# Are family firms reluctant to report impairment losses? Evidence from private firms

**Sundkvist, Charlotte Haugland; Stenheim, Tonny**
Department of Business, Marketing and Law, University of South-Eastern Norway, Hønefoss, Norway)



Sundkvist, C. H. & Stenheim, T. (2022). Are family firms reluctant to report impairment losses? Evidence from private firms. *Journal of Applied Accounting Research*, *23*(2), 434-453. https://doi.org/10.1108/JAAR-04-2021-0095

# Are Family Firms Reluctant to Report Impairment Losses? Evidence from Private Firms


## Abstract

### Purpose

This study examines the reporting of impairment losses in family and non-family private firms. Socioemotional wealth theory suggests that the reporting practices in family firms may differ from non-family firms, and may vary among family firms.

### Design/methodology/approach

The research question is examined using a large-scale archival study. We use unique register data on family relationships for Norwegian private firms provided by the CCGR database at BI Norwegian Business School.

### Findings

Drawing on socioemotional wealth theory, we predict and find that private family firms are more reluctant to report impairment losses compared to private non-family firms. Our results also suggest that both the likelihood to report impairment losses and the impairment amounts increase with board independence in private family firms. We also find some evidence suggesting that private family firms with a family CEO report lower impairment losses than private family firms without a family CEO, but this result is less robust and should be interpreted with caution.

**Originality**

This study contribute to the accounting literature by examining the reporting of a specific accrual (impairment losses) in the setting of *private* family firms. Prior research in this area is scarce.

**Practical Implications**

Our results suggest a higher risk of impairment being managed in private family firms than in private non-family firms, and that independent board members mitigate this tendency somewhat in private family firms. Awareness of this risk should have practical value for stakeholders such as non-family owners and creditors, external auditors, supervisory and monitoring bodies, and regulators.

**Keywords:** Private firms, family firms, impairment losses, family CEO, board independence

# 1. Introduction

This paper examines impairment reporting practices in private family firms and non-family firms, and whether CEO characteristics such as family ties with the largest owning family and board independence affect these impairment reporting practices. Family firms play a major role in the world's economy, and the family dimension has shown to be significant when explaining business phenomena (Prencipe et al., 2014). The literature on accounting practices in family firms are mainly investigating public firms. Few studies are conducted on private firms (Berzins et al., 2008; Hope, 2015), even though private firms differ from public firms on many key characteristics, which suggests a general need for more research (Bar-Yosef et al., 2019). Private firms do not have publicly traded stocks and rely more on bank financing (Hope, 2015; Hope & Vyas, 2017). They are typically smaller, have less dispersed ownership, less formal corporate governance mechanisms, stronger family ownership and involvement, and the controlling shareholders typically take a more active role in running the business (Asker et al., 2014; Berzins et al., 2008; Hope & Vyas, 2017).

We use socioemotional wealth (SEW) theory to guide our hypotheses (e.g., Berrone et al., 2012; Gomez-Mejia et al., 2014; Gómez-Mejía et al., 2007; Gomez-Mejia et al., 2018). SEW theory predicts that family owners are loss averse to the threat of losing control and influence over the firm (Berrone et al., 2012; Gomez-Mejia et al., 2014), and sensitive to reputational concerns (e.g. Berrone et al., 2012; Cennamo et al., 2012; Gomez-Mejia et al., 2011; Gomez-Mejia et al., 2014). Both of these concerns are likely to affect impairment reporting practices. Impairment losses typically emerge in situations with poor performance as they are supposed to reflect expectations of reduced future cash flows (Francis et al., 1996; Kosi & Valentincic, 2013). These losses will, if recognized, reduce earnings and earnings-based performance measures. Consequently, family owners may be reluctant to report impairment losses and to reveal poor performance as this may cause a reputational loss or questions

regarding the family's control and influence over the firm. Based on this, we hypothesize that family firms are less likely to report impairment losses, and report lower impairment losses, compared to non-family firms.

We also examine whether the impairment reporting practices vary among family firms with certain characteristics. We expect that more family control will reinforce the general tendency of family firms to avoid the recognition of impairment losses and that less family control will mitigate this trend. Specifically, we hypothesize that if the CEO is a member of the largest owning family, the family firm is less likely to report impairment losses and report lower impairment losses. Finally, we hypothesize that both the likelihood of reporting impairment losses and the reported impairment loss increase with decreased family board dominance, measured as the proportion of non-family board members (named board independence)[1].

We use data from Norway, which we believe provides an excellent setting to test our hypotheses. First, low book-tax alignment (Nobes & Schwencke, 2006) allows us to investigate impairment decisions distinct from tax motivations (i.e. incentives to report excessive impairment losses to reduce taxes)[2]. Second, all the firms in our sample have audited financial reports,[3] and they are basically using the same impairment testing procedure.[4] Third, a Norwegian setting allows us to use a unique and rich dataset of *private* firms. These firms are

[1] We use the term board independence in this paper to reflect the lack of family presence and dominance on the board of directors. Thus, we classify any board member that is not a member of the largest owning family as an independent board member. The extent to which these board members are not truly independent of the family should work against finding the predicted results.

[2] Many studies classify Norway as a country with low book tax alignment (e.g. Nobes and Schwencke, 2006, Che and Limei, 2015, Hope, 1999; Hoogendoorn, 1996). In contrast, Sundvik (2017) classify Norway as a country with high book-tax alignment. This difference in classification is probably caused by Sundvik (2017) focusing on permanent differences. While permanent differences may be small in Norway, temporary differences are not. Impairment losses, which is the focus of our study, are not under any circumstances tax deductible.

[3] Effective May 2011, the smallest firms were allowed to deselect their auditor (cf. Norwegian Limited Liability Companies Act paragraph 7-6). They are not included in our sample because they have missing observations on the variables *Big4* and *lnAF* (auditor fee).

[4] The regulation of impairment losses under Norwegian Generally Accepted Accounting Principles (NGAAP) is close to IAS 36 Impairment of Assets. This is the case even for small limited liability firms.

less likely to be subject to an external demand for timely loss recognition, making impairment losses more discretionary and susceptible to reporting incentives (Kosi & Valentincic, 2013).

We find that family firms are less inclined to report impairment losses and report lower impairment losses compared to non-family firms, controlling for economic conditions that affect the underlying economic impairment. This supports our first hypothesis. Additional analysis suggests that non-family firms report impairment losses that better reflect future economic fundamentals such as future cash flows, sales growth, and performance (ROA). Moreover, the likelihood of reporting impairment losses and the reported impairment loss increase with board independence (i.e. less family board dominance). We also find that family firms with a family CEO report lower impairment losses, compared to family firms without a family CEO. However, this relationship sometimes vanishes in robustness tests.

Our study responds to the call for more research on accounting practices in family and non-family firms, specifically impairment losses (Prencipe et al. (2014, p. 380), and the call for more research on accounting practices in private firms in general (Bar-Yosef et al. (2019). We complement the literature on impairment losses in private firms (e.g. Garrod et al., 2008; Kosi & Valentincic, 2013) by examining differences between private family and non-family firms in a setting of low book-tax alignment. The research on impairment losses in family firms is limited, and in private family firms, it is, to the best of our knowledge, non-existent. We demonstrate that private family firms are less inclined to report impairment losses and report lower impairment losses than private non-family firms, but that this tendency is weaker with less family board dominance (i.e. more board independence). These are, as far as we know, new research findings.

The paper proceeds as follows: Section 2 outlines the literature and hypotheses development. Section 3 describes the research design and summary statistics. Main results, robustness tests and additional tests are presented in Section 4, while Section 5 concludes.

