This article was downloaded by: [Victoria University of Wellington] On: 02 June 2012, At: 18:49 Publisher: Routledge Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



European Accounting Review

Publication details, including instructions for authors and subscription information: http://www.tandfonline.com/loi/rear20

The Decision Usefulness of Financial Accounting Measurement Concepts: Evidence from an Online Survey of Professional Investors and their Advisors

Joachim Gassen^a & Kristina Schwedler^b

^a Wirtschaftswissenschaftliche Fakultät, CASE - Center for Applied Statistics and Economics, Humboldt-Universität zu Berlin, 10099, Berlin, Germany

^b Accounting Standards Committee of Germany, Zimmerstraße 30, 10969, Berlin, Germany

Available online: 08 Sep 2010

To cite this article: Joachim Gassen & Kristina Schwedler (2010): The Decision Usefulness of Financial Accounting Measurement Concepts: Evidence from an Online Survey of Professional Investors and their Advisors, European Accounting Review, 19:3, 495-509

To link to this article: <u>http://dx.doi.org/10.1080/09638180.2010.496548</u>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <u>http://www.tandfonline.com/page/terms-and-conditions</u>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sublicensing, systematic supply, or distribution in any form to anyone is expressly forbidden. The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

The Decision Usefulness of Financial Accounting Measurement Concepts: Evidence from an Online Survey of Professional Investors and their Advisors

JOACHIM GASSEN* and KRISTINA SCHWEDLER**

*Wirtschaftswissenschaftliche Fakultät, CASE – Center for Applied Statistics and Economics, Humboldt-Universität zu Berlin, 10099 Berlin, Germany; **Accounting Standards Committee of Germany, Zimmerstraße 30, 10969 Berlin, Germany

(Received September 2008; accepted February 2010)

ABSTRACT In their current framework project, the IASB and the FASB identify decision usefulness as the objective of financial reporting. Unfortunately, accounting research has neither yet come up with an undisputed measure of decision usefulness, nor with a satisfying method to rank competing measurement concepts, such as fair value or historical cost, with regard to their relative decision usefulness. Thus, assessing the decision usefulness of different accounting measurement concepts ultimately poses an empirical question. We provide evidence to this question by surveying an important user group, namely professional investors and their advisors, about their opinions on the decision usefulness of different accounting measurement concepts. We find that our respondents clearly differentiate between mark-to-market and mark-to-model fair values. While they consistently rank mark-to-market fair values as most decision-useful, they generally rank mark-to-model fair values as least decision-useful. In addition, the ranking differs across asset classes.

Correspondence Address: Joachim Gassen, Wirtschaftswissenschaftliche Fakultät, CASE – Center for Applied Statistics and Economics, Humboldt-Universität zu Berlin, 10099 Berlin, Germany. E-mail: gassen@wiwi.hu-berlin.de

0963-8180 Print/1468-4497 Online/10/030495-15 © 2010 European Accounting Association DOI: 10.1080/09638180.2010.496548

Published by Routledge Journals, Taylor & Francis Ltd on behalf of the EAA.

1. Introduction

Measuring assets and liabilities is a cornerstone of financial accounting. Thus, identifying the measurement concept or concepts suitable for financial accounting is of general interest to practitioners, standard setters and academics alike. While economic theory can be used to investigate the effects of different accounting measurement concepts in well-controlled settings, standard setters face the problem of identifying accounting measurement concepts that provide decision-useful information for an ex ante unknown universe of heterogeneous users and settings. In short: picking and enforcing the 'right' accounting measurement concept(s) requires balancing competing needs and thus ultimately is a political decision.

This short note provides descriptive empirical input to this debate by surveying the opinions of professional investors and their advisors. We find that those professional investors and their advisors who take interest in financial accounting issues (our respondents) generally rate fair values based on market values (mark-to-market fair values) as the most decision-useful measurement concept. Interestingly, they also consistently rank fair values based on model estimates (mark-to-model fair values) as the least decision-useful category. This clearly indicates that our respondents do not see the concept of fair value as a homogeneous measurement concept. In addition, we find that our respondents evaluate the decision usefulness of measurement concepts differently for different asset classes. These main results are in line with measurement theory, which highlights the importance of (external) verifiability of measurement concepts in settings with moral hazard and asymmetric information (e.g. Arya et al., 1998; Ball, 2006, p. 13; Christensen et al., 2002; Fischer and Verrecchia, 2000; Hermalin and Katz, 1991; Penman, 2007, p. 41) and confirms predictions that state that the decision usefulness of market values varies with the liquidity of the relevant markets and with the transaction costs attached to the measured assets (Allen and Carletti, 2008; Plantin et al, 2008).

