments. Accordingly, more research is needed to determine whether cash flows and discount rates are exploited opportunistically in weak and stringent reporting environments.

My implication that a stringent reporting environment restricts managers’ exploitation of discretion is based on a probit regression. I construct an index that captures an increasingly stringent reporting environment. The index is constructed by adding determinants that capture strict country-level enforcement systems, periods of intense scrutiny over a firm’s financial reporting, and firm-specific determinants of a stringent reporting environment. The index is then interacted with determinants of impairments that capture IAS 36 requirements to test whether the occurrence of impairments is systematically aligned to IAS 36 requirements in an increasing fashion to the stringency of the reporting environment. Consequently, I do not discriminate across determinants that capture a stringent reporting environment. However, it is interesting to examine whether there are differences that affect managers’ exploitation of discretion across the determinants.

In agreement with prior studies, my findings suggest that a stringent reporting environment encourages managers to estimate impairment charges
prudently to avoid overstating a firm’s asset base. I draw my implication on the probit regression and the index that captures an increasingly stringent reporting environment (see previous paragraph). The constructed index tests whether impairment charges occur in an increasing fashion to the stringency of the reporting environment. This implies that managers report impairment losses more prudently in a stringent reporting environment than in a weak reporting environment. Yet, a prudent reporting (or higher occurrence) of impairment losses in a stringent reporting environment does not exclude the possibility that such an environment induces managers to understate assets.

In this context, I conclude (carefully) that managers are induced to report impairments to account for previous economic losses in periods of intense scrutiny over a firm’s financial reporting. The implication is based on results of an OLS regression that relates the magnitude of (nonzero) impairment charges to determinants that capture strict country-level enforcement systems, periods of intense scrutiny over a firm’s financial reporting, and firm-specific determinants of a stringent reporting environment. Higher magnitudes of impairment losses related to periods of intense scrutiny over a firm’s financial reporting might not only suggest that managers report accumulated economic losses in a firm’s financial statements, but also that assets are understated.

Furthermore, based on the OLS regression, I find that strict country-level enforcement systems encourage managers to report relatively large magnitudes of impairment charges in financial statements while firm-specific determinants that capture a stringent reporting environment induce managers to report relatively small amounts of impairment losses. Although country-level enforcement systems and firms-specific determinants can be assumed to be permanently strict over the sampling period, the results of the OLS regression differ. These results may provide evidence that strict
country-level enforcement systems induce managers to understate assets
and firm-specific determinants that capture a stringent reporting
environment encourage managers to adjust the asset base frequently.

The aspects related to the underestimation of assets are avenues for
future research. It would be interesting to examine specifically whether
strict country-level enforcement systems and periods of intense scrutiny
over a firm’s financial reporting encourage managers to understate a firm’s
asset base. In addition, future research might analyze explicitly whether
firm-specific determinants drive the frequency of impairment charges.
Moreover, it is interesting to analyze the consequences of an underestimation
of assets. Understating assets might increase rather than decrease investors’
uncertainty about the quality of a firm’s asset base. Also the consequences
of frequent impairment reporting in financial statements are interesting to
analyze. An understanding of the effect of a strict reporting environment on
the consequences of reports of IAS 36 impairments would support rule
setters in improving the relevance to investors of fair values reported for
impaired assets in financial statements.

5.4.3 Limitations and future directions of the research presented in
chapter 3: IAS 36 “Impairment of Assets”

My findings provide evidence that impairment charges are reported with a
delay and their information content is of low quality. These findings are not
driven by managers’ opportunistic behavior assuming that my selection
criteria to identify nonopportunistic impairment charges are valid. IAS 36
impairment charges are defined as nonopportunistic when they are:
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1. reported along with fiscal year negative returns (proxy for economic losses),

2. released 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.