# 2. Literature Review and Hypotheses

## 2.1 Impairment Losses and Earnings Quality

Most prior research on accounting practices in family firms has been on public firms, not private firms (Paiva et al., 2016). Evidence from public firms generally suggests that the accounting practices in family firms differ from those in non-family firms, but the direction of this relationship remains unclear. Several studies, conducted on US data, suggest that family ownership is associated with higher earnings quality and better financial disclosure practices than non-family firms (e.g. Ali et al., 2007; Chen et al., 2014; Jiraporn & DaDalt, 2009; Tong, 2007; Wang, 2006). The results for public family firms, however, are less conclusive when the investigation is carried out on data from other countries (e.g. Achleitner et al., 2014; Cascino et al., 2010; Greco et al., 2015; Ho & Shun Wong, 2001; Prencipe et al., 2011; Prencipe et al., 2008; Yang, 2010). For instance, Prencipe et al. (2008) find evidence suggesting that compared to non-family firms, family firms are less likely to smooth earnings, but more likely to inflate earnings to avoid debt covenant violations. Achleitner et al. (2014) examine German listed firms and find that family firms engage in less real earnings management, but more income decreasing accrual-based earnings management than non-family firms. Very few studies have examined whether earnings quality differs between family and non-family firms in private firms, and the scarce research that does exist, provides inconclusive evidence. Borralho et al. (2019) find less abnormal accruals in private family firms compared to private non-family firms, while Kvaal et al. (2012) find more income decreasing abnormal accruals in private family firms compared to private non-family firms. Kvaal et al. (2012) further document that private family firms manage earnings upwards when leverage is high.

The recognition of impairment losses is intended to increase the informativeness of earnings by signaling expectations of reduced future cash flows to outside parties (Kosi & Valentincic, 2013). However, the recognition of impairment losses is found to be highly

discretionary, which may harm the informativeness of earnings. Impairment losses generally suffer from significant measurement uncertainty and lack of verifiability, and consequently they are at risk of being opportunistically reported (Alciatore et al., 1998; Beatty & Weber, 2006; Francis et al., 1996; Kothari et al., 2010; Lapointe-Antunes et al., 2008; Ramanna, 2008; Ramanna & Watts, 2012; Riedl, 2004; Stenheim & Madsen, 2016; Zang, 2008). Prior studies demonstrate that impairment losses are not always faithfully reported (e.g. Francis et al., 1996; Ramanna, 2008; Ramanna & Watts, 2012; Riedl, 2004; Zang, 2008). They are found to be associated with proxies of earnings management incentives rather than proxies for economic impairment (Francis et al., 1996; Greco et al., 2015; Kosi & Valentincic, 2013; Riedl, 2004).

Even though evidence on impairment reporting practices is scarce in the family firm literature, a notable exception is Greco et al. (2015), which examine *public* firms. Their findings suggest that managers of non-family firms compared to family firms have stronger incentives to report impairment losses for earnings management purposes in order to maximize personal wealth, for instance through compensation contracts or through signaling smooth earnings streams to outsiders.

These findings do not necessarily speak for private family and private non-family firms. A substantial literature has demonstrated that accounting practices, hereby designated earnings management incentives in private firms, differ from those in public firms (e.g. Ball & Shivakumar, 2005; Burghstahler et al., 2006; Hope et al., 2013), which have the general implication that findings on accounting practices in public firms may not reflect these practices in private firms (Hope et al., 2012). Earnings management incentives caused by compensation contracts and signaling to outsiders are likely to be of less concern in private firms compared to public firms (Burghstahler et al., 2006). The external demand for timely and accurate recognition of impairment losses in earnings is lower in private firms, making impairment losses especially prone to managerial discretion (Kosi & Valentincic, 2013). Personal

attachment to the firm and discretionary power over the firm are typically stronger in private firms, suggesting that socioemotional wealth considerations may guide decision making in these firms (Berrone et al., 2012).

## 2.2 Socioemotional Wealth Theory and the Reporting of Impairments

Socioemotional wealth theory originated from within the field of family firm research. It predicts that socioemotional wealth is the main reference point for family principals and that their actions and decisions will be influenced by their desire to avoid any socioemotional wealth loss (e.g., Berrone et al., 2012; Berrone et al., 2010; Gomez-Mejia et al., 2011; Gomez-Mejia et al., 2014; Gómez-Mejía et al., 2007). An important dimension of SEW is that family owners are loss averse to the threat of losing some of their control and influence over the firm (Berrone et al., 2012; Gomez-Mejia et al., 2014). Such perceived threats to the family's ultimate control may trigger family principals to manage earnings to ensure their continued control over the firm (Gomez-Mejia et al., 2014). An example of a situation where family control could be threatened is when the firm performs poorly. Poor performance may induce criticism and questions regarding the way the family manages the firm. In order to conceal poor performance, family principals may minimize the reported impairment amount.

SEW theory also predicts that family principals may be sensitive to reputational concerns due to family principals' strong identification with the firm (e.g. Berrone et al., 2012; Cennamo et al., 2012; Gomez-Mejia et al., 2011; Gomez-Mejia et al., 2014). The family firm becomes the family's pride and heritage, and the family name may be associated with the family firm as well. Large write downs and consequently large losses may result in reputational costs for family firms (Greco et al., 2015), motivating family owners to avoid reporting impairment losses. Financial reports of all Norwegian private limited liability firms can easily be accessed by anyone online, even the smallest firms. For instance, neighbors, competitors, friends, and anyone else in the community who know of the firm can easily access their financial reports

and see that they perform poorly. Consequently, poor reported performance can affect the private family firm reputation negatively even when it is not well-known nationally. This may motivate family owners to avoid large write downs.

Being accused of manipulating earnings, e.g. avoiding impairment losses, will also negatively affect the reputation of family firms. However, they will only suffer reputational losses if they are actually accused of avoiding impairment losses, and the accusation reaches the public. Impairment losses are highly discretionary, and even external auditors are not always capable of detecting understated impairment losses. When they do detect such understated losses, it may not be known to the public that these losses were understated in the first place, as long as the family firm complies with the auditors' requests to increase these losses.

Furthermore, SEW theory incorporates prospect theory, which suggests that family owners will be *loss averse* to lose SEW, implying that family owners will accept risks to avoid a loss in SEW (e.g. Berrone et al., 2012; Gomez-Mejia et al., 2011; Gómez-Mejía et al., 2007). Family owners may then be willing to manage earnings to avoid this SEW loss, i.e., they are willing to risk an even greater SEW loss (i.e., if earnings management is detected) to avoid the loss in SEW triggered by reporting impairment losses (i.e. they are willing to take risk to avoid a sure loss). Based on this discussion, we propose the following hypotheses:

*Hypothesis 1a: Family firms are less likely to report impairment losses compared to non-family firms.*

*Hypothesis 1b: Family firms report lower impairment losses than non-family firms.*

If the family firm has engaged a family member to serve in the CEO position, family control and influence over the firm increases compared to a situation where the family firm has an external CEO. This makes it easier for the family members to make decisions based on socioemotional wealth considerations (Stockmans et al., 2010). In the case of family CEOs, the

CEO's interests are better aligned with those of the dominant (family) shareholder (Yang, 2010). Thus, a family CEO is likely to reinforce the general earnings management strategy of the controlling family (Kvaal et al., 2012).

Evidence on public family firms suggests a negative association between family CEO and earnings management (i.e., aggregated discretionary accruals) (Wang, 2006; Yang, 2010), while a study investigating private family firms suggests that a family CEO reinforces the general earnings management strategy of the controlling family (Kvaal et al., 2012). If the general tendency of family firms is to report lower impairment losses compared to non-family firms, we expect that the presence of a family CEO, as opposed to a CEO who is not a member of the controlling family, will reinforce this reporting behavior. Formally stated:

*Hypothesis 2a: Family firms are less likely to report impairment losses if the CEO is a member of the controlling family compared to family firms where the CEO is not a member of the controlling family.*

*Hypothesis 2b: Family firms report lower impairment losses when the CEO is a member of the controlling family compared to family firms where the CEO is not a member of the controlling family.*

The board of directors plays an important role in corporate governance. Board independence has been found to be an efficient corporate governance mechanism to reduce earnings management behavior (e.g. Klein, 2002; Peasnell et al., 2005; Prencipe & Bar-Yosef, 2011). In the case of family firms, we define independent board members as members who are not related to the controlling family. Independent board members can monitor the family members and prevent them from making reporting decisions based on socioemotional wealth concerns. Thus, independent board members are likely to mitigate the general earnings management strategy of the controlling family (Kvaal et al., 2012). Conditional on that the

general reporting strategy of family firms is to report lower impairment losses, independent (i.e., non-family) board members should moderate this reporting behavior. Formally stated:

*Hypothesis 3a: Family firms are more likely to report impairment losses as the proportion of non-family board members increases.*

*Hypothesis 3b: Family firms' reported impairment losses increase as the proportion of non-family board members increases.*

# 3. Research Design and Summary Statistics

## 3.1 Sample

Our data are obtained from the CCGR database at the BI Norwegian Business School. Family relationships are determined through blood lines, marriage, and adoption. It spans back four generations and extends out to third cousins. There are 3 316 306 firm-year observations in the database for the period of 2001 to 2015. In order to exclude the smallest firms with little economic significance, we require a minimum of 2 million NOK (consumer price adjusted) in yearly sales to be included in the sample.[5] After eliminating firms with less than 2 million NOK, public firms, unlimited liability firms, financial firms, and firms with missing information on family relationships and other variables, our final sample consists of 510 741 firm-year observations. All the firm-year observations have audited financial reports[6]. The details of the sample selection process are outlined in Table 1.

