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Accounting conservatism: A review of the literature

George W. Ruch, Gary Taylor *

University of Alabama, Culverhouse School of Accountancy, United States

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ABSTRACT

We review and analyze the accounting literature that examines the effects of accounting conservatism on financial statements and financial statement users. We begin by analyzing how conservatism affects the reported numbers on the financial statements. These studies primarily evaluate how conservatism affects earnings quality, including earnings persistence and the presence of earnings management. Next, we assess the effect of accounting conservatism on the users of the financial statements. We identify three primary users of the financial statements: (1) equity market users (2) debt market users and (3) corporate governance users. Within each of these categories, we analyze the findings of prior research and explore unanswered research questions. By analyzing the effects of accounting conservatism from a diverse range of research topics, we inform the discussion on the costs and benefits of accounting conservatism.

1. Introduction

Accounting conservatism can be defined as accounting policies or tendencies that result in the downward bias of accounting net asset value relative to economic net asset value. It is one of the most fundamental features of accounting information, dating back centuries (Basu, 1997; Watts, 2003a). While there is little question as to conservatism's existence, there is a debate among researchers and

* Corresponding author. Tel.: +1 2053484658.
E-mail addresses: ruch001@cba.ua.edu (G.W. Ruch), gtaylor@cba.ua.edu (G. Taylor).

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standard setters as to how costly or beneficial conservatism is to financial statement users. The Financial Accounting Standards Board (FASB) does not include conservatism as one of the qualitative characteristics of financial reporting in its conceptual framework because it believes that conservatism biases accounting information and compromises neutrality (FASB, 2010). Some researchers have echoed this notion, arguing that conservatism biases financial statement numbers to result in inefficient decision-making (Gigler, Kanodia, Sapra, & Venugopalan, 2009; Guay & Verrecchia, 2006).

Alternatively, some researchers contend that accounting conservatism arises naturally between contracting parties and is necessary as an efficient contracting mechanism (Basu, 1997; Watts, 2003a). This view stems from the idea that certain contracts (e.g., debt and executive compensation) have asymmetric payoffs to contracting parties, thereby resulting in timelier reporting of information that has the greatest potential to affect the contracting parties. For example, a debt agreement has asymmetric payoffs for the lender. While strong financial performance on the part of the debtor does not increase the payoff to the lender, weak financial performance on the part of the debtor increases the risk of default, thus reducing the lender's potential payoff. Consequently, the lending party demands that the borrowing party report information that may reflect weak financial performance (i.e., bad news) in a timelier manner than it would report information that may reflect strong financial performance (i.e., good news).

The controversy that fuels this debate arises from different perspectives on the informational roles of accounting. From one perspective, the primary function of accounting is to capture information that can be used to assess the market value of equity and make investment decisions ("valuation perspective"). From another perspective, the primary function of accounting is to provide information that allows contracting parties to evaluate the efficiency and effectiveness with which obligations are performed in contracting settings such as debt and executive compensation contracts ("contracting perspective").[1] Assessments of the costs and benefits of accounting conservatism are largely dependent on one's perspective on accounting information (i.e., valuation versus contracting), as information that is desirable from one perspective may be of little value from another perspective.

To address these issues, we review the literature and provide analysis of the effects of accounting conservatism. We discuss the effects of accounting conservatism in two phases. First, we discuss the direct effects of accounting conservatism on the financial statement numbers. Second, we discuss the effects of conservatively reported financial statements on the users of the financial statements. We analyze the effects of conservatism on three broad groups of financial statement users: (1) equity market users (2) debt market users (3) corporate governance users. The section on equity market users discusses how investors and analysts use the financial statements to make decisions about the firm. The section on debt market users discusses how lenders and borrowers use the financial statements in debt contracting settings. The section on corporate governance users discusses how conservatism impacts the effectiveness with which shareholders monitor firm management through executive compensation and investment decisions. Fig. 1 provides an illustration of the effects of accounting conservatism on the financial statements and the users of the financial statements.

We review 34 studies on the effects of accounting conservatism, the majority of which are published in prominent peer-reviewed accounting journals with dates ranging from 1997 to 2014.[2] Table 1, Panel A provides a count of the studies we review, grouped by source journal; Panel B provides a count of the studies we review, grouped by research topic. Overall, prior research has provided mixed evidence on the costs and benefits of accounting conservatism. Some of the studies reviewed in this paper find that conservatism alleviates information asymmetry, reduces debt cost of capital, makes executive compensation more sensitive to accounting earnings, and induces management to make more efficient investment decisions, all of which indicate that conservatism may be beneficial

[1] See Christensen and Demski (2003) for a complete discussion on the valuation and contracting roles of accounting information. Holthausen and Watts (2001), Barth et al. (2001), and Watts (2003a, 2003b) also discuss the dual roles of accounting information and how conservatism may or may not be useful in each of these roles.

[2] Our review includes a discussion of one working paper (Louis et al., 2014). We include a discussion of this study because its findings are particularly relevant to the effects of conservatism on analyst forecasts and are distinct from findings in published research. Additionally, Google Scholar indicates that this study has been cited 25 times as of January 2015.

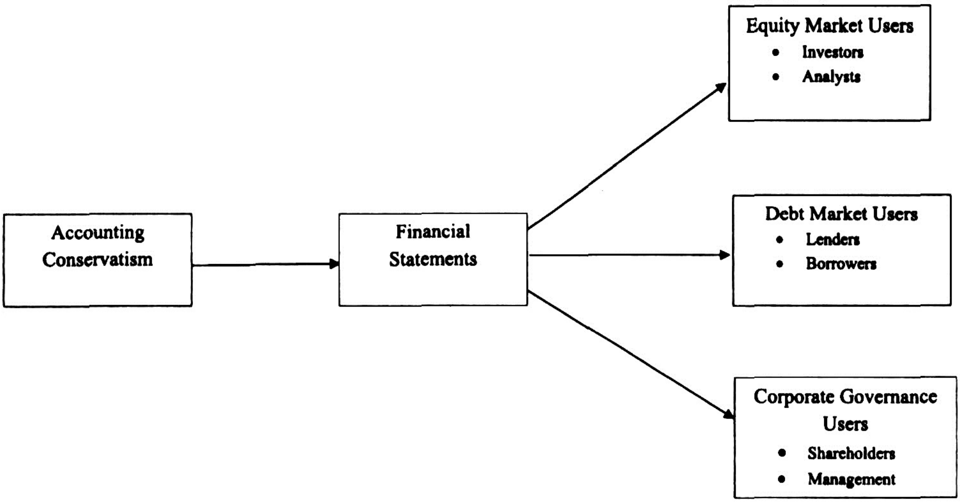

Fig. 1. Overview of the effects of accounting conservatism on financial statements and financial statement users.

Table 1
Breakdown of studies reviewed.

	Number of papers reviewed
Panel A: Studies reviewed (by source journal)	
Accounting and Finance	2
Accounting Horizons	2
Contemporary Accounting Research	2
Journal of Accounting, Auditing, and Finance	1
Journal of Accounting and Economics	7
Journal of Accounting Research	5
Review of Accounting Studies	4
The Accounting Review	6
Other Journals	4
Working Papers	1
Total	34
Panel B: Studies reviewed (by topic)	
Financial statement effects	6
Equity market users	16
Debt market users	4
Corporate governance users	8
Total	34

when viewed from the contracting perspective. Conversely, other studies find that conservatism reduces earnings persistence and predictability, facilitates earnings management, reduces analyst forecast accuracy, and may reduce the value relevance of earnings, which indicates that conservatism may be detrimental when viewed from the valuation perspective. Finally, we find that conservatism's effect on the cost of equity capital is mixed and inconclusive.