Stressing the limitations of our findings, which we discuss in the conclusion of the paper, we contribute to a small line of literature that uses survey designs to investigate the preferences of financial statement users (AIMR, 2000; Barker, 1999; CFO Institute, 2007; Hodge, 2003; PWC, 2007). We collaborate and extend the existing evidence provided by this literature by explicitly investigating the attitudes of professional investors towards different measurement concepts focusing on different asset classes and differentiating between mark-to-model and mark-to-market fair values. The results of this project might be relevant for theoretical work in the area of accounting measurement concepts as they provide input about the attitudes of a central financial reporting user group. In addition, we provide input to the current standard setting debate, suggesting that fair value is regarded by professional investors and their advisors as a heterogeneous measurement concept whose decision usefulness varies across different asset classes. The reminder of this paper is organized as follows. The second section briefly motivates our research design choice, gives an overview over the applied methodology and documents the response to our survey. The third section presents the results and some robustness checks. The fourth section states the limitations of our study and concludes.

2. Research Design

In a world with heterogeneous users and governance infrastructures there is no undogmatic normative solution to the financial accounting measurement problem (Demski, 1973). Hence, setting financial accounting standards is ultimately a political process (Watts, 1977). This research project addresses a descriptive research question: how do professional investors and their advisors assess the decision usefulness of different financial accounting measurement concepts?

We use survey methodology to address our research question. Balancing the strengths and weaknesses of experimental (Kachelmeier and King, 2002; Mains *et al.*, 2006) as well as empirical archival research designs (Allee *et al.*, 2007; Holthausen and Watts, 2001), survey studies allow direct investigation of subjects' attitudes, thus avoiding the internal validity concerns of empirical archival studies. In addition, it is not necessary to directly observe the action of subjects, which substantially increases the feasibility of the research design. Also, subjects are questioned about real-life behavior, which removes some of the external validity concerns that threaten laboratory experiments.

The relevant population of this study comprises all professional investors and their advisors who use financial accounting information for their decisionmaking. This population is unknown and even its size is hard to predict. Also, defining the group of professional investors and their advisors is not straightforward. This study takes a pragmatic approach in identifying its research sample. As some earlier work on the view of professional investors from the US already exists (AIMR, 2000; CFO, 2007), we focus on European investors and rely on the network of the European Federation of Financial Analysts Societies (EFFAS) for providing the contact opportunities to a sample of professional investors. In addition, other investor organizations (German CFA Society, GCFAS; Bundesverband Investment und Asset Management eV, BVI; Corporate Reporting User Forum, CRUF) were addressed in order to produce a sufficiently large response sample. This yields a research sample of about 20,000 investors.

For an international survey study of this magnitude, a structured online questionnaire seemed to be the only feasible instrument. In order to increase response, the survey was limited in length so that the total time needed to complete the survey should not exceed 20 minutes. Before developing the actual instrument, structured interviews with financial analysts and fund investors were conducted in order to better understand the way these investors process financial accounting data and how they approach different measurement concepts. One main result of these interviews was the focus on the inherent heterogeneity of the term 'fair value' and the focus on different classes of assets and liabilities.¹ One other result of the interviews was that most participants stated that most of their colleagues were neither very interested nor very experienced in different accounting measurement concepts. This caused two concerns. First, whenever a survey study is conducted in a 'special interest' area, subjects who have this 'special interest' tend to respond more frequently than subjects who do not share this 'special interest', giving rise to substantial response bias (Sax et al., 2003). Second, subjects who are unfamiliar with the topics addressed in the survey instrument could induce noise into the response data. To address the second concern, control questions were included, surveying the method of analysis, the information usage and the familiarity with different accounting measurement concepts. The first concern is hard to address, as there is no way to control for response bias without instrumental data describing the underlying population. Thus, this study can only be expected to be representative of professional investors and their advisors who regularly use financial accounting information within their decision-making process and thus take an active interest in financial accounting matters.

The survey instrument was pre-tested on twenty subjects. These subjects all had a professional background in investing and accounting. After the feedback of the pre-testing group, the questionnaire was slightly modified to address the concerns of the pre-testers. The links to the online instruments were distributed to the surveyed investors by email, accompanied by a note from the participating organizations explaining the purpose and the importance of the study. The response deadline was extended twice and two reminders were distributed over the participating organizations' networks in order to improve the response rate.

The survey period started on 15 May 2007. Most organizations sent out their invitation email to their members at a later date of their own discretion. By the final response deadline (30 October 2007) 383 responses had been received. This indicates an estimated response rate of roughly 1.9%. This is a low response rate, also compared to similar surveys (Sax *et al.*, 2003) but can be explained by the surveying procedure (anonymous email, no incentivization) and the surveyed population (high opportunity costs). Nevertheless, in absolute number and compared to similar studies,² the sample offers a unique and extensive dataset that provides us with the opportunity to address our research question.