*[Insert Table 1 about here]*

[5] We chose 2 million NOK instead of 1 million NOK, which has been used as a cut-off in previous research on Norwegian private firms (e.g. Che & Langli, 2015). This is because very few of the firm-years in the group between 1 million NOK and 2 million NOK report impairment losses (less than 0.07%). Thus, including these firm-year observations would reduce the power of our tests.

[6] Effective May 2011, the smallest firms were allowed to deselect their auditor (cf. Norwegian Limited Liability Companies Act paragraph 7-6). They are not included in our sample because they have missing observations on the variables *Big4* and *lnAF* (audit fee).

## 3.2 Variable Measurement and Methodology

We specify the following regression equations to test our first hypotheses:

$$(1)\ ImpDec_{i,t} = \beta_0 + \beta_1 FamilyFirm + \beta_2 preROA_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 preSIZE_{i,t} + \beta_5 preDebtRatio_{i,t} + \beta_6 Hist_{i,t} + \beta_7 Big4_{i,t} + \beta_8 lnAF_{i,t} + \beta_9 SecondLargest_{i,t} + \beta_{10} lnFirmAge_{i,t} + Year\ fixed\ effects + Industry\ fixed\ effects + \varepsilon_{i,t}$$

$$(2)\ ImpAsset_{i,t} = \beta_0 + \beta_1 FamilyFirm + \beta_2 preROA_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 preSIZE_{i,t} + \beta_5 preDebtRatio_{i,t} + \beta_6 Hist_{i,t} + \beta_7 Big4_{i,t} + \beta_8 lnAF_{i,t} + \beta_9 SecondLargest_{i,t} + \beta_{10} lnFirmAge_{i,t} + Year\ fixed\ effects + Industry\ fixed\ effects + \varepsilon_{i,t}$$

Where *ImpDec* is a dummy variable reflecting the impairment decision. It takes the value 1 if the firm has reported impairment losses that year and 0 if not. *ImpAsset* indicates the impairment amount divided by lagged total assets multiplied by 100. It reflects the impairment of fixed assets (both tangible and intangible assets) and is defined here as a positive amount. *FamilyFirm* is a dummy variable that equals 1 if the firm is defined as a family firm and 0 if not. Prior studies examining family firms have often used the level of family ownership to define whether the firm is a family firm or not (e.g. Chau & Gray, 2010; Che & Langli, 2015; Ding et al., 2011; Pazzaglia et al., 2013; Yang, 2010). In private firms, where ownership concentration and family ownership is higher than in public firms, it is natural to use 50% as a cutoff to separate family firms from non-family firms (e.g. Che & Langli, 2015; Stockmans et al., 2010; Sundkvist et al., 2020). We get data on the size of family ownership directly from the CCGR database and create the variable *FamilyFirm* based on these data. *FamilyFirm* equals 1 if family ownership exceeds 50%, and 0 otherwise. The size of family ownership in the database is calculated using ultimate ownership and thus includes indirect ownership as well as direct ownership.

We include several proxies for economic factors that may affect the impairment amount. Performance is likely to affect impairment losses (Francis et al., 1996; Riedl, 2004). We include two variables to control for performance: *preROA* and *GROWTH*. *preROA* measures return on assets before impairment losses, that is, pre-impairment net income, scaled by lagged total assets. The variable *GROWTH* measures growth in sales as the percentage change in sales from year *t*-1 to year *t*. *preSIZE* is measured as the natural logarithm of pre-impairment total assets. Prior research documents that larger private firms report higher impairment losses (Kosi & Valentincic, 2013). *preDebtRatio* is measured as the ratio of total debt to pre-impairment total assets. Prior research on private firms documents that the debt ratio is associated with impairment losses (Kosi & Valentincic, 2013).

The variable *Hist* reflects prior impairments by the firm and is measured as lagged *ImpAsset.* Prior research has demonstrated that the likelihood of reporting impairment losses increases if the firm has a history of reporting impairment losses (Elliott & Hanna, 1996). We use two proxies for audit quality: *Big4* and *lnAF*. *Big4* is a dummy variable that equals 1 if the firm is audited by one of the Big 4 auditing firms and 0 if not. The use of a Big 4 auditor has been shown to improve audit quality in private firms (Che et al., 2020). *lnAF* is the natural logarithm of audit fees and is used as a proxy for audit effort (Hope et al., 2012). *SecondLargest* is measured as the fraction of ownership of the second largest shareholder, regardless of whether the second largest shareholders is a family member or not, and is included in the model to control for ownership concentration, as this might affect the opportunity for both managers and the largest shareholder to behave opportunistically and affect reported impairment losses. *FirmAge* is included to control for the generational effect in family firms, as the emphasis on socioemotional wealth goals is likely to vary across family generations (Stockmans et al., 2010). This variable is measured by the natural logarithm of the number of years since a firm's foundation date.

We specify the following regression equations to test H2a, H2b, H3a, and H3b:

$$(3)\ ImpDec_{i,t} = \beta_0 + \beta_1 FamilyCEO_{i,t} + \beta_2 BoardInd_{i,t} + \beta_3 preROA_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 preSIZE_{i,t} + \beta_6 preDebtRatio_{i,t} + \beta_7 Hist_{i,t} + \beta_8 Big4_{i,t} + \beta_9 lnAF_{i,t} + \beta_{10} SecondLargest_{i,t} + \beta_{11} lnFirmAge_{i,t} + \beta_{12} Family\_Ownership_{i,t} + Year\ fixed\ effects + Industry\ fixed\ effects + \varepsilon_{i,t}$$

$$(4)\ ImpAsset_{i,t} = \beta_0 + \beta_1 FamilyCEO_{i,t} + \beta_2 BoardInd_{i,t} + \beta_3 preROA_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 preSIZE_{i,t} + \beta_6 preDebtRatio_{i,t} + \beta_7 Hist_{i,t} + \beta_8 Big4_{i,t} + \beta_9 lnAF_{i,t} + \beta_{10} SecondLargest_{i,t} + \beta_{11} lnFirmAge_{i,t} + \beta_{12} Family\_Ownership_{i,t} + Year\ fixed\ effects + Industry\ fixed\ effects + \varepsilon_{i,t}$$

The response variables and control variables are the same as in equation (1) and (2), except that *FamilyOwnership* is here included as an additional control variable, as the level of family ownership spans from above 50% to 100% in the sample, and prior research suggests that the level of family ownership is associated with earnings quality in private family firms (Sundkvist et al., 2020). The test variables are *FamilyCEO* and *BoardInd. FamliyCEO* is a dummy variable that equals 1 if the CEO belongs to the largest owning family and 0 if not. The data for this variable are retrieved directly from the database. *BoardInd* measures the ratio of board members who are not a member of the largest owning family. Specifically, it is the number of board members who are not a member of the controlling family divided by the total number of board members.

The variables *preROA, preSIZE, GROWTH, preDebtRatio,* and *lnAF* are winsorized at the 1st and 99th percentile. The dependent variable, *ImpAsset,* and the lagged version of this

variable, *hist*, are winsorized at the 99th percentile of non-zero values.[7] We control for year and industry fixed effects in all our regressions. The standard errors are adjusted for serial correlation and heteroscedasticity by using the Huber-White Sandwich Estimator, clustered at the firm level (e.g. Petersen, 2009). Equation (1) and (3) are logistic regression models and equation (2) and (4) are tested using ordinary least squares (OLS) regression. H1a and H1b imply a negative coefficient of *FamilyFirm*, H2a and H2b imply a negative coefficient of *FamilyCEO*, and H3a and H3b imply a positive coefficient of *BoardInd*.