Prior literature reviews on conservatism have surveyed studies that examine the legal and political determinants of conservatism (Habib, 2007; Watts, 2003a, 2003b), the construct validity of the various empirical measures of conservatism (Wang, Hógartaigh, & van Zijl, 2009), and the relationship between timely loss recognition (i.e., conditional conservatism) and earnings quality (Dechow, Ge, & Schrand, 2010). Our study differs from these prior surveys of the conservatism literature in that we focus on the costs and benefits of accounting conservatism, rather than reviewing specific measures or causes of accounting conservatism. Additionally, our study analyzes how different forms of accounting conservatism (i.e., conditional versus unconditional conservatism) may affect financial statements and financial statement users.

Overall, we contribute to the literature by integrating and analyzing conservatism research from a broad spectrum of research topics to encompass multiple aspects of the impact of conservatism on financial statements and financial statement users. Understanding the effects of conservatism is important in assessing the costs and benefits of conservatism and informs the debate surrounding the role of conservatism in financial reporting. Additionally, this study identifies avenues for future research on the effects of accounting conservatism.

This study is organized as follows: Section 2 provides background on accounting conservatism. Section 3 discusses the effects of conservatism on the financial statements vis-à-vis earnings quality. Section 4 discusses the effects of conservatism on the users of the financial statements, specifically, equity market users, debt market users, and corporate governance users. Section 5 provides concluding remarks.

2. Background

Accounting conservatism can be defined as accounting policies or tendencies that contribute to a downward bias in accounting net asset value relative to economic net asset value. Accounting standard-setters and accounting scholars have offered similar definitions of conservatism. Statement of Financial Accounting Concepts (SFAC) No. 2 defines conservatism as follows:

> "Conservatism is a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered. Thus, if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate. . ." (FASB, 1980)

The philosophy of conservatism is commonly summarized in the literature by the adage "anticipate no profits and provide for all probable losses" (Bliss, 1924). Watts and Zimmerman (1986) define conservatism as reporting the lowest value among possible alternative values for assets and the highest alternative value for liabilities.

Extending these definitions, accounting researchers have identified two broad forms of conservatism that produce the aforementioned understatement of accounting value: (1) conditional conservatism, and (2) unconditional conservatism. The primary difference between the two forms of conservatism is that the application of conditional conservatism depends on economic news events, while the application of unconditional conservatism does not.

Conditional conservatism occurs when negative economic news is recognized in accounting earnings in a timelier manner than positive economic news. In other words, conditional conservatism is characterized by the asymmetric recognition of positive and negative economic news. Examples of conditional conservatism include the asymmetric treatment of loss and gain contingencies and accounting for inventory using the lower-of-cost-or-market convention.

Unconditional conservatism occurs through the consistent under-recognition of accounting net assets. Unlike conditional conservatism, unconditional conservatism does not depend on news events. Examples of unconditional conservatism include immediately expensing research and development expenditures and accelerated depreciation. Table 2 provides a list of conditional and unconditional conservatism practices.

It is important to distinguish between conditional and unconditional conservatism for three reasons. First, these two forms of conservatism have different effects on the financial statements. The application of accounting policies consistent with unconditional conservatism is likely to have a relatively consistent impact on the income statement from period to period (e.g., research and development expenses). Conversely, the application of conditional conservatism is more likely to be transitory on the income statement because of fluctuations in the content and timing of economic news across periods (Chen, Folsom, Paek, & Sami, 2014). On the balance sheet, both types of conservatism result in understated net assets. However, conditional and unconditional conservatism have different effects on the timing of income statement recognition, and in turn, different effects on the timing of balance sheet recognition (i.e., reduction in net asset value). For example, accelerated

Table 2
Examples of accounting conservatism.

Type of conservatism	Common examples
Conditional conservatism	• Goodwill impairment • Long-lived asset impairment • Inventory recorded at the lower of cost or market • Asymmetry in gain/loss contingencies
Unconditional conservatism	• Accelerated depreciation methods • Expensing R&D costs • Expensing advertising costs • LIFO inventory • Accumulated reserves in excess of expected future costs (e.g., allowance for doubtful accounts, warranty allowance)

depreciation of an asset in the first few years of the asset's life may eliminate the need to write down the book value of the asset in the event of bad news about the market value of the asset.

Second, research suggests that the application of one type of conservatism affects the application of the other type. Most notably, Beaver and Ryan (2005) investigate the relationship between conditional and unconditional conservatism, and find that unconditional conservatism creates "accounting slack" that may preempt the application of conditional conservatism.[3] The unconditional understatement of assets limits the magnitude of write-downs recognized in the presence of bad news events, and therefore, reduces observed asymmetric timeliness in earnings. Consequently, inferences made regarding the presence of conditional conservatism may be confounded by the presence of unconditional conservatism.

Third, the conditions that give rise to conditional conservatism may differ from those of unconditional conservatism. For instance, Qiang (2007) examines the presence of unconditional and conditional conservatism in each of four explanations for conservatism offered by Watts (2003a) – contracting, litigation, taxation, regulatory – and finds that conditional conservatism arises in settings where contracting and litigation costs are high, whereas unconditional conservatism arises in settings where litigation, regulatory, and tax costs are high.

Of the two forms of conservatism, conditional conservatism is more prevalent than unconditional conservatism in research on accounting conservatism. Specifically, 24 of the 34 studies reviewed in our study focus on conditional conservatism in some manner, whereas only 11 of the 34 studies focus on unconditional conservatism.[4] A potential reason for the focus on conditional conservatism could be the notion that it communicates information about uncertain events, and is therefore of greater interest to researchers studying contracting and valuation issues than is unconditional conservatism (Ball & Shivakumar, 2005; Ryan, 2006).

3. Effects on financial statements

Conservatism results in an understatement of accounting book value relative to the market value of equity due to the understatement of assets and revenues and/or the overstatement of liabilities and expenses. However, the extant literature on the financial statement effects of accounting conservatism primarily focuses on its effects on earnings quality. Dechow et al. (2010) analyze how earnings quality is defined in the accounting literature and the proxies commonly used to measure it. They contend that there is no consensus definition of earnings quality, which, we posit, may be attributed to the different perspectives on the use of accounting information (i.e., contracting versus valuation).[5]

[3] See also Basu (2005) for discussion of the relationship between conditional and unconditional conservatism.

[4] 17 studies focus exclusively on conditional conservatism, 5 studies focus exclusively on unconditional conservatism, 7 studies focus on both forms of conservatism, and 5 studies do not specify a form of conservatism.

[5] One of the proxies for earnings quality discussed by Dechow et al. (2010) is timely loss recognition (i.e., conditional conservatism). While their analysis provides insights into the effects of accounting conservatism on earnings quality, it only focuses on conditional conservatism. Our study extends their analysis by examining the effects of both conditional and unconditional conservatism on earnings quality.