While my results (including the results of my additional tests) provide some evidence that the selection criteria for nonopportunistic impairment charges are valid, future research might refine these selection criteria. Accordingly, future analyses can generate more knowledge about the (decision) relevance of impairment charges that are driven by managers’ genuine application of complex impairment guidelines.

By assuming that the selection criteria to identify nonopportunistic impairment losses are valid and allowing for the fact that IAS 36 guidelines are costly to implement, my findings provide some evidence that managers’ cost considerations affect the timeliness and quality of information provided through reports of impairment charges in financial statements. However, I cannot exclude (fully) that factors other than managers’ opportunistic behavior and cost considerations drive results.

Specifically, I use an OLS regression that relates the bid-ask spread to nonopportunistic impairment losses reported in high and low analyst coverage environments. The delta of the bid-ask spread captures the change in information asymmetry between managers and investors. I find that the bid-ask spread decreases (increases) in the prereporting period of nonopportunistic impairment losses—that captures an eight month period ending at a firm’s fiscal year end—in a high (low) analyst coverage environment.
environment. By assuming that nonopportunistic impairment losses are less likely to be reported during the fiscal year with a negative event (economic loss), I conclude that the information content of nonopportunistic impairment losses is anticipated in a high analyst coverage environment and investors’ uncertainty increases in a low analyst coverage environment. My assumption, however, might not be valid, in particular, in a high analyst coverage environment; or when some firms report nonopportunistic impairment charges during the fiscal year with a negative event, these reports increase noise and can affect my results. ¹¹³ Future studies could increase the validity of the research results by collecting quarterly data which would be less noisy.

In addition, I find that in a low analyst coverage environment the bid-ask spread declines in the reporting period of nonopportunistic impairment losses that captures a four month period ending at the end of the fourth month following a firm’s fiscal year end. I find, however, that over both periods (prereporting and reporting period), the bid-ask spread increases in a low analyst coverage environment. This implies that the quality of information provided by reports nonopportunistic impairment losses in financial statements is low with the result that the information content is not sufficient to reduce fully the information asymmetry between managers and investors. Based on my findings that nonopportunistic impairment charges are reported with a delay and their information content is of low quality, I argue that managers consider direct and indirect costs of providing information to the public. To increase the validity of my

¹¹³ I assume that impairment losses are predominantly reported at the fiscal year end based on contemporaneous research (see e.g., Heintges and Herre 2007; Spear and Taylor 2011; Muller et al. 2012) and additional tests conducted in chapter 3. Accordingly, I assume also that some firms in my sample report impairment losses in financial statements during the fiscal year with a negative event.
argument, future research should analyze specifically whether managers consider cost and whether their cost considerations affect the informativeness of nonopportunistic impairment charges. Accordingly, more knowledge about the consequences of requiring firms to implement complex and costly impairment guidelines will be generated, which should be of interest to standard setters, in particular.

5.4.4 Limitations and future directions of the research presented in chapter 4: IAS 40 “Investment Property”

My findings suggest that, except in severe crises, fair value based income reported for investment properties by real estate firms is of higher value relevance to investors than historical cost income including impairment charges. The conclusion is based on application of the fair value model to a sample of U.K. real estate firms and application of the historical cost model to a sample of U.S. real estate firms. I cannot fully exclude that the results are driven by country fixed effects even though I use two common law countries that both have highly developed capital and real estate markets and compare incremental adj. R²s obtained from value relevance (price and return) regressions across subsamples.

I compare the explanatory power (adj. R²s) derived from value relevance regressions applied to historical cost subsamples and fair value subsamples. To alleviate concern that my results are driven by the differences in pricing of the accounting information between the U.S. market and the U.K. market, I additionally estimate the incremental adj. R²s for each subsample. To obtain incremental adj. R²s, I measure adj. R²s using unrestricted price and return regressions that include investment property adjustments (i.e., depreciation, impairments, and fair value adjustments).
then estimate the explanatory power (adj. $R^2$s) using restricted versions of the value relevance regressions that exclude investment property adjustments. To obtain incremental adj. $R^2$, I subtract adj. $R^2$ derived from the restricted version from that derived from the unrestricted version. Although I use incremental adj. $R^2$s in my study, results might still be driven by country fixed effects. Future research could supplement my study by controlling for country fixed effects in a different way.