[7] There are 226 firm-year observations with reported impairment reversals in our sample, which we set to zero. The results do not change if these observations instead are excluded from the sample or included as they are.

## 3.3 Summary Statistics

Table 2 presents the summary statistics. Panel A presents descriptive statistics for family firms, while panel B presents descriptive statistics for non-family firms. *ImpDec* is higher in non-family firms (0.02) compared to family firms (0.01), implying that about 1% of the firm-year observations of family firms and 2% of the firm-year observations of non-family firms have reported impairment losses during the sample period. Average *ImpAsset* is 0.05 for family firms and 0.08 for non-family firms. This implies that reported impairment losses for family firms in our sample is on average 0.05% of lagged total assets for family firm observations and 0.08% of lagged total assets for non-family firms.[8]

*[Insert Table 2 about here]*

Non-family firms in our sample are on average larger (26.6 million NOK vs. 15.76 million NOK in total pre-impairment assets) and have higher *GROWTH* (13% vs. 9%). They are also more likely to be audited by a Big 4 audit firm (30% vs. 23% of the sample) and have higher audit fees (42.97 vs. 34.88 thousand NOK). *preROA* is on average 9% for family and 10% for non-family firms. pre*DebtRatio* is on average 75% for both family and non-family firms. Non-family firms have a history of higher impairment losses, with an average *Hist* of 0.07 for non-family firms and 0.04 for family firms. Family firms are on average older (15.05 vs. 13.84 years) and the ownership stake of the second largest shareholder is 28% in non-family firms and 18% in family firms. In family firms, 77% of the firm-year observations have a family CEO, average board independence is 20% and average family ownership is 90%.

Table 2, panel C, reports correlation coefficients for the whole sample of private firms (used to test H1a and H1b), while panel D of Table 2 reports the correlation coefficients for the subsample of family firms only (used to test H2a, H2b, H3a and H3b). We see that the correlations among the test and control variables are reasonably low. We also see that the test

[8] *ImpAsset* is measured as the impairment amount divided by lagged total assets multiplied by 100.

variable *FamilyFirm* is negatively correlated with *ImpDec* and *ImpAsset* in panel C. From panel D, we note that the test variable *FamilyCEO* is negatively correlated with both *ImpDec* and *ImpAsset*, ant that the test variable *IndBoard* is positively correlated with both *ImpDec* and *ImpAsset*. This provides some preliminary support for our hypotheses.

# 4. Results

## 4.1 Main Results

Table 3 reports the results from the main tests. Panel A presents the results for the whole sample, testing H1a and H1b. The first two columns of panel A present the results from regressing *ImpDec* on test and control variables using logistic regression (equation (1)). Our test variable, *FamilyFirm,* is negative and significant at the 1% level ($\beta_1$=-0.271, *z*-statistics=-6.99). This suggests that, after controlling for economic factors that are likely to affect the decision to report impairment losses, family firms are significantly less likely to report impairment losses compared to non-family firms. This supports H1a. The last two columns of panel A report the results from regressing *ImpAsset* on test and control variables using OLS (equation (2)). The variable *FamilyFirm* is negative and significant at the 1% level ($\beta_1$=-0.015, *t*-statistics=-3.75), suggesting that family firms report significantly lower impairment losses even after controlling for economic factors that are likely to affect the reported impairment amount. This supports H1b.

*[Insert Table 3 about here]*

Table 3, panel B, reports the results from the regression within the family firm segment, testing H2a, H2b, H3a and H3b. The first two columns of panel B report the results from regressing *ImpDec* on test and control variables for family firms only (equation (3)). The coefficient of *FamilyCEO* is not significant. Thus, we do not get support for H2a. The coefficient of *BoardInd* is positive and significant ($\beta_2$=0.418, *z*-statistics=4.97), suggesting that family firms are more likely to report impairment losses as board independence increases. This provides support for

H3a. The last two columns of panel B present the results from regressing *ImpAsset* on test and control variables (equation (4)). The variable *FamilyCEO* is significantly negative ($\beta_1$=-0.021, *t*-statistics=-3.65), suggesting that family firms with a family CEO report lower impairment amounts compared to family firms where the CEO is not a family member. This supports H2b. The coefficient of *BoardInd* is positive and significant ($\beta_2$=0.048, *t*-statistics=4.80), suggesting that the amount of reported impairment losses increases with board independence in family firms, providing support for H3b.

## 4.2 Robustness tests

We perform several untabulated robustness tests. First, we employ a propensity score matching design to test the differences between family firms and non-family firms. We find that the main results hold. Second, we perform a tobit regression where a zero-inflated dataset is better accounted for. Most of our main results hold, but the variable *FamilyCEO* is no longer significant. Third, we use an alternative definition of family firms where we exclude firms with only one family owner. Again, most of the main results hold, but the variable *FamilyCEO* is insignificant. Taken together, this suggests that the findings for *FamilyCEO* is less robust. Fourth, we examine changes in family firm status and family CEO status. These tests reveal that firms that change status from a family firm to a non-family firm are more likely to report impairment losses in the period after the change has taken place. Similarly, family firms that change from a family CEO to a non-family CEO are more likely to report impairment losses in the period after they change to a non-family CEO. We do not find significant differences in the impairment amount using OLS regression, but we do find higher impairment amounts after the change (from family firm to non-family firm or from family CEO to non-family CEO) when using tobit regression. Finally, we test the economic significance of our results by focusing on a specific situation where there is likely to be a need for impairment. Specifically, we examine the rapid decline in oil prices starting in 2014 and use this as an exogenous shock that was likely

to trigger a need for reporting impairment losses in oil price exposed firms. We run the test models in a sample of oil firms for the period 2014-2015. We find that the average marginal effect of *FamilyFirm* is -0.09, i.e., the likelihood of reporting impairment losses was 9 percentage point higher for non-family firms, suggesting that our results are economically meaningful as well.

## 4.3 Future Economic Fundamentals

Evidence from public firms suggests that family firms report impairment losses that better reflect future economic fundamentals, probably because non-family firms have incentives use impairment losses as an earnings management tool (i.e. income smoothing and big bath accounting) (Greco et al., 2015). Such incentives are likely to be smaller in private firms compared to public firms (Burghstahler et al., 2006), and thus, we expect opposite results for private firms, i.e. family firms' reported impairment losses have a weaker association with future economic fundamentals.

We examine this by testing whether the association between reported impairment losses and future economic fundamentals differ between family and non-family firms. Based on prior research, we identify future cash flows, performance (ROA), and sales growth as important future economic fundamentals, which should be negatively associated with current impairment (Gordon & Hsu, 2018; Greco et al., 2015; Kosi & Valentincic, 2013). We test whether family and non-family firms differ in this regard by interacting future cash flows, future sales growth and future ROA with *FamilyFirm*, as presented in the model below.

(5) $$ImpAsset_{i,t} = \beta_0 + \beta_1 FamilyFirm_{i,t} + \beta_2 EconFund_{i,t+1} + \beta_3 FamilyFirm_{i,t} * EconFund_{i,t+1} + \beta_4 preROA_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 preSIZE_{i,t} + \beta_7 preDebtRatio_{i,t} + \beta_8 hist + \beta_9 Big4_{i,t} + \beta_{10} lnAF_{i,t} + \beta_{11} SecondLargest_{i,t} + \beta_{12} lnFirmAge_{i,t} + \varepsilon_{i,t}$$

*EconFund* is economic fundamentals and is one of the three variables $CFO_{i,t+1}$, $GROWTH_{i,t+1}$ or $preROA_{i,t+1}$. $CFO_{i,t+1}$ is cash flows from operations in year *t*+1, measured as net income before extraordinary items minus total accruals for firm *i* in year *t+1*, scaled by pre-impairment total assets in year *t*[9][10]. $GROWTH_{i,t+1}$ is measured as the percentage change in sales from year *t* to year *t*+1. $ROA_{i,t+1}$ is measured as net income in year *t*+1 scaled by pre-impairment total assets in year *t*.[11]

*[Insert Table 4 about here]*

Table 4 reports the results from this regression. The coefficients of $CFO_{i,t+1}$, $GROWTH_{i,t+1}$ and $preROA_{i,t+1}$ are all negative and significant, while the coefficients of the interaction terms $FamilyFirm * CFO_{i,t+1}$, $FamilyFirm * GROWTH_{i,t+1}$ and $FamilyFirm * preROA_{i,t+1}$ are positive and significant. Taken together, this suggests that the negative association between the impairment amount and future economic fundamentals such as cash flows from operations, sales growth, and ROA is weaker for family firms compared to non-family firms. As the associations between impairment losses and these economic fundamentals are expected to be negative, weaker associations in family firms can be interpreted as indications of impairment losses better reflecting economic impairment losses in non-family firms than in family firms. This is consistent with the theory underlying our hypotheses, which suggests a general reluctance to report impairment losses in family firms.