We review the conservatism studies that have examined the effect of conservatism on the earnings quality proxies discussed in Dechow et al. (2010). While the studies reviewed in this section do not explicitly address all of the proxies discussed in Dechow et al. (2010), some of the conclusions drawn with respect to the effects of conservatism on certain earnings quality proxies may be applied to other earnings quality proxies. We group the studies that examine the effects of conservatism on earnings quality into two broad groups: (1) time-series properties of earnings, which encompass earnings persistence and predictability, and (2) the presence of earnings management.

3.1. Time-series properties of earnings

Research on the effects of conditional conservatism on the time-series properties of earnings consistently finds that conditional conservatism reduces earnings persistence and predictability. Dichev and Tang (2008) and Chen et al. (2014) provide evidence that conditional conservatism increases earnings volatility and decreases earnings persistence. Dichev and Tang (2008) find that the correlation between past expenses and current revenues has increased over the 40 years preceding the study, which, in turn contributes to increased earnings volatility and decreased earnings persistence. An increase in the correlation between past expenses and current revenues is consistent with timely loss recognition. Accordingly, Dichev and Tang (2008) conclude that this finding is consistent with an increase in conditional conservatism over a similar time frame, as noted by Givoly and Hayn (2000).

Chen et al. (2014) find that conditional conservatism has a negative incremental effect on persistence and that the negative effect on earnings persistence leads to lower pricing multiples on earnings. Additionally, they find that earnings persistence and pricing multiples are lower for conditionally conservative earnings than for unconditionally conservative earnings.

Kim and Kross (2005) and Bandyopadhyay, Chen, Huang, and Jha (2010) provide evidence that conditional conservatism decreases the ability of earnings to predict future earnings but increases the ability of earnings to predict future operating cash flows. Kim and Kross (2005) find that the ability of earnings to predict future operating cash flows increases (does not increase) through periods where conservatism is increasing (not increasing). Extending Kim and Kross (2005), Bandyopadhyay et al. (2010) find that conservatism is positively associated with the predictability of future cash flows and negatively associated with the predictability of future earnings. These studies suggest that the increased timeliness of bad news recognition is associated with temporary fluctuations in earnings, making earnings less persistent and predictable from one period to the next.

The impact of unconditional conservatism on earnings persistence and predictability are dependent on the conservatism practice used. For example, accelerated depreciation would likely result in less persistent earnings than a straight-line or less accelerated method. Excess depreciation expense recognized earlier in an asset's useful life would not be recognized later in the asset's useful life, reducing the persistence of depreciation expense. However, we are unaware of any research that has examined this effect of accelerated depreciation methods on earnings persistence.

Focusing on some of the other methods of unconditional conservatism, Penman and Zhang (2002) find that research and development (R&D) expenditures, advertising expenditures, and LIFO accounting for inventory reduce the persistence of earnings when these methods temporarily fluctuate. For example, the temporary reduction of R&D expenditures increases earnings in the period of reduction. However, earnings return to normal levels when normal R&D activity is resumed. Penman and Zhang (2002) find that unconditional conservatism creates "hidden reserves" that can be released into earnings, causing a temporary distortion of operating performance.[6] This can be especially misleading in light of the fact that the reduction of R&D expenditures may reduce future sales. Overall, research suggests that conditional and unconditional conservatism adversely affect earnings quality by reducing earnings persistence and predictability.

Another aspect of earnings quality discussed in Dechow et al. (2010) that is not explicitly addressed by the conservatism literature is accrual quality. While we are not aware of any studies that explicitly

[6] The term "hidden reserve" refers to the fact that these understatements of net assets are not explicitly reported on the balance sheet. For example, expensing advertising expenditures that have future benefits has the same effect on net assets as recording reserves for bad debts or warranty liabilities.

address the relationship between conservatism and accrual quality, we contend that the results of the aforementioned studies related to the time-series properties of earnings may tangentially support the expected relationship between conservatism and accrual quality. Prior research finds that the accrual portion of earnings is less persistent than the cash portion (Sloan, 1996) and theorizes that the accrual portion of earnings possesses a lower level of quality than that of the cash portion of earnings because accruals are subject to measurement error (Dechow & Dichev, 2002). Additionally, the application of accounting conservatism is frequently accomplished through the use of accruals, especially in the case of timely loss recognition. Consequently, the differences in earnings persistence and predictability noted in the studies reviewed in this section may be the result of differences in the accrual composition of earnings.

3.2. *Presence of earnings management*

Next, we consider the relationship between accounting conservatism and the presence of earnings management. Earnings management is often defined as management's intentional manipulation of accounting numbers to achieve strategic earnings targets. While there is a significant amount of earnings management research, few studies investigate the effect of accounting conservatism on the occurrence of earnings management.[7] A natural research question is: how do conservative accounting policies impact the pervasiveness of earnings management? At first glance, it may appear that conservatism lies in direct contrast to an aggressive accounting practice, such as earnings management. However, we do not restrict our definition of accounting conservatism to management's intent to be prudent. Rather, we consider any downward bias in accounting values to be conservative, including opportunistic downward earnings management.

In general, it is unlikely that conditional conservatism would have a significant relationship with earnings management. Due to the uncertainty of news events, managers are not able to effectively rely on the accounting recognition of news events in a given period to meet earnings targets. Bad news write-downs may be used to manage earnings downward (i.e., "big bath"), but we are not aware of any empirical evidence supporting such an assertion. Additionally, Watts (2003b) contends that the significant evidence for the existence of conservatism is unlikely to support the notion that observed write-down recognition is a significant indicator of earnings management.

Unconditional conservatism, on the other hand, has the ability to facilitate earnings management through the accumulation of reserves on the balance sheet that can be released into earnings when an earnings target needs to be met. The reserves are accumulated via unconditional conservatism over multiple accounting periods. In this case, firm management is opportunistically exploiting conservative accounting to achieve earnings targets in future periods. Jackson and Liu (2010) demonstrate that conservatism in estimating the allowance for doubtful accounts can be associated with earnings management. They find that the allowance for doubtful accounts conservatively estimates future write-downs on average, and that such conservatism is associated with the use of bad debt expense to meet analyst EPS targets. In other words, the conservatively estimated reserve is released into earnings by reducing bad debt expense to meet earnings targets.

3.3. *Opportunities for future research*

Overall, research has found that conditional conservatism reduces earnings persistence and predictability and that unconditional conservatism can facilitate earnings management through the accumulation of balance sheet reserves. These findings seem to indicate that accounting conservatism has more negative effects on earnings quality than positive effects. A list of the studies that evaluate the effects of conservatism on the financial statements is provided in Table 3.

Future research on conditional conservatism's effect on the time-series properties of earnings could do more to separate these effects into good news and bad news periods. The deferral of gains is likely to result in more persistent earnings, and therefore, earnings in good news periods are likely to

[7] See Habib and Hansen (2008), Healy and Wahlen (1999), and Schipper (1989) for more thorough definitions of earnings management and reviews of the earnings management literature.

Table 3
Studies on financial statement effects.