Moreover, whereas I select real estate firms that are highly invested in investment properties and use incremental bootstrapped adj. $R^2$s as outlined previously, I cannot fully exclude that GAAP requirements for assets other than investment properties might affect the results. In a similar vein, firm-specific factors (other than factors related to the composition of the real estate firms’ residual assets), such as financial leverage and audit quality, increase noise and hence can affect results. Future research might decrease noise by controlling for firm-specific factors (firm characteristics) more rigorously (see also subsection 5.4.1).

Furthermore, my findings suggest that the fair value model for investment properties is not superior to the historical cost model in

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114 Another approach to compare the value relevance to investors of historical cost income including impairments and fair value based income might be to focus on the coefficients on investment property adjustments in price and return regressions. Because impairment charges, unrealized gains, and unrealized losses are not based on conservative accounting and are transitory, the coefficients should be close to one when these kinds of fair values are faithfully represented (see e.g., Hanlon et al. 2008, and Appendix 4.1). Consequently, the closer the coefficients on investment property adjustments are to one, the more faithfully fair values are represented and value relevant to investors. However, the coefficients can be biased (see e.g., Barth and Kallapur 1996; Easton and Sommers 2003; Barth and Clinch 2009) and historical cost income includes depreciation based on unconditional conservatism which biases upward the coefficient on depreciation (see e.g., Hanlon et al. 2008). Thus, it is difficult (or even impossible) to draw any inference about the magnitudes of coefficients in my price and return regressions. As a result, I focus on the level of adj. $R^2$s and incremental adj. $R^2$s by applying the bootstrapping technique. The bootstrapping technique is a common approach applied in contemporaneous research to compare the value relevance of accounting data across subsamples (e.g., Barth et al. 2008; Barth et al. 2012; Florou et al. 2012; Lin et al. 2012).
explaining market price variations during severe crises. I argue that this might be related to the reluctance of managers to report large amounts of fair value decrements in financial statements and this reluctance decreases the faithful representation of unrealized losses. It would be interesting to examine specifically whether this argument is valid and whether unrealized losses are faithfully represented outside of crises.

Finally, my results imply that fair value estimates of investment properties are capable being decision useful (i.e., value relevant) to investors outside of severe real estate crises. Yet, I cannot conclude that fair value estimates of investment properties are decision useful (relevant) to investors. In other words, when fair values are sufficiently faithfully represented to be value relevant, they do not necessarily reduce information asymmetry between managers and investors. This is particularly true when the information conveyed by fair values is already known to investors.  

Future research might supplement my analysis with a decision relevance study (e.g., using the bid-ask spread as an dependent variable).

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115 The value relevance analysis suggests a correlation between accounting data and market data, and does not necessarily indicate a causal relationship between those data. Accounting data that are value relevant summarize information, regardless of the source, that is used by investors in valuing a firm’s net assets. This suggests that the accounting data do not need to be decision useful (relevant) to investors. Investors may concentrate on information other than on accounting data to infer a firm’s net asset quality (value) (Easton et al. 1993; Barth and Clinch 1998; Collins et al. 1999; Francis and Schipper 1999; Sloan 1999; Barth et al. 2001). I have chosen a value relevance study since the value relevance analysis 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, accounting data are relevant if they are “capable” of being decision useful (relevant) to investors (FASB 2010; see also Sloan 1999; Barth et al. 2001; Herrmann et al. 2006). Consequently, the U.S. FASB and IASB define relevance in a sense that fair values reported by managers should contain information that explain assets’ economic performance but they do not need to provide “new” information to investors.