Some non-participating subjects were questioned for their reasons of nonresponding. The indicated reasons are primarily in line with the existing literature (time constraints, too many surveys sent to them, lack of interest). Thus, subjects with a high level of interest in financial accounting matters can be expected to be over-represented in the sample. In addition, as the member organizations of EFFAS have differing regulations for determining whom they accept as a member of their organization, it appears unclear whether all respondents belong to the population of professional investors and their advisors. As professional investors are generally assumed to face higher opportunity costs than average market participants (Elliot *et al.*, 2007), it seems probable that out-of-population responses are over-represented in the response sample. To avoid out-of-population responses polluting the sample, only respondents who can be assigned to one of the following groups are treated as valid respondents: financial analysts, fund managers, institutional investors, credit or corporate rating experts. Of the resulting 250 valid responses, eight observations were discarded because the respondents did not answer the questions about their cultural background.

3. Results

Based on the response sample of 242 valid responses, Table 1 reports the surveyed personal information about the respondents. As Panel A shows, the respondents stem from 22 different countries, with the largest sub-groups being Sweden (58 respondents), Germany (43) and Switzerland (41). These frequencies can be explained by the sampling procedure: as every EFFAS member organization decided independently about the means to promote the online survey, country-level response rates are a function of the efficiency of the country-level sampling process. Twenty-five observations are from common-law countries (Canada, Hong Kong, Singapore, South Africa, the UK and the US) and all but 13 are from European countries.

Panel B reports the frequencies of job descriptions across our sample. About half of the sample consists of financial analysts (71 sell-side and 34 buy-side), and fund managers make up the second largest group (74 respondents). The data presented in Panel C give some information on the work focus of the respondents. More than half of the respondents focus on equity instruments while a smaller group of 35 focuses on debt instruments. Panel D reports the respondents' years of work experience. Mean and median are slightly more than 10 years.

In order to get insights into the decision-making process used by professional investors, we asked whether a set of statements correctly describes the analysis method of the respondents. The assessments of these statements given by the respondents are also displayed in Panel D. The responses are coded from one (strongly agree) to five (strongly disagree). Overall, the rate of agreement is highest for the statement 'My advice or decision is based on accounting data of the company and its industry (fundamental analysis)'. The statement with the second highest agreement rate is 'My advice or decision is based on first-hand information and the impression of management quality', followed by 'My method of analysis differs according to the respective company or its industry' and 'My advice or decision is based on non-accounting market data (quantitative/technical analysis)'. The differences of agreement between these statements are significant at conventional levels (i.e. at least 5%, two-sided).

Taken together the results presented in Table 1 indicate that the 242 members of the response sample qualify as the targeted respondent group: they all work as professional investors or their advisors, come from different countries and investing backgrounds and have reasonably long work experience. Also, they rely on financial accounting as the central source of information for their investment

| Country | Frequency | Percent | | | | | | |
|---------------------------------------|-----------|----------------|----|-----|--------|-----|--|--|
| Panel A: Respondents' country of work | | | | | | | | |
| Austria | 8 | 3.31 | | | | | | |
| Belgium | 1 | 0.41 | | | | | | |
| Canada | 1 | 0.41 | | | | | | |
| Denmark | 2 | 0.83 | | | | | | |
| Finland | 3 | 1.24 | | | | | | |
| France | 8 | 3.31 | | | | | | |
| Germany | 43 | 17.77 | | | | | | |
| Hong Kong | 1 | 0.41 | | | | | | |
| Italy | 20 | 8.26 | | | | | | |
| Latvia | 3 | 1.24 | | | | | | |
| Lithuania | 2 | 0.83 | | | | | | |
| Luxemburg | 1 | 0.41 | | | | | | |
| Norway | 12 | 4.96 | | | | | | |
| Singapore | 1 | 0.41 | | | | | | |
| Slovenia | 1 | 0.41 | | | | | | |
| South Africa | 1 | 0.41 | | | | | | |
| Spain | 11 | 4 55 | | | | | | |
| Sweden | 58 | 23.97 | | | | | | |
| Switzerland | 41 | 16.94 | | | | | | |
| | 12 | 10.94 | | | | | | |
| Ukraine | 12 | 4.90 | | | | | | |
| | 0 | 1.24 | | | | | | |
| Total | 242 | 100.00 | | | | | | |
| Field of work | Frequency | Percent | | | | | | |
| Panal R. Paspondants' field | of work | | | | | | | |
| Sell side analyst | 71 | 20.34 | | | | | | |
| Buy side analyst | 24 | 29.34 | | | | | | |
| Eurod manager | 34 74 | 14.05 | | | | | | |
| Fund manager | /4 | 50.56 16.52 | | | | | | |
| | 40 | 10.55 | | | | | | |
| Credit/corporate rating | 23 | 9.50 | | | | | | |
| lotal | 242 | 100.00 | | | | | | |
| Work focus | Frequency | Percent | | | | | | |
| Panel C: Respondents' work | t focus | | | | | | | |
| Debt instruments | 35 | 14.52 | | | | | | |
| Equity instruments | 136 | 56.43 | | | | | | |
| Derivatives | 3 | 1.24 | | | | | | |
| Combination of the above | 67 | 27.80 | | | | | | |
| Total | 241 | 100.00 | | | | | | |
| Variable | n | Mean | SD | 25% | Median | 75% | | |
| | | | | | | | | |