[9] We use tobit regression to better handle the large amount of zero-observations in our dataset (i.e. firms that have not reported impairment losses). An alternative could be to run the regression for the sample of firms which have reported impairment losses only. However, this may cause selection bias to interfere with our results because family firms which have been successful in avoiding reporting impairment losses will not be included in this sample.

[10] A substantial portion of the firms in our sample is not required to issue cash flow statements. Consequently, we calculate cash flows using the balance sheet method. Total accruals= changes in non-cash current assets less changes in current non-interest-bearing liabilities+depreciation expenses+impairment losses.

[11] We adjust for the impairment amount for numbers measured in the event-year. For instance, $ROA_{i,t+1}$ use net income year *t*+1 and pre-impairment assets year *t*, while $preROA_{i,t}$ use pre-impairment net income year *t* and total assets year *t*-1.

## 5. Discussion

Impairment losses indicate that the firm will generate less cash flows in the future (Francis et al., 1996; Kosi & Valentincic, 2013), which provides a powerful, yet negative, signal to the stakeholders of the firm. As stated earlier, family owners may be reluctant to report impairment losses and to reveal poor performance as this may cause reputational losses or questions regarding the family's control and influence over the firm. Our findings support this notion. We find that family firms are less likely to report impairment losses and report lower impairment losses compared to non-family firms, controlling for economic conditions that may affect the underlying economic impairment. These findings support our first hypothesis. Additional analysis also reveals that compared to family firms, non-family firms report impairment losses that better reflect future economic fundamentals. This finding contrasts previous findings from public firms suggesting that family firms are the ones which report impairment losses more consistent with future economic fundamentals (i.e., Greco et al., 2015). Private firms are different from public firms in many respects, implying that findings from public firms may not be generalizable to private firms. Our findings highlights this important implication as these findings differ from findings in public firms (i.e., Greco et al., 2015).

In some countries, impairment losses are tax-deductible, which may lead to incentives to overstate rather than understate impairment losses. Previous studies on private firms have investigated the role of impairment losses as an instrument for tax deduction (Garrod et al., 2008; Kosi & Valentincic, 2013). Our study contrasts these previous studies by investigating a setting with low book-tax conformity and by comparing family with non-family private firms.

Impairment reporting practices may vary among family firms with certain characteristics. More power and influence concentrated in the hands of the family facilitate a reporting behavior that better suits the family's needs and desires. We hypothesize that if the

CEO is a member of the largest owning family, the family firm is less likely to report impairment losses and report lower impairment losses. A family CEO gives rise to more influence and opportunities to alter the financial reporting. In a similar vein, less family board dominance may prevent the family from managing earnings to serve their own interests. Thus, we hypothesize that less family dominance (i.e. more board independence) is associated with more and higher impairment losses.

Our findings support our hypotheses on board independence, but the findings regarding family CEO are less robust. We find that family firms with a family CEO report lower impairment losses, compared to family firms without a family CEO. However, we find no significant differences in the likelihood of reporting impairment losses for family firms with family CEOs and non-family CEOs. Furthermore, in robustness tests, we find no significant association with family CEOs and the impairment losses using tobit regression, or when we exclude sole-owners from the sample. This suggests that the main findings regarding family CEOs are less robust and should be interpreted with caution.

Our results have several practical implications. The results suggests that the risk of impairment losses being managed is somewhat higher in private family firms than in private non-family firms. Impairment losses hold important information about future economic prospects, which is information of high importance for investors and creditors. Non-controlling family owners and creditors should be aware of the risk of manipulated impairment losses when the firm is controlled by one single family. Consequently, by identifying this risk, our study may help stakeholders of private family firms to protect themselves from opportunistic behavior of the controlling family. The results are also important to external auditors and other supervisory and monitoring bodies trying to prevent and detect earnings management. External auditors, for instance, are assessing the risk of material mistakes caused by e.g. earnings management, and they will carry out the audit based

on this assessment. Our findings suggest that the risk of impairment losses being managed is higher for family private firms than non-family private firms, implying that external auditors, in general, should be more on alert when carrying out audits in private family firms.

## 6. Concluding Remarks

This paper investigates the reporting of impairment losses in family and non-family private firms. The overall results suggest that family firms are less likely to report impairment losses and report lower impairment losses compared to non-family firms, and that the reporting of impairment losses vary with family power and influence among private family firms. Specifically, we find that board members who are not family members are positively associated with both the likelihood of reporting impairment losses and the impairment amount. There is also some evidence suggesting that a family firm with a family CEO reports lower impairment losses than a family firm where the CEO is not a family member, though these findings are less robust.

Since the true economic impairment is unobservable, it is necessary to use proxies to control for whether impairment losses are faithfully reported or not. We base our proxies on prior research (e.g. Francis et al., 1996; Greco et al., 2015; Riedl, 2004), but the validity of our results depends on the extent to which these proxies capture true economic impairment.

This study is conducted on a setting with low book-tax conformity. Future research should examine whether these results are generalizable to a high book-tax conformity setting. In such a setting, firms may have incentives to manage earnings downwards in order to reduce tax payments, and it would be interesting to examine whether family firms' desires to reduce tax payments outweighs their desires to avoid reporting poor performance.

## References


Achleitner, A.-K., Günther, N., Kaserer, C., & Siciliano, G. (2014). Real Earnings Management and Accrual-based Earnings Management in Family Firms [Article]. *European Accounting Review*, *23*(3), 431-461. https://doi.org/http://dx.doi.org/10.1080/09638180.2014.895620

Alciatore, M., Dee, C. C., Easton, P., & Spear, N. (1998). Asset write-downs: A decade of research. *Journal of Accounting Literature*, *17*, 1.

Ali, A., Chen, T.-Y., & Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics*, *44*(1–2), 238-286. https://doi.org/http://dx.doi.org/10.1016/j.jacceco.2007.01.006

Asker, J., Farre-Mensa, J., & Ljungqvist, A. (2014). Corporate investment and stock market listing: A puzzle? *The Review of Financial Studies*, *28*(2), 342-390. https://doi.org/https://doi.org/10.1093/rfs/hhu077

Ball, R., & Shivakumar, L. (2005). Earnings quality in UK private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics*, *39*(1), 83-128. https://doi.org/http://doi.org/10.1016/j.jacceco.2004.04.001

Bar-Yosef, S., D'Augusta, C., & Prencipe, A. (2019). Accounting Research on Private Firms: State of the Art and Future Directions. *The International Journal of Accounting*, *54*(02), 1950007. https://doi.org/http://dx.doi.org/10.1142/s1094406019500070

Beatty, A., & Weber, J. (2006). Accounting Discretion in Fair Value Estimates: An Examination of SFAS 142 Goodwill Impairments. *Journal of Accounting Research*, *44*(2), 257-288. https://doi.org/https://doi.org/10.1111/j.1475-679X.2006.00200.x

Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional Wealth in Family Firms: Theoretical Dimensions, Assessment Approaches, and Agenda for Future Research. *Family Business Review*, *25*(3), 258-279. https://doi.org/https://doi.org/10.1177/0894486511435355

Berrone, P., Cruz, C., Gomez-Mejia, L. R., & Larraza-Kintana, M. (2010). Socioemotional Wealth and Corporate Responses to Institutional Pressures: Do Family-Controlled Firms Pollute Less? [Article]. *Administrative science quarterly*, *55*(1), 82-113. https://doi.org/http://doi.org/10.2189/asqu.2010.55.1.82

Berzins, J., Bøhren, Ø., & Rydland, P. (2008). Corporate finance and governance in firms with limited liability: Basic characteristics. *Available at SSRN 2294269*.