Author(s)	Topic	Research question	Sample	Type of conservatism	Findings
Penman and Zhang (2002)	Time-series properties of earnings	What effect do conservative accounting practices have on earnings quality?	US firms (1975–1997)	Unconditional	Conservatism results in the accumulation of "hidden reserves". These reserves are released into earnings when temporary changes are made to conservative accounting. This results in earnings that are less predictable.
Kim and Kross (2005)	Time-series properties of earnings	Has the ability of earnings to predict future operating cash flows improved over time?	US firms (1972–2001)	Conditional	The ability of earnings to predict operating cash flows has increased over the sample period. This increase appears to be driven by the previously documented time-series increase in accounting conservatism.
Dichev and Tang (2008)	Time-series properties of earnings	Has the ability of expenses to match revenues declined over time?	US firms (1967–2003)	Conditional	Revenue-expense matching has decreased over time, resulting in more volatile and less persistent earnings. This suggests that expense recognition is timelier, consistent with conditional conservatism.
Bandyopadhyay et al. (2010)	Time-series properties of earnings	How does the ability of earnings to predict future operating cash flows affect the ability of earnings to predict future earnings?	US firms (1972–2006)	Conditional	Conservatism enhances the ability of earnings to predict future operating cash flows, but inhibits the ability of earnings to predict future earnings.
Jackson and Liu (2010)	Earnings management	How does conservative accounting with respect to the allowance for doubtful accounts impact the ability of firms to manage earnings using bad debt expense?	US firms (1980–2004)	Unconditional	Bad debt expense is managed to meet earnings targets. Conservative treatment of allowance for doubtful accounts facilitates the use of bad debt expense to manage earnings.
Chen et al. (2014)	Time-series properties of earnings	How does conservatism affect earnings persistence and stock pricing multiples?	US firms (1988–2010)	Conditional; Unconditional	Conditional conservatism reduces earnings persistence, and in turn, reduces equity pricing multiples. Conditionally conservative earnings are also found to be less persistent that unconditionally conservative earnings.

be more persistent than earnings in bad news periods. It is apparent that the bad news timeliness portion of conditional conservatism reduces earnings persistence and predictability, but it is unclear how the good news timeliness portion of conditional conservatism affects earnings persistence and predictability.

Future research on the effects of conservatism on earnings management could examine whether conditional conservatism, in the form of timely loss recognition, has the ability to facilitate earnings management via the "big bath". Additionally, future research could examine the presence of classification shifting in timely write-downs (e.g., McVay, 2006).

Future research could also examine the connection between unconditional conservatism methods and the use of real activities manipulation to meet earnings targets (i.e., real earnings management).[8] While not explicitly discussed by the authors, the evidence in Penman and Zhang (2002) suggests that unconditional conservatism practices could facilitate real earnings management. The hidden reserves created by the conservative treatment of R&D expenditures, advertising expenditures, and inventory using the LIFO convention can be released into earnings by manipulating the operations of the firm. Future research could explore whether firms that use LIFO accounting for inventory are more likely to engage in real earnings management via overproduction than firms that use FIFO or average cost methods.

4. Effects on financial statement users

In this section, we discuss how accounting conservatism affects financial statement users in equity markets, debt markets, and corporate governance settings. SFAC No. 8 states that financial accounting information is relevant to financial statement users if it has predictive and/or confirmatory value (FASB, 2010).[9] We contend that the predictive or confirmatory value of information depends on the outcomes financial statement users are trying to predict or confirm. In other words, equity market users may prefer information that is relevant from the valuation perspective, whereas debt market and corporate governance users may prefer information that is relevant from the contracting perspective.

4.1. Equity market users

We define equity market users to include investors and analysts and examine how accounting conservatism affects the quality of accounting information provided to these users. We assess information quality in terms of decision usefulness for investors and analysts on two dimensions: (1) value relevance and (2) information asymmetry.

Value relevance refers to the extent to which accounting information has predictive and/or confirmatory value to the decisions of equity market users, and is commonly operationalized as a contemporaneous association between accounting earnings and market returns. Conditional conservatism results in a greater association between earnings and returns when news is bad (Basu, 1997), which implies that timely loss recognition provides information that is more value relevant. Alternatively, conditional conservatism also results in a lower association between earnings and returns when news is good, which implies that deferred gain recognition provides information that is less value relevant. Unconditional conservatism may reduce value relevance by omitting information that is useful in assessing the firm's value. For example, R&D expenditures could provide future benefits to the firm in the form of future sales. However, the immediate expensing of R&D under conservative accounting ignores these future benefits by prohibiting accounting from capitalizing the expenditures.

There is a debate as to whether a high contemporaneous association between accounting information and stock market information should be considered a desirable trait of accounting information. Holthausen and Watts (2001) contend that measuring value relevance provides little

[8] See Xu et al. (2007) for a review of the real earnings management literature.

[9] SFAC No. 8 further states that information has predictive value if it can be used as an input to predict future outcomes, and that information has confirmatory value if it provides feedback about prior information.

value in assessing the quality of accounting information, as accounting information has uses beyond equity valuation (e.g., contracting). They use accounting conservatism to illustrate this point by noting that demands for conservatism originate from non-equity market users (see Watts, 2003a). Under this view, studying the effects of conservatism on value relevance is of little value in assessing the merits of conservatism for financial reporting.

In contrast, Barth, Beaver, and Landsman (2001) argue that value relevance is one trait among many that can be used to assess information quality. Under this view, value relevance serves as one of many implications to consider in assessing the merits of conservatism. We contend that evaluating the effect of conservatism on value relevance is important to understanding the effects of conservatism on equity market users. However, it is important to note that value relevance may only be a desirable attribute of accounting from the valuation perspective and not necessarily from the contracting perspective.

Overall, accounting research has provided indirect evidence that conservatism may affect value relevance. Collins, Maydew, and Weiss (1997) find that the decline in value relevance of earnings can be explained by temporal increases in intangible-asset intensity, increases in the incidence of nonrecurring charges in earnings, and increases in the incidence of negative earnings.[10] The study has two implications for conservatism. First, the increase in intangible-asset intensity implies an increase in unconditional conservatism. Second, the increase in nonrecurring charges in earnings implies an increase in conditional conservatism. Lev and Zarowin (1999) attribute the decline in value relevance to firms with increasing R&D intensity. In contrast, Francis and Schipper (1999) do not find evidence that the decline in value relevance for high-technology firms is greater than the decline for low-technology firms.[11]

Balachandran and Mohanram (2011) is the only study we are aware of that directly examines the relationship between unconditional conservatism and value relevance over time. While they find that unconditional conservatism has increased over time and that the value relevance of accounting earnings has decreased over time, they do not find evidence that the decline in value relevance can be attributed to an increase in unconditional conservatism.

From a valuation model perspective, Feltham and Ohlson (1995) analytically assert that conservative accounting policies do not alter the future cash flows of a firm, and therefore, does not affect its market value of equity.[12] Conservatism merely alters the amount of equity market value that is recorded in accounting value. However, Monahan (2005) notes that the downward bias in accounting information caused by conservative accounting policies alters expectations of future earnings in the residual income valuation model. Specifically, he finds that the market underestimates future earnings when a firm's past R&D growth is high (i.e., unconditional conservatism), ultimately resulting in a lower estimated market value for the firm. Monahan (2005) also finds that residual income valuation estimates are less accurate for firms with high R&D intensity and high R&D growth. From this perspective, it appears that unconditional conservatism impairs the predictive value of accounting information.[13] Overall, there is only limited evidence to suggest that conservatism reduces value relevance.

The second dimension of information quality we examine, information asymmetry, occurs when management has private information that is relevant in assessing future firm performance that is not available to investors and analysts. When accounting information communicates this private information to investors and analysts, information asymmetry is alleviated and information is of

[10] Easton et al. (2000) note that intangible-asset intensity, non-recurring losses, and negative earnings can all affect the earnings-return relationship through the extent to which earnings are permanent and the extent to which value-relevant events are recorded in earnings. They note that failure to control for the permanence of earnings may result in incorrect conclusions with respect to value relevance. None of the studies that examine the change in value relevance over time attempts to measure or to control for the permanence of earnings.