Table 1. Descriptive statistics for the response sample

Panel D: Respondents' work experience and method of analysisYears of Work Experience23910.8915.84561015

(Continued)

| Variable | п | Mean | SD | 25% | Median | 75% |
|---|-----|-------|-------|-----|--------|-----|
| My advice or decision is based on accounting data of the company and its industry (fundamental analysis). | 237 | 1.624 | 0.796 | 1 | 1 | 2 |
| My advice or decision is based on first-hand information and impression of management quality. | 234 | 2.128 | 0.981 | 1 | 2 | 3 |
| My advice or decision is based on non-accounting market data (quantitative/technical analysis). | 235 | 3.187 | 1.154 | 2 | 3 | 4 |
| My method of analysis differs according to the respective company or its industry. | 226 | 2.779 | 1.133 | 2 | 3 | 4 |

Table 1. Continued

Notes: The response sample contains all survey responders which provided demographic information to be assigned to the targeted response groups and a work country. This yields a sample size of 242 observations. In the respective analyses, a sample size below 242 indicates missing or can't say answers. The responses to the statements presented in Panel D are coded from one (strongly agree with this statement) to five (strongly disagree with this statement).

decision. Thus, the response sample provides suitable data to investigate the attitude of international professional investors towards financial accounting in general, and different measurement concepts in particular.

Table 2 presents information on the assessment of different information sources. Respondents were asked to evaluate different information sources with respect to relevance and reliability. Overall, respondents view annual financial statements as the most relevant information source, followed by direct personal contact with the management, notes to the financial statements, quarterly financial statements, management commentary (e.g. management's discussion & analyses), interaction on analysts meetings (conference calls, etc), voluntary public disclosure by the company, and third-party coverage. Again, it becomes obvious that the outcome of the financial accounting process is the predominant information source for our respondents. Comparing the relevance of different information sources with their respective reliability indicates that the respondents differentiate between relevance and reliability. The audited information sources annual financial statements and the notes of the financial statements are rated to be roughly as reliable as they are relevant, while quarterly financial statements and the management commentary, which are not audited at the same level

| | Relevance | | | | Reliability | | | | | | | |
|---|-----------|-------|-------|-----|-------------|-----|-----|-------|-------|-----|-----|-----|
| | n | Mean | SD | 25% | 50% | 75% | n | Mean | SD | 25% | 50% | 75% |
| Direct personal contact with management | 233 | 2.047 | 1.134 | 1 | 2 | 3 | 222 | 2.459 | 0.859 | 2 | 2 | 3 |
| Interaction in analysts' meetings, conference calls, etc. | | 2.487 | 1.028 | 2 | 2 | 3 | 218 | 2.596 | 0.897 | 2 | 3 | 3 |
| Quarterly financial statements | | 2.154 | 0.937 | 1 | 2 | 3 | 224 | 2.201 | 0.803 | 2 | 2 | 3 |
| Annual financial statements | 237 | 1.911 | 0.909 | 1 | 2 | 2 | 225 | 1.889 | 0.780 | 1 | 2 | 2 |
| Notes to annual financial statements | 234 | 2.073 | 0.912 | 1 | 2 | 3 | 222 | 2.032 | 0.792 | 1 | 2 | 3 |
| Management commentary (e.g. MD&A) | | 2.311 | 0.897 | 2 | 2 | 3 | 226 | 2.619 | 0.898 | 2 | 3 | 3 |
| Voluntary public disclosure by the company | 228 | 2.759 | 0.880 | 2 | 3 | 3 | 217 | 2.825 | 0.837 | 2 | 3 | 3 |
| Third-party coverage | | 2.954 | 0.917 | 2 | 3 | 3 | 220 | 3.191 | 0.896 | 3 | 3 | 4 |

Table 2. Assessment of information channels

Notes: The response sample contains all survey responders which provided demographic information to be assigned to the targeted response groups and a work country. This yields a sample size of 242 observations. In the respective analyses, a sample size below 242 indicates missing or can't say answers. The responses are coded from one (very high relevance/reliability) to five (very low relevance/reliability).

of scrutiny in most jurisdictions, are rated to be less reliable than relevant. The same applies to direct personal contact and to voluntary disclosures by the management.