Borralho, J., Gallardo Vázquez, D., & Hernández-Linares, R. (2019). Earnings Management in Private Family Versus Non-Family Firms: The Moderating Effect of Family Business Generation. *Spanish Journal of Finance and Accounting, Borralho et al*. https://doi.org/https://doi.org/10.1080/02102412.2019.1616480

Burghstahler, D. C., Hail, L., & Leuz, C. (2006). The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms [Article]. *Accounting Review*, *81*(5), 983-1016. https://doi.org/https://doi.org/10.2308/accr.2006.81.5.983

Cascino, S., Pugliese, A., Mussolino, D., & Sansone, C. (2010). The Influence of Family Ownership on the Quality of Accounting Information. *Family Business Review*, *23*(3), 246-265. https://doi.org/https://doi.org/10.1177/0894486510374302

Cennamo, C., Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional Wealth and Proactive Stakeholder Engagement: Why Family-Controlled Firms Care More About Their Stakeholders. *Entrepreneurship Theory and Practice*, *36*(6), 1153-1173. https://doi.org/https://doi.org/10.1111/j.1540-6520.2012.00543.x

Chau, G., & Gray, S. J. (2010). Family ownership, board independence and voluntary disclosure: Evidence from Hong Kong. *Journal of International Accounting, Auditing*

*and Taxation*, *19*(2), 93-109. https://doi.org/https://doi.org/10.1016/j.intaccaudtax.2010.07.002
Che, L., Hope, O.-K., & Langli, J. C. (2020). How big-4 firms improve audit quality. *Management Science*. https://doi.org/https://doi.org/10.1287/mnsc.2019.3370
Che, L., & Langli, J. C. (2015). Governance Structure and Firm Performance in Private Family Firms. *Journal of Business Finance & Accounting*, *42*(9-10), 1216-1250. https://doi.org/http://doi.org/10.1111/jbfa.12170
Chen, S., Chen, X., & Cheng, Q. (2014). Conservatism and Equity Ownership of the Founding Family [Article]. *European Accounting Review*, *23*(3), 403-430. https://doi.org/https://doi.org/10.1080/09638180.2013.814978
Ding, S., Qu, B., & Zhuang, Z. (2011). Accounting properties of Chinese family firms. *Journal of Accounting, Auditing & Finance*, *26*(4), 623-640. https://doi.org/https://doi.org/10.1177/0148558X11409147
Elliott, J. A., & Hanna, J. D. (1996). Repeated accounting write-offs and the information content of earnings. *Journal of Accounting Research*, *34*, 135-155. https://doi.org/https://doi.org/10.2307/2491430
Francis, J., Hanna, J. D., & Vincent, L. (1996). Causes and Effects of Discretionary Asset Write-Offs. *Journal of Accounting Research*, *34*, 117-134. https://doi.org/https://doi.org/10.2307/2491429
Garrod, N., Kosi, U., & Valentincic, A. (2008). Asset write-offs in the absence of agency problems. *Journal of Business Finance & Accounting*, *35*(3-4), 307-330. https://doi.org/https://doi.org/10.1111/j.1468-5957.2008.02078.x
Gomez-Mejia, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *The academy of management annals*, *5*(1), 653-707. https://doi.org/http://dx.doi.org/10.1080/19416520.2011.593320
Gomez-Mejia, L. R., Cruz, C., & Imperatore, C. (2014). Financial Reporting and the Protection of Socioemotional Wealth in Family-Controlled Firms [Article]. *European Accounting Review*, *23*(3), 387-402. https://doi.org/https://doi.org/10.1080/09638180.2014.944420
Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative science quarterly*, *52*(1), 106-137. https://doi.org/https://doi.org/10.2189/asqu.52.1.106
Gomez-Mejia, L. R., Patel, P. C., & Zellweger, T. M. (2018). In the Horns of the Dilemma: Socioemotional Wealth, Financial Wealth, and Acquisitions in Family Firms. *Journal of Management*, *44*(4), 1369-1397. https://doi.org/https://doi.org/10.1177/0149206315614375
Gordon, E. A., & Hsu, H.-T. (2018). Tangible Long-Lived Asset Impairments and Future Operating Cash Flows under U.S. GAAP and IFRS. *The Accounting Review*, *93*(1), 187-211. https://doi.org/https://doi.org/10.2308/accr-51815
Greco, G., Ferramosca, S., & Allegrini, M. (2015). The Influence of Family Ownership on Long-Lived Asset Write-Offs. *Family Business Review*, *28*(4), 355-371. https://doi.org/http://doi.org/10.1177/0894486515590017
Ho, S. S. M., & Shun Wong, K. (2001). A study of the relationship between corporate governance structures and the extent of voluntary disclosure7. *Journal of International Accounting, Auditing and Taxation*, *10*(2), 139-156. https://doi.org/http://doi.org/10.1016/S1061-9518(01)00041-6

Hoogendoorn, M. N. (1996), 'Accounting and Taxation in Europe – A Comparative Overview', *European Accounting Review*, Vol. 5, Supplement, pp. 783– 94.
Hope, O.-K. (1999) 'Value Relevance Effects of the Introduction of Interperiod Tax Allocation: The Case of Norway', *Advances in International Accounting*, Vol. 12, pp. 157– 91.
Hope, O.-K. (2015). DISCUSSION OF Do Creditors Prefer Smooth Earnings? Evidence from European Private Firms [Article]. *Journal of International Accounting Research*, *14*(2), 181-184. https://doi.org/http://doi.org/10.2308/jiar-10471
Hope, O.-K., Langli, J. C., & Thomas, W. B. (2012). Agency conflicts and auditing in private firms. *Accounting, Organizations and Society*, *37*(7), 500-517. https://doi.org/http://dx.doi.org/10.1016/j.aos.2012.06.002
Hope, O.-K., Thomas, W. B., & Vyas, D. (2013). Financial Reporting Quality of U.S. Private and Public Firms [Article]. *Accounting Review*, *88*(5), 1715-1742. https://doi.org/http://dx.doi.org/10.2308/accr-50494
Hope, O.-K., & Vyas, D. (2017). Private company finance and financial reporting. *Accounting and Business Research*, *47*(5), 506-537. https://doi.org/https://doi.org/10.1080/00014788.2017.1303963
Jiraporn, P., & DaDalt, P. J. (2009). Does founding family control affect earnings management? *Applied Economics Letters*, *16*(2), 113-119. https://doi.org/https://doi.org/10.1080/17446540701720592
Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, *33*(3), 375-400. https://doi.org/https://doi.org/10.1016/S0165-4101(02)00059-9
Kosi, U., & Valentincic, A. (2013). Write-offs and Profitability in Private Firms: Disentangling the Impact of Tax-Minimisation Incentives. *European Accounting Review*, *22*(1), 117-150. https://doi.org/https://doi.org/10.1080/09638180.2012.661938
Kothari, S. P., Ramanna, K., & Skinner, D. J. (2010). Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics*, *50*(2), 246-286. https://doi.org/https://doi.org/10.1016/j.jacceco.2010.09.003
Kvaal, E., Langli, J. C., & Abdolmohammadi, M. J. (2012). Earnings management priorities of private family firms. *Available at SSRN 1532824*.
Lapointe-Antunes, P., Cormier, D., & Magnan, M. (2008). Equity Recognition of Mandatory Accounting Changes: The Case of Transitional Goodwill Impairment Losses [Article]. *Canadian Journal of Administrative Sciences*, *25*(1), 37-54. https://doi.org/https://doi.org/10.1002/CJAS.41
Nobes, C., & Schwencke, H. R. (2006). Modelling the Links between Tax and Financial Reporting: A Longitudinal Examination of Norway over 30 Years up to IFRS Adoption [Article]. *European Accounting Review*, *15*(1), 63-87. https://doi.org/https://doi.org/10.1080/09638180500510418
Paiva, I. S., Lourenço, I. C., & Branco, M. C. (2016). Earnings management in family firms: current state of knowledge and opportunities for future research. *Review of Accounting and Finance*, *15*(1), 85-100. https://doi.org/https://doi.org/10.1108/RAF-06-2014-0065
Pazzaglia, F., Mengoli, S., & Sapienza, E. (2013). Earnings Quality in Acquired and Nonacquired Family Firms: A Socioemotional Wealth Perspective. *Family Business Review*, *26*(4), 374-386. https://doi.org/https://doi.org/10.1177/0894486513486343
Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board monitoring and earnings management: do outside directors influence abnormal accruals? *Journal of Business Finance & Accounting*, *32*(7-8), 1311-1346. https://doi.org/https://doi.org/10.1111/j.0306-686X.2005.00630.x