[11] Lev and Zarowin (1999) find that the decline in value relevance for steady-state R&D firms is insignificantly different for high R&D intensity firms and low R&D intensity firms. If R&D intensity is not changing across the sample period, then the effect of R&D on value relevance is likely to be constant across the sample period. This is a possible reason for the lack of significant differences in the value-relevance declines of high-technology and low-technology firms noted by Francis and Schipper (1999).

[12] Feltham and Ohlson (1995) use the residual income model from Ohlson (1995) as the theoretical basis for their conclusions. See also Barth et al. (1999) for empirical tests that incorporate the conservatism parameters in the residual income model.

[13] See also Beaver and Ryan (2000) for tests on the relationship of unconditional conservatism practices and firm value.

higher quality. In other words, accounting conservatism improves information quality if it alleviates information asymmetry and impairs information quality if it exacerbates information asymmetry.

In general, information asymmetry is alleviated when more information is provided rather than less. Therefore, timely loss recognition is commonly theorized to alleviate information asymmetry. Conversely, deferred gain recognition may exacerbate information asymmetry by withholding information about future gains. Unconditional conservatism may increase information asymmetry simply due to the fact that information related to firm value is being withheld from investors and analysts, assuming there is no other source of such information.

LaFond and Watts (2008) find that conditional conservatism is positively associated with information asymmetry, but find that information asymmetry *induces* conditional conservatism. They contend that critics of conservatism have misinterpreted this positive association as conservatism being the cause of information asymmetry. LaFond and Watts (2008) theorize that equity market participants demand conservative accounting to mitigate the effects of information asymmetry, and therefore conservatism arises in the presence of information asymmetry.

Supporting the conclusion in LaFond and Watts (2008), Hui, Matsunaga, and Morse (2009) find a negative association between voluntary disclosure and accounting conservatism, indicating that the timely reporting of bad news acts as a substitute for voluntary disclosure. The authors also find that conservatism reduces the need to disclose bad news.

Two recent studies have found that the ability of conservatism to alleviate information asymmetry mitigates negative market reactions to bad news economic events (Francis, Hasan, & Wu, 2013; Kim, Li, Pan, & Zuo, 2013). Francis et al. (2013) find a positive relationship between measures of conditional and unconditional conservatism and abnormal stock returns during the financial crisis. This finding indicates that firms exhibiting more conservatism prior to the financial crisis suffered smaller losses during the financial crisis than firms exhibiting less conservatism prior to the financial crisis.

Kim et al. (2013) examine the effects of conditional conservatism on the market reaction to seasoned equity offering (SEO) announcements. They find that SEO announcement returns are positively related to the degree of conditional conservatism, and that the negative association between information asymmetry and SEO announcement returns is mitigated in the presence of conservatism. The findings provide evidence that conditional conservatism benefits equity investors by mitigating the risks associated with information asymmetry. Overall, evidence suggests that conditional conservatism alleviates information asymmetry, indicating that it improves information quality on the information asymmetry dimension.

We next discuss how conservatism's effect on information quality impacts the cost of equity capital and the accuracy of analyst forecasts. If conservatism improves (impairs) information quality, we expect cost of equity capital to be lower (higher) and analyst forecasts to be more (less) accurate. However, the studies on value relevance and information asymmetry have not provided conclusive evidence on conservatism's overall effect on information quality.

The cost of equity capital represents the required rate of return investors demand on their equity investment. All else equal, the required rate of return increases with the risk of the equity investment. We posit that higher quality accounting information would reduce the cost of equity capital. Therefore, conservatism's association with estimates of the cost of equity capital is an implicit indication of conservatism's impact on information quality.

Francis, LaFond, Olsson, and Schipper (2004) are unable to find a significant association between conditional conservatism and cost of equity capital. However, Chan, Lin, and Strong (2009) find a positive association between cost of equity capital and conditional conservatism and a negative association between cost of equity capital and unconditional conservatism in UK firms. Chan et al. (2009) posit that these relationships exist because unconditional conservatism is associated with more reliable earnings, and thus less uncertainty about future earnings. Conversely, conditional conservatism practices are subject to opportunistic behavior from management (e.g., "big bath" accounting), which likely compromises the quality of earnings. In contrast to Chan et al. (2009), García Lara, Garcia Osma, and Penalva (2011) find a negative association between conditional conservatism and the cost of equity capital.

Overall, the findings of conservatism's effect on the cost of equity capital are mixed. However, the mixed findings are likely attributable to measurement issues. The studies are inconsistent in their estimation of cost of equity capital. Francis et al. (2004) use the price-earnings-growth (PEG) to estimate the cost of equity capital. Chan et al. (2009) use a residual-income valuation model to estimate cost of capital, but note that their findings are robust to using the PEG ratio. García Lara et al. (2011) use the difference between raw returns and the risk free rate to estimate cost of capital.[14] Differences in each of these estimates may result in different findings.

Next, we review the literature on conservatism's effect on analyst forecast accuracy. Mensah, Song, and Ho (2004) find some evidence that conservative accounting increases analyst forecast error and dispersion.[15] Using a measure of unconditional conservatism, they find that conservative accounting is positively associated with the absolute value of forecast error and dispersion. However, they find mixed results when using another measure of conservatism that more likely captures conditional conservatism.

Helbok and Walker (2004) find that analyst forecasts are optimistically biased under conditionally conservative accounting practices. They argue that this optimistic bias exists because analysts fail to account for the conservative recognition of economic news events between the initial forecast and the earnings announcement. Instead, analysts asymmetrically adjust their forecasts in response to good news and bad news as it becomes available. Accordingly, analysts incorporate the implications of conservative treatment of economic news into their forecasts, but not until that news becomes available. That is, they do not attempt to anticipate conservatism.

Extending Helbok and Walker (2004), Louis, Lys, and Sun (2014) further investigate the relationship between conditional conservatism and the optimistic bias of analysts in initial forecasts. While analysts do not attempt to anticipate conservative treatment of economic events subsequent to the initial forecast, they may be able to incorporate information about conservative accounting available at the time the forecast is made. They find a negative and significant relationship between conservatism, as measured at the end of the prior period, and forecast error, as measured in the subsequent period, suggesting that analysts do not always incorporate available information about conservatism into their forecasts.[16]

Consistent with the above studies, Pae and Thornton (2010) find that analysts fail to efficiently incorporate the implications of conditional conservatism into their forecasts. Overall, these studies provide evidence that accounting conservatism results in noisy, biased, and inefficient earnings forecasts. From this evidence, one may conclude that conservatism impairs information quality for analysts.

Table 4 provides a list of the studies on the effects of conservatism on equity market users. To summarize the effects of accounting conservatism on equity market users, research shows that conditional conservatism alleviates information asymmetry and mitigates the negative market response to bad news economic events. Conversely, research also shows that conditional conservatism is not efficiently incorporated into analyst forecasts, possibly indicating that conditional conservatism provides poor quality information to analysts. Additionally, there is some indirect evidence that conservatism decreases the value relevance of earnings. Research is largely mixed or inconclusive on the effect of conservatism on the cost of equity capital.