Table 3 presents the familiarity with and general attitudes towards different accounting measurement concepts. Panel A reports the answers to the question: 'How familiar are you with the following measurement concepts?' Ranked by overall familiarity, the mark-to-market fair value measurement concept seems

| Measurement concept | п | Mean | SD | 25% | Median | 75% | | | | |
|---|---------|--------------|-----------|------|--------|-----|--|--|--|--|
| Panel A: 'How familiar are you with the following measurement concepts?' | | | | | | | | | | |
| Historical cost | 235 | 1.736 | 0.910 | 1 | 2 | 2 | | | | |
| Lower of cost or market | 233 | 2.094 | 1.129 | 1 | 2 | 3 | | | | |
| Value in use | 230 | 2.891 | 1.282 | 2 | 3 | 4 | | | | |
| Fair value (mark-to-market) | 237 | 1.595 | 0.667 | 1 | 2 | 2 | | | | |
| Fair value (mark-to-model) | 232 | 2.690 | 1.392 | 2 | 2 | 4 | | | | |
| | п | Mean | SD | 25% | Median | 75% | | | | |
| Panel B: 'Please give us your opinio | n on ti | he following | statement | s. ' | | | | | | |
| All assets and liabilities should be reported following the same measurement concept. | 229 | 2.380 | 1.199 | 1 | 2 | 3 | | | | |
| All assets and liabilities should be reported at fair value, with historical cost information presented in the notes. | 233 | 2.391 | 1.125 | 2 | 2 | 3 | | | | |
| All assets and liabilities should be reported at historical cost, with fair value information presented in the notes. | 231 | 3.152 | 1.095 | 2 | 3 | 4 | | | | |
| Assets and liabilities should be reported following different measurement concepts, with the relevant measurement concept depending on the nature of the according asset or liability. | 228 | 2.969 | 1.178 | 2 | 3 | 4 | | | | |
| Companies should be permitted to choose among alternative measurement concepts for different classes of assets and/or liabilities. | 228 | 3.838 | 1.035 | 3 | 4 | 5 | | | | |

Table 3. Familiarity and general attitude towards different measurement concepts

Notes: The response sample contains all survey responders which provided demographic information to be assigned to the targeted response groups and a work country. This yields a sample size of 242 observations. In the respective analyses, a sample size below 242 indicates missing or can't say answers. The responses in Panel A are coded from one (very familiar) to five (unfamiliar). The responses in Panel B are coded from one (strongly agree with this statement) to five (strongly disagree with this statement).

to be the most well-known, followed by historical cost, lower of cost or market, the mark-to-model fair value concept and the notion of value-in-use. We find it interesting to note that, while historical cost has been the most influential accounting measurement concept for decades, professional investors on average claim to be more familiar with mark-to-market fair values. In addition, the significant difference in familiarity with mark-to-market fair values compared with mark-to-model fair values is obvious. The lower of cost or market concept is conceptually similar to the historical cost concept and was included in the survey to avoid confusion among the respondents about which measurement concept was meant by our categories. Finally, users seem to be not very familiar with the value-in-use concept, which is applied, for example, in IAS 36. Therefore, although we will continue to report the results for the lower of cost or market concept as well as for the value-in-use concept in Table 4 for the sake of completeness, we will not discuss them further. Instead, the subsequent analyses will focus on the three predominant prototypic measurement concepts: fair value (mark-to-market), fair value (mark-to-model) and historical cost.

Prior survey-based evidence on the decision usefulness of accounting measurement concepts focused on rather broad and general statements (AIMR, 2000; CFO, 2007). In order to link our results to this prior research, we asked the respondents to give their opinion with respect to two different types of statements. The first group of statements addresses the question of whether one measurement concept should be applied consistently to all assets and liabilities, whether the applied measurement concept should depend on the respective asset or liability, or whether companies should have the right to choose the measurement concept they view as appropriate. The second group of statements proposes the broad measurement concept that should be applied in measuring assets and liabilities (fair value versus historical cost), assuming that only one measurement method is applied and that the results of the other measurement concept are disclosed in the notes. As can be seen from Panel B of Table 3, the results clearly indicate that respondents favor the consistent application of one measurement concept for all assets and liabilities. Given a choice between historical cost and fair value as the measurement concept for valuing assets and liabilities, they clearly vote for fair value. In addition, they strongly oppose discretionary freedom of firms in choosing the appropriate measurement concept. Summing up, it appears that, in general, professional investors prefer the usage of fair value accounting as the predominant measurement concept of financial reporting. This result is in line with the results of prior literature (CFO, 2007).