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of financial studies*, *22*(1), 435-480. https://doi.org/https://doi.org/10.1093/rfs/hhn053
Prencipe, A., & Bar-Yosef, S. (2011). Corporate governance and earnings management in family-controlled companies. *Journal of Accounting, Auditing & Finance*, *26*(2), 199-227. https://doi.org/https://doi.org/10.1177/0148558X11401212
Prencipe, A., Bar-Yosef, S., & Dekker, H. C. (2014). Accounting Research in Family Firms: Theoretical and Empirical Challenges [Article]. *European Accounting Review*, *23*(3), 361-385. https://doi.org/http://dx.doi.org/10.1080/09638180.2014.895621
Prencipe, A., Bar-Yosef, S., Mazzola, P., & Pozza, L. (2011). Income Smoothing in Family-Controlled Companies: Evidence from Italy. *Corporate Governance: An International Review*, *19*(6), 529-546. https://doi.org/http://dx.doi.org/10.1111/j.1467-8683.2011.00856.x
Prencipe, A., Markarian, G., & Pozza, L. (2008). Earnings management in family firms: Evidence from R&D cost capitalization in Italy. *Family Business Review*, *21*(1), 71-88. https://doi.org/https://doi.org/10.1111/j.1741-6248.2007.00112.x
Ramanna, K. (2008). The implications of unverifiable fair-value accounting: Evidence from the political economy of goodwill accounting. *Journal of Accounting and Economics*, *45*(2-3), 253-281. https://doi.org/https://doi.org/10.1016/j.jacceco.2007.11.006
Ramanna, K., & Watts, R. L. (2012). Evidence on the use of unverifiable estimates in required goodwill impairment. *Review of Accounting Studies*, *17*(4), 749-780.
Riedl, E. I. (2004). An Examination of Long-Lived Asset Impairments [Article]. *Accounting Review*, *79*(3), 823-852. https://doi.org/http://doi.org/10.2308/accr.2004.79.3.823
Stenheim, T., & Madsen, D. Ø. (2016). Goodwill impairment losses, economic impairment, earnings management and corporate governance. *Journal of Accounting and Finance*.
Stockmans, A., Lybaert, N., & Voordeckers, W. (2010). Socioemotional Wealth and Earnings Management in Private Family Firms. *Family Business Review*, *23*(3), 280-294. https://doi.org/https://doi.org/10.1177/0894486510374457
Sundkvist, C. H., Che, L., & Stenheim, T. (2020). *Ownership Structure and Earnings Quality in Private Family Firms* [Working Paper].
Sundvik, D. (2017). Book-tax conformity and earnings management in response to tax rate cuts. *Journal of International Accounting, Auditing and Taxation*, 28, pp. 31-42.
Tong, Y. H. (2007). Financial Reporting Practices of Family Firms. *Advances in Accounting*, *23*, 231-261. https://doi.org/http://dx.doi.org/10.1016/S0882-6110(07)23009-3
Wang, D. (2006). Founding Family Ownership and Earnings Quality. *Journal of Accounting Research*, *44*(3), 619-656. https://doi.org/http://dx.doi.org/10.1111/j.1475-679X.2006.00213.x
Yang, M.-L. (2010). The Impact of Controlling Families and Family CEOs on Earnings Management. *Family Business Review*, *23*(3), 266-279. https://doi.org/https://doi.org/10.1177/0894486510374231
Zang, Y. (2008). Discretionary behavior with respect to the adoption of SFAS no. 142 and the behavior of security prices. *Review of Accounting and Finance*, *7*(1), 38-68. https://doi.org/https://doi.org/10.1108/14757700810853842

# Tables

## Table 1. Sample Selection

| Sample Selection | Firm-years |
|---|---|
| Observations in the CCGR database for the years 2001–2015 | 3 316 306 |
| **Exclusion criteria** | |
| Firms with sales less than 2 million NOK in at least one year | 2 520 703 |
| Public firms or unlimited liability firms | 85 085 |
| Financial firms | 4 032 |
| Firm-years with missing values on family ownership | 119 303 |
| Firm-years with missing values on other variables | 76 442 |
| **Number of firm-years** | 510 741 |

## Table 2. Summary Statistics

| Panel A: Descriptive Statistics for Family Firms | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | N | Mean | SD | p5 | p25 | p50 | p75 | p95 |
| *ImpDec* | 339 816 | 0.01 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *ImpAsset* | 339 816 | 0.05 | 0.98 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *preROA* | 339 816 | 0.09 | 0.17 | -0.16 | 0.01 | 0.07 | 0.17 | 0.39 |
| *Audit Fee (TNOK)* | 339 816 | 34.88 | 30.63 | 10.00 | 18.00 | 26.00 | 40.00 | 89.00 |
| *Total Assets (MNOK)* | 339 816 | 15.76 | 40.70 | 0.91 | 2.27 | 4.73 | 11.65 | 60.13 |
| *preDebtRatio* | 339 816 | 0.75 | 0.27 | 0.31 | 0.59 | 0.77 | 0.89 | 1.13 |
| *GROWTH* | 339 816 | 0.09 | 0.32 | -0.26 | -0.05 | 0.04 | 0.16 | 0.58 |
| *Hist* | 339 816 | 0.04 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Big4* | 339 816 | 0.23 | 0.42 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| *SecondLargest* | 339 816 | 0.18 | 0.18 | 0.00 | 0.00 | 0.15 | 0.33 | 0.50 |
| *FirmAge* | 339 816 | 15.05 | 12.78 | 2.00 | 6.00 | 12.00 | 20.00 | 37.00 |
| *FamilyCEO* | 339 816 | 0.77 | 0.42 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| *BoardInd* | 339 816 | 0.20 | 0.29 | 0.00 | 0.00 | 0.00 | 0.50 | 0.75 |
| *Family_Ownership* | 339 816 | 0.90 | 0.16 | 0.55 | 0.83 | 1.00 | 1.00 | 1.00 |

**Panel B: Descriptive Statistics for Non-family Firms**

| | N | Mean | SD | p5 | p25 | p50 | p75 | p95 |
|---|---|---|---|---|---|---|---|---|
| *ImpDec* | 170 925 | 0.02 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *ImpAsset* | 170 925 | 0.08 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *preROA* | 170 925 | 0.10 | 0.18 | -0.17 | 0.01 | 0.07 | 0.18 | 0.43 |
| *Audit Fee (TNOK)* | 170 925 | 42.97 | 41.69 | 10.00 | 19.00 | 30.00 | 48.00 | 129.00 |
| *Total Assets (MNOK)* | 170 925 | 26.60 | 61.14 | 1.01 | 2.76 | 6.55 | 19.08 | 125.81 |
| *preDebtRatio* | 170 925 | 0.75 | 0.26 | 0.33 | 0.60 | 0.76 | 0.89 | 1.11 |
| *GROWTH* | 170 925 | 0.13 | 0.39 | -0.27 | -0.04 | 0.05 | 0.19 | 0.81 |
| *Hist* | 170 925 | 0.07 | 1.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Big4* | 170 925 | 0.30 | 0.46 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 |
| *SecondLargest* | 170 925 | 0.28 | 0.15 | 0.07 | 0.17 | 0.25 | 0.40 | 0.50 |
| *FirmAge* | 170 925 | 13.84 | 13.29 | 2.00 | 5.00 | 11.00 | 18.00 | 35.00 |