4.2. Debt market users

To assess the effects of conservatism on debt market users (i.e., lenders and borrowers), we discuss how accounting conservatism affects the information quality in debt contracting settings. As with equity market users, the two most important components of information quality for debt market users are the relevance of accounting information to lending decisions and the presence of information asymmetry. Accounting information is of high quality if it is relevant to lending decisions (e.g., useful in assessing default risk) and alleviates information asymmetry between lenders and borrowers. We

[14] This is an *ex post* measure of cost of capital, whereas the PEG ratio and RIV models are *ex ante* measure of cost of capital.
[15] Forecast error refers to the absolute value difference between the most recent quarterly EPS forecast and actual EPS, scaled by the beginning of period price. Forecast dispersion is the standard deviation from the mean EPS forecast for the period.
[16] The forecast error in this study is signed. Therefore, higher conservatism results in a more negative forecast error. A negative forecast error is also consistent with optimistic bias in initial forecasts.

Table 4
Studies on the effects on equity market users.

Author(s)	Topic	Research question	Sample	Type of conservatism	Findings
Panel A: Value relevance					
Collins et al. (1997)	Value relevance	Has the value relevance of earnings and book value decreased over the past forty years?	US firms (1953–1993)	Not specified	Value relevance of earnings has decreased over time. The decrease is attributed to an increase in one-time charges, negative earnings, and intangible intensity.
Francis and Schipper (1999)	Value relevance	Has the value relevance of financial statements decreased over time?	US firms (1952–1994)	Not specified	Value relevance of earnings has declined over time. Decrease cannot be attributed to an increase in high-technology firms.
Lev and Zarowin (1999)	Value relevance	Has the usefulness of financial reporting declined over the past twenty years?	US firms (1977–1996)	Not specified	The association between earnings and returns has declined over time. This decreased association is particularly large for firms with increasing R&D intensity.
Monahan (2005)	Value relevance	How does conservative accounting for R&D expenditures impact valuations using the residual income valuation model?	US firms (1988–1998)	Unconditional	Equity valuations using the RIV model of firms with high R&D and high R&D growth are less accurate than those of firms with low R&D or low R&D growth.
Balachandran and Mohanram (2011)	Value relevance	Is conservatism driving the previously documented decline in value relevance?	US firms (1975–2004)	Unconditional	There is insufficient evidence to conclude that accounting conservatism is driving the decrease in value relevance over time.
Panel B: Information asymmetry					
LaFond and Watts (2008)	Information asymmetry	Is information asymmetry caused by conservatism?	US firms (1983–2001)	Conditional	The differential timeliness of bad news and good news recognition is greater in the presence of information asymmetry. Changes in information asymmetry lead conservatism, indicating that conservatism arises from information asymmetry.
Hui et al. (2009)	Information asymmetry	How does accounting conservatism impact voluntary disclosure?	US firms (1991–2002)	Conditional; unconditional	Conservatism is negatively associated with the frequency of management earnings forecasts. Conservatism reduces the need to disclose bad news, as it mitigates information asymmetry.
Francis et al. (2013)	Information asymmetry	Did firms that exhibited a high degree of conditional conservatism experience smaller market value losses during the financial crisis?	US firms (1980–2009)	Conditional; unconditional	Firms exhibiting more conservatism prior to the financial crisis suffered smaller losses during the financial crisis than firms exhibiting less conservatism prior to the financial crisis.
Kim et al. (2013)	Information asymmetry	Does conditional conservatism mitigate the negative market reaction of seasoned equity offerings?	US firms (1989–2008)	Conditional	SEO announcement returns are positively related to the degree of accounting conservatism and that the negative association between information asymmetry and SEO announcement returns in mitigated in the presence of conservatism.

Table 4 (*Continued*)

Author(s)	Topic	Research question	Sample	Type of conservatism	Findings
Panel C: Cost of equity capital					
Francis et al. (2004)	Cost of equity capital	What earnings attributes result in a lower cost of equity capital?	US firms (1975–2001)	Conditional	There is no significant evidence to indicate that conservatism affects cost of equity capital.
Chan et al. (2009)	Cost of equity capital	How does accounting conservatism affect cost of equity capital? How does the effect differ on the type of conservatism?	UK firms (1987–1999)	Conditional; Unconditional	Unconditional conservatism is associated with a lower cost of equity capital and conditional conservatism is associated with a higher cost of equity capital.
García Lara et al. (2011)	Cost of equity capital	What is the relationship between conditional conservatism and cost of equity capital?	US firms (1975–2003)	Conditional	There is a negative association between conditional conservatism and cost of equity capital.
Panel D: Analyst forecasts					
Helbok and Walker (2004)	Analyst forecasts	Is conservative accounting the cause of optimistically biased analyst forecasts?	UK firms (1990–1998)	Conditional	The optimistic bias in analyst forecasts is due to the fact that analysts fail to account for the conservative treatment of news content between the initial forecast and the earnings announcement. Analysts adjust their forecasts in response to good news and bad news as it become available.
Mensah et al. (2004)	Analyst forecasts	How does accounting conservatism affect analyst forecast accuracy and dispersion?	US firms (1987–1999)	Unconditional	Conservatism is positively associated absolute value forecast error and dispersion. However, results are mixed when conservatism measure is altered in sensitivity analysis.
Louis et al. (2014)	Analyst forecasts	Do analysts incorporate currently available information related to accounting conservatism into their forecasts?	US firms (1990–2006)	Conditional	Negative and significant relationship between conservatism measured at the end of the prior period and forecast error in the subsequent period, suggesting that analysts do not incorporate available information about conservatism into their forecasts.
Pae and Thornton (2010)	Analyst forecasts	Do analysts incorporate currently available information related to accounting conservatism into their forecasts?	US firms (1984–2002)	Conditional	Analysts do not efficiently incorporate the asymmetric recognition of news into their forecasts.

expect high quality information to be reflected in a lower debt cost of capital and fewer incorrect lending decisions (i.e., lending to non-credit-worthy borrowers or not lending to credit-worthy borrowers).

Watts (2003a) theorizes that information about borrower losses is more relevant to lenders than information about borrower gains, as the upside to the lender is capped at the contractual interest payments. Under this theory, conditional conservatism in the form of asymmetric timeliness provides a more relevant information set to lenders. Unconditional conservatism restricts the accounting recognition of certain unverifiable portions of economic value, which provides something akin to a "worst-case scenario" to lenders. Empirical support for this theory would show that conservatism results in lower interest rates to borrowers and better assessments of borrower default risk by lenders.

Ahmed, Billings, Morton, and Stanford-Harris (2002) find that accounting conservatism reduces bondholder–shareholder conflict and debt cost of capital. Bondholders will accept a lower interest rate if conservative accounting (unconditional and conditional) can restrain the overpayment of dividends to shareholders. The study finds that conservatism[17] is positively associated with bondholder–shareholder conflict and negatively associated with debt cost of capital. Zhang (2008) finds that conservative accounting enhances the identification of default risk and reduces interest rates (i.e., debt cost of capital). She theorizes that conservatism benefits lenders by providing a timelier signal of default risk and benefits borrowers through lower interest rates. Wittenberg-Moerman (2008) finds that conditional conservatism, in the form of timely loss recognition, reduces information asymmetry, thereby increasing the trading efficiency of debt securities in the secondary debt market.