It appears unclear, however, whether this general assessment also applies to particular asset classes. In addition, it is questionable whether it depends on whether fair values are determined by market values or by model estimates. In order to test this, we asked the respondents to rank a set of measurement concepts for different asset classes according to their decision usefulness. This set of measurement concepts is the same as that of Panel A of Table 3. Table 4 presents the results of this question. At first glance, it looks as if the answers of Table 4

| Asset class | Measurement concept | п | Mean | SD | 25% | Median | 75% |
|-------------------|-----------------------------|-----|-------|-------|-----|--------|-----|
| Intangible Assets | Historical Cost | 178 | 2.713 | 1.285 | 2.0 | 2.0 | 4.0 |
| (not including | Lower of Cost or Market | 161 | 2.981 | 1.237 | 2.0 | 3.0 | 4.0 |
| Goodwill) | Value in Use | 146 | 2.719 | 1.119 | 2.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-market) | 175 | 2.480 | 1.295 | 2.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-model) | 133 | 3.165 | 1.298 | 2.0 | 3.0 | 4.0 |
| Goodwill | Historical Cost | 177 | 2.650 | 1.293 | 2.0 | 2.0 | 3.0 |
| | Lower of Cost or Market | 150 | 3.147 | 1.297 | 2.0 | 3.0 | 4.0 |
| | Value in Use | 137 | 2.912 | 1.240 | 2.0 | 3.0 | 4.0 |
| | Fair Value (mark-to-market) | 171 | 2.480 | 1.343 | 2.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-model) | 129 | 3.240 | 1.292 | 2.0 | 3.0 | 5.0 |
| Property, Plant & | Historical Cost | 177 | 2.379 | 1.191 | 2.0 | 2.0 | 3.0 |
| Equipment | Lower of Cost or Market | 158 | 2.823 | 1.239 | 2.0 | 3.0 | 4.0 |
| | Value in Use | 143 | 2.503 | 1.034 | 2.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-market) | 181 | 2.149 | 1.093 | 1.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-model) | 128 | 3.063 | 1.290 | 2.0 | 3.0 | 4.0 |
| Inventories | Historical Cost | 172 | 2.640 | 1.251 | 2.0 | 2.0 | 3.5 |
| | Lower of Cost or Market | 164 | 2.573 | 1.229 | 2.0 | 2.0 | 3.0 |
| | Value in Use | 145 | 2.779 | 1.108 | 2.0 | 3.0 | 3.0 |
| | Fair Value (mark-to-market) | 179 | 2.117 | 1.072 | 1.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-model) | 128 | 3.234 | 1.264 | 2.0 | 3.0 | 4.0 |
| Financial Assets | Historical Cost | 168 | 3.149 | 1.400 | 2.0 | 3.0 | 5.0 |
| | Lower of Cost or Market | 156 | 2.923 | 1.384 | 2.0 | 3.0 | 4.0 |
| | Value in Use | 132 | 3.189 | 1.314 | 2.0 | 3.0 | 5.0 |
| | Fair Value (mark-to-market) | 190 | 1.542 | 0.781 | 1.0 | 1.0 | 2.0 |
| | Fair Value (mark-to-model) | 128 | 2.805 | 1.243 | 2.0 | 3.0 | 4.0 |
| Non-operating | Historical Cost | 161 | 2.621 | 1.112 | 2.0 | 2.0 | 3.0 |
| Assets | Lower of Cost or Market | 157 | 2.860 | 1.238 | 2.0 | 3.0 | 4.0 |
| | Value in Use | 132 | 2.932 | 1.120 | 2.0 | 3.0 | 3.0 |
| | Fair Value (mark-to-market) | 167 | 2.108 | 0.963 | 1.0 | 2.0 | 3.0 |
| | Fair Value (mark-to-model) | 122 | 3.016 | 1.213 | 2.0 | 3.0 | 4.0 |

Table 4. Decision usefulness of measurement concepts by asset class

Notes: The response sample contains all survey responders which provided demographic information to be assigned to the targeted response groups and a work country. This yields a sample size of 242 observations. In the respective analyses, a sample size below 242 indicates missing or can't say answers. The responses are coded from one (very useful) to five (not useful).

confirm the results of Table 3, as the mark-to-market fair value concept is the preferred measurement concept for all asset classes. But respondents clearly differentiate between mark-to-model and mark-to-market concepts when evaluating the decision usefulness of fair values. For most asset classes, they rank mark-to-model fair values as the least decision-useful measurement concept. The difference between the evaluations of mark-to-market and mark-to-model approaches is highly significant for all asset groups. The difference between the evaluations of mark-to-market fair values and cost-oriented approaches is significant at conventional levels (not tabulated) for inventories, financial assets and non-operating assets, indicating that for these asset classes, professional investors

clearly prefer mark-to-market fair values to historical cost approaches. The difference between the evaluations of mark-to-model fair values and historical cost is significant at conventional levels (not tabulated) for financial asset classes, indicating that only for financial assets, professional investors prefer mark-to-model fair values to historical cost approaches while for all other asset classes they prefer historical cost to mark-to-model fair values.

In order to assess potential differences in response behavior across subjects we analyze correlations between respondents' demographics and their response behavior. For the sake of brevity we do not tabulate the results but we generally find that the assessment of the decision usefulness of the different measurement concepts is relatively homogeneous across respondents. Users with more work experience generally tend to view fair-value based measurement concepts as less decision useful. The same applies to users that have a common law background.³ Finally, more experienced investors and professional investors with a focus on the financial services industry differentiate more between the decision usefulness of mark-to-market and mark-to-model fair values. Taken together, these correlation analyses indicate that our findings are fairly robust across subjects and are not driven by inexperienced investors.⁴

4. Conclusions

In this study, we surveyed professional investors and their advisors in order to enhance our understanding of their assessment of the decision usefulness of different accounting measurement concepts. The results show that investors hold differentiated beliefs about the decision usefulness of competing measurement attributes. Based on a sample of professional investors with an interest in financial accounting matters, we find that investors are reasonably familiar only with historical cost accounting and mark-to-market fair value accounting. Other measurement concepts, such as value-in-use, or mark-to-model fair value accounting are significantly less well-known. For liquid and non-operating assets, mark-to-market fair value is considered to be the most decision-useful measurement concept. For non-liquid and operating assets, historical cost and market-based fair values are not regarded as being significantly different in respect to decision usefulness.

Mark-to-model based fair values are regarded as significantly less decisionuseful than market-based fair values and historical cost measures for practically all asset and liability classes. Only for financial assets do respondents view markto-model measures as more decision-useful than historical cost values. This differentiation between mark-to-model and mark-to-market fair values increases with work experience. Also, investors from common-law countries seem to view fair values on average as less decision-useful, but this result is based on a small group of investors with a common-law background.

These findings clearly suggest that professional investors do not see fair value as a homogeneous measurement concept. While they generally evaluate marketbased fair values as being (very) decision-useful, they rate mark-to-model based fair values as the overall least decision-useful measurement concept. Respondents also differentiate between different asset groups when assessing the decision usefulness of measurement concepts. This differentiation is also more pronounced for experienced investors. Since we fail to document an influence of the investing background on the assessment of decision usefulness, we take this evidence as indicating, overall, that verifiability of accounting measures matters to professional investors, regardless of their investing background.

Our results should be interpreted with care for a number of reasons. First, our findings do not speak directly to the overall social welfare effects of different measurement concepts as we focus on a particular user group and their relevant information needs. Second, even though the selected research design constitutes an appropriate design choice for the research question at hand, all survey studies suffer from both internal and external validity concerns (Graham *et al.*, 2005, p. 9; Groves *et al.*, 2004). Finally, it seems important to note that this study was conducted prior to the financial crisis. As this crisis spawned a lively debate about the advantages and disadvantages of using fair value based measurement concepts in financial accounting and reporting, it might be a fruitful avenue for future research to re-investigate the attitudes of professional investors towards alternative financial accounting measurement concepts post-2008/2009.

Acknowledgments

This study has been supported by the Accounting Standards Committee of Germany (ASCG). We thank the members of the ASCG's working group on fair value measurement and the board members of the ASCG for fruitful discussions and comments on the study design. Also, we thank the European Federation of Financial Analysts Societies (EFFAS) for cooperating on conducting this study. Excellent research assistance by Björn Knittel is gratefully acknowledged. This paper has significantly benefited from feedback we received at the joint conference of the accounting section of VHB and the IAAER in Munich 2008, the EAR Research Conference in Segovia 2009, the EAA Annual Conference 2009 in Tampere, from Ann Gaeremynck (our discussant at the EAR conference), from two anonymous referees and from Katherine Schipper as well as Marco Trombetta (the editors). All opinions expressed in this paper are solely those of the authors.

Notes

¹The online survey also collected data on the decision usefulness of different measurement concepts for liabilities. In comments to their responses, several respondents stated that they were insecure on how to interpret the accounting measurement concepts for the according question. Therefore, we dropped this question (no. 12) from the analysis. The main results of the study are unaffected by this design choice.