While the above studies provide substantial evidence that conservatism benefits both borrowers and lenders in debt contracting agreements, Gigler et al. (2009) analytically challenge the notion that conservatism results in efficient debt contracting. They define an optimal (i.e., efficient) debt contract as one that minimizes costs arising from decision errors due to false alarms and decisions errors due to undue optimism. In this setting, a false alarm occurs when a lender terminates or fails to enter the debt agreement when it would have been profitable to enter into or remain in the debt agreement. Undue optimism occurs when a lender fails to terminate or enters into the debt agreement when it would have been profitable to terminate or abstain from the debt agreement. According to the model, conservatism decreases the probability of undue optimism but *increases* the probability of a false alarm. Therefore, the degree to which accounting conservatism enhances the efficiency of debt contracts depends on which effect dominates. Gigler et al. (2009) contend that the reduction in borrowing costs is not necessarily an indication of debt-contracting efficiency. We are unaware of any study that has empirically tested the assertions in the Gigler et al. (2009) model.

Table 5 provides a list of the studies on the effects of conservatism on debt market users. Research in this area overwhelmingly supports the notion that conservatism benefits both lenders and borrowers in debt contracting situations. While the Gigler et al. (2009) study calls into question the extent of these benefits, there has yet to be an empirical study that finds conservatism to be detrimental to debt contracting.

4.3. Corporate governance users

To discuss corporate governance in the context of accounting conservatism, we examine corporate governance as a mechanism shareholders use to monitor firm management to minimize agency costs. We define corporate governance users as shareholders, including the board of directors, and management. Similar to equity market users and debt market users, accounting information is of high quality to corporate governance users if it is relevant to corporate governance decisions and mitigates information asymmetry between shareholders and firm management. The central question with respect to conservatism and corporate governance is: does conservatism provide information that assists shareholders in monitoring firm management?

One of the primary ways of monitoring management is by aligning management incentives with shareholder incentives. The degree to which incentives align is primarily determined by

[17] The authors use multiple measures of accounting conservatism that encompass both conditional and unconditional conservatism.

Table 5
Studies on the effects on debt market users.

Author(s)	Topic	Research question	Sample	Type of conservatism	Findings
Ahmed et al. (2002)	Debt markets	Does conservatism mitigate bondholder–shareholder conflict and result in lower debt cost of capital?	US firms (1987–1998)	Conditional; Unconditional	Conservatism is positively associated with proxies for bondholder–shareholder conflict. Conservatism is negatively associated with debt cost of capital. Findings indicate that conservatism arises from bondholder–shareholder conflict and acts to lower debt cost of capital.
Zhang (2008)	Debt markets	Does conservatism identify default risk in a timelier manner? Does conservatism reduce debt cost of capital?	US firms (1999–2000)	Conditional; unconditional	Conservatism provides timely information about default risk to lenders, which results in lower debt cost of capital for borrowers.
Wittenberg-Moerman (2008)	Debt markets	Do analysts incorporate currently available information related to accounting conservatism into their forecasts?	US firms (1990–2006)	Conditional	Negative and significant relationship between conservatism measured at the end of the prior period and forecast error in the subsequent period, suggesting that analysts do not incorporate available information about conservatism into their forecasts.
Gigler et al. (2009)	Debt markets	Does conservatism result in efficient debt contracting?	Analytical model	Not specified	Optimal debt contracting arises when Type I and Type II errors are minimized, and not when debt cost of capital is minimized.

management's compensation incentives. Accounting conservatism's effect on management compensation is likely to benefit corporate governance in two ways. First, conservatism protects the shareholders against overcompensating management. According to Watts (2003a), accounting conservatism increases the verifiability of reported information that may benefit management's compensation. Because the news impounded in stock prices may not be verifiable for accounting purposes, using earnings to determine compensation may guard against the overcompensation of management based on overly optimistic information.

Second, compensation incentives based on conservatively reported earnings are more likely to induce management to make better investment decisions. The timely recognition of losses under conditional conservatism incentivizes management to abandon negative net present value (NPV) projects in a timely manner. Additionally, the higher verifiability requirement for the recognition of profit incentivizes management to push positive NPV projects to the point where they can be recognized in accounting, and in turn, reflected in their compensation.

If accounting conservatism provides high quality information to shareholders, we expect conservative accounting earnings to reflect an alignment of incentives between shareholders and management. Therefore, we would expect accounting earnings to be a significant determinant of management compensation. Additionally, we would expect to see the compensation incentives result in better investment decisions by firm management in the presence of conservatism than in the absence of conservatism.

The literature relating conservatism to corporate governance investigates the general association between corporate governance metrics and conservatism, the relationship between conservatism and executive compensation, and the relationship between conservatism and investment decisions. Ahmed and Duellman (2007) find that conditional and unconditional conservatism are positively associated with the percentage of outside directors' shareholdings and negatively related to the percentage of inside directors on the board. This provides evidence that conservatism is associated with more independence on the board of directors, thus reducing agency costs and improving corporate governance. García Lara, Osma, and Penalva (2009) find that firms with strong corporate governance exhibit higher levels of conditional conservatism. These studies provide circumstantial evidence that conservatism is an important aspect of effectively monitoring firm management.

In the area of executive compensation, O'Connell (2006) finds that executive cash compensation is more sensitive to accounting earnings changes in good news years than in bad news years. Iyengar and Zampelli (2010) examine compensation sensitivity to accounting performance in the presence of conditional conservatism and find that it significantly increases the correlation of earnings changes to compensation changes. They theorize that conditional conservatism reduces noise in earnings, reduces the probability of earnings manipulation, and increases the probability that earnings manipulation is detected, allowing compensation committees to place greater weight on accounting earnings when the firm utilized conservative accounting practices.

The increased compensation sensitivity to earnings in the presence of conservatism is an indicator that conservative earnings are more relevant to compensation decisions than non-conservative earnings. This could be construed to mean that shareholders see conservatism as an optimal way to incentivize management to make investment decisions that align with shareholder incentives. Ahmed and Duellman (2011) examine this possibility, and find that firms that use more conservative accounting have higher industry-adjusted future profitability measured by operating cash flows and gross profit margins, up to 3 years in the future. These findings provide *ex post* evidence that conservatism is associated with better investment decisions.

Francis and Martin (2010) present findings suggesting that conservatism plays a role restraining management's investment in negative NPV projects. Under conditional conservatism, losses from negative NPV projects are recognized in a timelier manner than gains from positive NPV projects, which incentivizes management to invest in positive NPV projects and abandon negative NPV projects. Specifically, they find a positive relationship between the asymmetric timeliness of earnings and expected acquisition profitability, consistent with the notion that firms that are more conservative make investments that are perceived to be more profitable.

Louis, Sun, and Urcan (2012) theorize that the inefficient investment of excess cash holdings in negative NPV projects results in the market value of an additional dollar of cash holdings to be worth less than a dollar. Because, the timely loss recognition feature of conservatism is believed to limit investment in negative NPV projects, the authors find that the market value of cash holdings is greater in the presence of conservatism, which suggests that conservatism is associated with more efficient investment of cash holdings.

While Francis and Martin (2010) and Louis et al. (2012) present evidence that conservatism restrains investment in negative NPV projects, Kravet (2014) theorizes that this could come at a cost to the firm by discouraging management from investing in risky, but profitable projects. He finds that accounting conservatism is negatively associated with the riskiness of acquisitions and that this association is present even if the equity market perceives the acquisition to produce positive earnings, suggesting that conservatism constrains management's incentive to make risky investments, even if those investments are profitable.