²See, for example, AIMR, 2000 (survey of 343 general investors); Barker (1999) (survey and interviews of 70 professional investors); CFO, 2007 (no formal survey); Hodge, 2003 (414 non-professional investors); PWC, 2005 (interviews with 50+ financial analysts).

³It should be noted that only 25 of 242 respondents have a common law background. Thus, our finding might be an artifact of the small sample.

⁴We further test our results for robustness by changing the sample to all respondents (383 observations) or by limiting the sample to varying sub-groups of respondents (e.g. only experienced investors, only investors who spent between 15 to 45 minutes with the online survey, only fully-completed survey responses, no investors with extreme or atypical response behavior, excluding the three countries with highest number of responses). Also, we normalized the response behavior of each subject. Our main results are robust to these robustness checks.

References

AIMR (2000) AIMR Corporate Disclosure Survey (AIMR).

- Allee, K. D., Bhattachraya, N., Black, E. L. and Christensen, T. E. (2007) Pro forma disclosure and investor sophistication: external validation of experimental evidence using archival data, *Accounting, Organizations and Society*, 32, pp. 201–222.
- Allen, F. and Carletti, E. (2008) Mark-to-market accounting and liquidity pricing, *Journal of Account*ing and Economics, 45, pp. 358–378.
- Arya, A., Glover, J. and Sunder, S. (1998) Earnings management and the revelation principle, *Review of Accounting Studies*, 3, pp. 7–34.

Ball, R. (2006) International Financial Reporting Standards (IFRS): pros and cons for investors, Accounting and Business Research, International Accounting Policy Forum, 36, pp. 5–27.

Barker, R. G. (1999) The role of dividends in valuation models used by analysts and fund managers, *European Accounting Review*, 8, pp. 195–218.

- CFO Institute (2007) A Comprehensive Business Reporting Model: Financial Reporting for Investors (CFO Institute)
- Christensen, P. O., Demski, J. S. and Frimor, H. (2002) Accounting policies in agencies with moral hazard and renegotiation, *Journal of Accounting Research*, 40, pp. 1071–1090.
- Demski, J. S. (1973) The general impossibility of a normative accounting standard, *The Accounting Review*, 48, pp. 718–723.
- Elliot, W. B., Hodge, F. D., Kennedy, J. and Pronk, M. (2007) Are MBA students a good proxy for nonprofessional investors? *The Accounting Review*, 82, pp. 139–168.
- Fischer, P. E. and Verrecchia, R. E. (2000) Reporting bias, The Accounting Review, 75, pp. 229-245.
- Graham, J. R., Harvey, C. R. and Rajgopal, S. (2005) The economic implications of corporate financial reporting, *Journal of Accounting and Economics*, 40, pp. 3–73.
- Groves, R. M., Fowler, Jr., F.J., Couper, M. P., Lepkowski, J. M., Singer, E. and Tourangeau, R. (2004) Survey Methodology (Hoboken, NJ: John Wiley & Sons).
- Hermalin, B. E. and Katz, M. L. (1991) Moral hazard and verifiability: the effects of renegotiation in agency, *Econometrica*, 59, pp. 1735–1753.
- Hodge, F. D. (2003) Investors' perceptions of earnings quality, auditor independence, and the usefulness of audited financial information, Accounting Horizons (Supplement), 17, pp. 37-48.
- Holthausen, R. W. and Watts, R. L. (2001) The relevance of the value-relevance literature for financial accounting standard setting, *Journal of Accounting and Economics*, 31, pp. 3–75.
- Kachelmeier, S. J. and King, R. R. (2002) Using laboratory experiments to evaluate accounting policy issues, Accounting Horizons, 16, pp. 219–232.
- Mains, L. A., Salomon, G. L. and Sprinkle, G. B. (2006) An information economic perspective on experimental research in accounting, *Behavioral Research in Accounting*, 18, pp. 85–102.
- Penman, S. H. (2007) Financial reporting quality: is fair value a plus or a minus? Accounting and Business Research, International Accounting Policy Forum, 37, pp. 33–44.

- Plantin, G., Sapra, H. and Shin, H. S. (2008) Marking-to-market: panacea or Pandora's box? *Journal of Accounting Research*, 46, pp. 435–460.
- PWC (2007) Measuring Assets and Liabilities: Investment Professionals' Views (Price Waterhouse Coopers).
- Sax, L. J., Gilmartin, S. K. and Bryant, A. N. (2003) Assessing response rates and nonresponse bias in web and paper surveys, *Research in Higher Education*, 44, pp. 409–432.
- Watts, R. L. (1977) Corporate financial standards, a product of the market and political processes, Australian Journal of Management, 2, pp. 53–75.