Table 6 provides a list of the studies on the effects of conservatism on corporate governance users. Overall, research on the effects of conservatism on corporate governance users consistently demonstrates that conditional conservatism benefits corporate governance through providing earnings that are more relevant to compensation decisions and inducing management to make better investment decisions. Additionally, the association between corporate governance metrics and accounting conservatism further supports the notion that conservatism provides high quality information for use in monitoring firm management. The studies exclusively examine the effects of

Table 6
Studies on the effects on corporate governance users.

Author(s)	Topic	Research question	Sample	Type of conservatism	Findings
O'Connell (2006)	Executive compensation	How does the sensitivity of executive compensation to accounting earnings differ in "good news" years and "bad news" years?	UK firms (1984–1997)	Conditional	Earnings changes impact compensation changes significantly more in years with positive returns (i.e., good news) than in years with negative returns (i.e., bad news).
Ahmed and Duellman (2007)	Corporate governance metrics	Is conservatism associated with corporate governance metrics that reduce agency costs?	US firms (1999–2001)	Conditional; unconditional	Conservatism is positively associated with the percentage of outside directors' shareholdings and negatively related to the percentage of inside directors on the board. This provides evidence that conservatism reduces agency costs and improves corporate governance.
García Lara et al. (2009)	Corporate governance metrics	Do firms with strong corporate *governance exhibit a greater* degree of accounting conservatism than firms with weak corporate governance?	US firms (1992–2003)	Conditional	High governance firms exhibit a greater degree of asymmetric timeliness. This indicates that the degree of conditional conservatism is positively associated with corporate governance metrics.
Francis and Martin (2010)	Financial decisions	Does conservative reporting (i.e., timely loss recognition) cause management to make acquisitions that are more profitable?	US firms (1980–2006)	Conditional	Asymmetric timeliness of earnings is positively associated with expected acquisition profitability. This association is more pronounced for firms with high ex ante agency costs.
Iyengar and Zampelli (2010)	Executive compensation	How does accounting conservatism impact the sensitivity of executive compensation to accounting earnings?	US firms (1994–2003)	Conditional	Accounting conservatism significantly increases the association between changes in earnings and changes in compensation.
Kravet (2014)	Financial decisions	Does conservative reporting (i.e., timely loss recognition) reduce management's incentive to make risky investments?	US firms (1984–2006)	Conditional	Accounting conservatism is negatively associated with the riskiness of acquisitions. This association is present in acquisitions that are perceived to be profitable, suggesting that conservatism constrains management's incentive to make risky investments, even if those investments are profitable.
Ahmed and Duellman (2011)	Financial decisions	Is conservatism associated with positive future performance?	US firms (1989–2001)	Not specified	Firms that exhibit more conservatism to have higher future profitability than firms that exhibit less conservatism.
Louis et al. (2012)	Financial decisions	Does accounting conservatism increase the value of cash holdings?	US firms (1974–2006)	Conditional	The market value of cash holdings is greater in the presence of conservatism, which suggests that conservatism is associated with more efficient use of cash holdings.

conditional conservatism on corporate governance users. We are unaware of any such studies that examine the effects of unconditional conservatism.

4.4. Opportunities for future research

Overall, research on the effects of accounting conservatism on financial statement users has many opportunities for further development. We contend that researchers could attempt to draw more theoretical connections between research on the financial statement effects and research on the financial statement user effects. Conservatism's effects on financial statement users are driven by its effects on the financial statements. An understanding of how users make decisions in light of specific financial statement effects would be beneficial to the literature.

Researchers could also look to separately evaluate the effects of timely loss recognition and deferred gain recognition under conditional conservatism. Many theoretical arguments made by researchers on the effects of conditional conservatism seem to heavily focus on timely loss recognition. However, Guay and Verrecchia (2006) contend that arguments supporting conservatism "...need not emphasize the merits of timely recognition of losses, as these are obvious. Instead, arguments must articulate the merits of less timely recognition of *gains*" (p. 150). If timely loss recognition provides higher quality information about losses, does deferred gain recognition provide lower quality information about gains? Since conditional conservatism is comprised of both timely loss recognition and less timely gain recognition, what can we conclude about conditional conservatism's overall effect on information quality? We believe that more theoretical development related to gain and loss timeliness could be helpful to future conditional conservatism research.

Additionally, we note that conditional conservatism seems to dominate the research on the effects of accounting conservatism. More research on the effects of unconditional conservatism and its relationship to the effects of conditional conservatism is needed to provide a complete picture of the effects of accounting conservatism.

For research on the effects of conservatism on equity market users, future research could attempt to make theoretical connections between information quality (i.e., value relevance and information asymmetry) and equity market outcomes such as cost of equity capital and analyst forecast accuracy. The research documented in this paper shows that conditional conservatism alleviates information asymmetry (i.e., improves information quality), yet there is evidence in multiple studies that it reduces analyst forecast accuracy. Future research could work to reconcile these seemingly paradoxical findings.

Additionally, future research could examine the effects of conservatism on other equity market outcomes. Researchers could examine conservatism's effect on the accrual anomaly noted in Sloan (1996) or on post-earnings announcement drift. Narayanamoorthy (2006) uses the conservative treatment of gains and losses in accounting to show differences in post-earnings announcement drift patterns. However, the study does not examine cross-sectional differences in conservatism and its *effect* on post-earnings announcement drift.

Future research examining the effects of conservatism on debt market users could provide an empirical analysis of the model in Gigler et al. (2009). Prior research has concluded that conservatism reduces debt cost of capital. However, Gigler et al. (2009) raise some important questions for future research. Does conservatism result in increased incidences of lenders not entering into or prematurely calling profitable debt agreements (i.e., false alarms)? If so, does the risk of loss to lenders from borrower defaults outweigh the risk of loss from false alarms?

Finally, future research on the effects of conservatism on corporate governance users could provide more theoretical connections between monitoring firm management, compensation incentives, and outcomes such as investment decisions and future firm performance. Additionally, there is room to explore other corporate governance outcomes. Specifically, how does conservatism affect a firm's litigation risk?[18] How is accounting conservatism associated with corporate social responsibility?

[18] A recent working paper, Ettredge et al. (2014), finds that conditional conservatism reduces litigation costs to firms. However, we are unaware of any published work in this area.

5. Conclusion

In this study, we review the literature that examines the effects on accounting conservatism on financial statements and financial statement users. While the effects of conservatism have been extensively researched over the past two decades, we find many areas where results are inconclusive and more research is needed. We first examine the effects of conservatism on the reported financial statement numbers. Research has found that conditional conservatism is negatively associated with earnings persistence and that unconditional conservatism may facilitate earnings management.

We next examine the effects of conservatism on financial statement users. Research has found that conditional conservatism alleviates information asymmetry for equity market users, but reduces analyst forecast accuracy, and some evidence that it reduces value relevance. Additionally, conditional conservatism reduces the debt cost of capital for borrowers, makes executive compensation more sensitive to accounting earnings, and incentivizes managers to make fewer negative NPV investments. Finally, research on conservatism's effect on the cost of equity capital is mixed. These findings may be due as much to the difficulty in measuring the equity cost of capital (Easton & Monahan, 2005) as it is to whether or not there is a relationship between conservatism and the equity cost of capital. Overall, we note several research opportunities to provide further information on the costs and benefits of accounting conservatism. We believe such research is necessary to fully understand accounting conservatism.

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