**Panel C: Pearson's Correlation Matrix for the Whole Sample**

| | | *v1* | *v2* | *v3* | *v4* | *v5* | *v6* | *v7* | *v8* | *v9* | *v10* | *v11* | *v12* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *ImpDec* | *v1* | 1.00 | | | | | | | | | | | |
| *ImpAsset* | *v2* | 0.52*** | 1.00 | | | | | | | | | | |
| *FamilyFirm* | v3 | -0.03*** | -0.01*** | 1.00 | | | | | | | | | |
| *preROA* | v4 | -0.03*** | -0.02*** | -0.02*** | 1.00 | | | | | | | | |
| *GROWTH* | v5 | 0.00* | -0.00** | -0.06*** | 0.23*** | 1.00 | | | | | | | |
| *preSIZE* | v6 | 0.09*** | 0.03*** | -0.12*** | 0.03*** | 0.06*** | 1.00 | | | | | | |
| *preDebtRatio* | v7 | -0.00** | 0.01*** | 0.00*** | -0.28*** | 0.05*** | -0.23*** | 1.00 | | | | | |
| *Hist* | v8 | 0.10*** | 0.13*** | -0.01*** | -0.02*** | -0.00*** | 0.02*** | 0.03*** | 1.00 | | | | |
| *Big4* | v9 | 0.05*** | 0.03*** | -0.07*** | -0.04*** | 0.01*** | 0.22*** | -0.03*** | 0.03*** | 1.00 | | | |
| *lnAF* | v10 | 0.08*** | 0.02*** | -0.10*** | -0.05*** | -0.02*** | 0.55*** | -0.05*** | 0.02*** | 0.16*** | 1.00 | | |
| *SecondLargest* | v11 | -0.01*** | -0.01*** | -0.29*** | 0.03*** | 0.01*** | -0.04*** | 0.01*** | -0.01*** | -0.05*** | -0.02*** | 1.00 | |
| *lnFirmAge* | v12 | 0.01*** | -0.01*** | 0.06*** | -0.02*** | -0.25*** | 0.24*** | -0.21*** | -0.01*** | 0.02*** | 0.21*** | -0.02*** | 1.00 |

**Panel D: Pearson's Correlation Matrix for the Subsample of Family Firms Only**

| | | *v1* | *v2* | *v3* | *v4* | *v5* | *v6* | *v7* | *v8* | *v9* | *v10* | *v11* | *v12* | *v13* | *v14* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *ImpDec* | *v1* | 1.00 | | | | | | | | | | | | | |
| *ImpAsset* | *v2* | 0.53*** | 1.00 | | | | | | | | | | | | |
| *FamilyCEO* | v3 | -0.02*** | -0.02*** | 1.00 | | | | | | | | | | | |
| *BoardInd* | v4 | 0.04*** | 0.03*** | -0.33*** | 1.00 | | | | | | | | | | |
| *preROA* | v5 | -0.02*** | -0.01*** | 0.04*** | -0.04*** | 1.00 | | | | | | | | | |
| *GROWTH* | v6 | -0.00 | -0.00*** | -0.02*** | 0.03*** | 0.24*** | 1.00 | | | | | | | | |
| *preSIZE* | v7 | 0.06*** | 0.02*** | -0.18*** | 0.24*** | 0.03*** | 0.06*** | 1.00 | | | | | | | |
| *preDebtRatio* | v8 | 0.00* | 0.01*** | -0.02*** | 0.02*** | -0.30*** | 0.05*** | -0.23*** | 1.00 | | | | | | |
| *Hist* | v9 | 0.11*** | 0.14*** | -0.02*** | 0.02*** | -0.01*** | -0.00* | 0.01*** | 0.03*** | 1.00 | | | | | |
| *Big4* | v10 | 0.03*** | 0.02*** | -0.09*** | 0.09*** | -0.03*** | 0.01*** | 0.18*** | -0.01*** | 0.02*** | 1.00 | | | | |
| *lnAF* | v11 | 0.06*** | 0.02*** | -0.12*** | 0.24*** | -0.06*** | -0.03*** | 0.53*** | -0.04*** | 0.02*** | 0.12*** | 1.00 | | | |
| *SecondLargest* | v12 | -0.00 | -0.00 | -0.02*** | 0.07*** | 0.00* | -0.00 | 0.05*** | -0.02*** | -0.00 | -0.01*** | 0.04*** | 1.00 | | |
| *lnFirmAge* | v13 | 0.01*** | -0.01*** | -0.01*** | 0.02*** | -0.02*** | -0.22*** | 0.25*** | -0.20*** | -0.01*** | 0.02*** | 0.22*** | 0.04*** | 1.00 | |
| *Family_Ownership* | v14 | -0.01*** | -0.01*** | 0.20*** | -0.47*** | -0.01*** | -0.03*** | -0.10*** | -0.01*** | -0.01*** | -0.03*** | -0.10*** | -0.32*** | -0.00 | 1.00 |

Panel A presents descriptive statistics (mean, standard deviation, the 5th, 25th, 50th, 75th, 95th percentiles) for family firms.
Panel B presents descriptive statistics (mean, standard deviation, the 5th, 25th, 50th, 75th, 95th percentiles) for non-family firms.
Panel C provides the Pearson correlations for the whole sample of private firms (used to test H1a and H1b).
Panel D provides the Pearson correlations for the subsample of family firms only (used to test H2a, H2b, H3a and H3b).
The variables are defined in Section 3.2. * (**) *** indicates significance at the 10 (5) 1 percent levels using two-tailed tests.

## Table 3. Regression Results for ImpDec and ImpAsset on Test and Control Variables

| | **Panel A: Family vs. Non-family Firms – H1a and H1b** | | | | **Panel B: Family Firms – H2a, H2b, H3a and H3b** | | | |
|---|---|---|---|---|---|---|---|---|
| | *ImpDec* | | *ImpAsset* | | *ImpDec* | | *ImpAsset* | |
| | *Coefficients* | *z-stat* | *Coefficients* | *t-stat* | *Coefficients* | *z-stat* | *Coefficients* | *t-stat* |
| *FamilyFirm* | -0.271*** | (-6.99) | -0.015*** | (-3.75) | | | | |
| *FamilyCEO* | | | | | 0.010 | (0.18) | -0.021*** | (-3.65) |
| *BoardInd* | | | | | 0.418*** | (4.97) | 0.048*** | (4.80) |
| *preROA* | -1.363*** | (-10.19) | -0.083*** | (-4.22) | -0.859*** | (-4.89) | 0.025 | (0.81) |
| *GROWTH* | 0.004 | (0.10) | -0.023*** | (-3.45) | -0.044 | (-0.64) | 0.003 | (0.24) |
| *preSIZE* | 0.403*** | (21.48) | 0.025*** | (10.29) | 0.312*** | (13.24) | 0.020*** | (6.80) |
| *preDebtRatio* | 0.055 | (0.70) | 0.019* | (1.83) | 0.250** | (2.50) | 0.018* | (1.80) |
| *Hist* | 0.114*** | (17.71) | 0.136*** | (7.48) | 0.128*** | (13.98) | 0.187*** | (5.17) |
| *Big4* | 0.330*** | (8.68) | 0.037*** | (8.31) | 0.205*** | (4.01) | 0.021*** | (3.75) |
| *lnAF* | 0.278*** | (8.60) | 0.006* | (1.72) | 0.321*** | (7.56) | -0.001 | (-0.35) |
| *SecondLargest* | -0.499*** | (-4.47) | -0.032*** | (-3.55) | -0.276* | (-1.86) | -0.018 | (-1.34) |
| *lnFirmAge* | -0.133*** | (-6.46) | -0.025*** | (-10.82) | -0.099*** | (-3.56) | -0.015*** | (-5.57) |
| *Family_Ownership* | | | | | 0.065 | (0.40) | 0.004 | (0.21) |
| *Year fixed effects* | Yes | | Yes | | Yes | | Yes | |
| *Industry fixed effects* | Yes | | Yes | | Yes | | Yes | |
| *Constant* | -11.522*** | (-39.09) | -0.299*** | (-8.33) | -10.723*** | (-26.24) | -0.232*** | (-4.96) |
| *N* | 510 734 | | 510 741 | | 339 775 | | 339 816 | |
| adj. $R^2$ | | | 0.019 | | | | 0.027 | |
| pseudo $R^2$ | 0.095 | | | | 0.069 | | | |

This table presents the test for H1, H2 and H3. Panel A presents the results for H1a and H1b (equations (1) and (2)), addressing differences between family and non-family firms. Panel B presents the results for H2a, H2b, H3a and H3c (equations (3) and (4)), addressing variations *among* family firms. The first two columns of panel A present the coefficients and corresponding *z*-statistics of regressing *ImpDec* on test and control variables using logistic regression. The last two columns of panel A present the results of regressing *ImpAsset* on test and control variables using ordinary least squares (OLS) regression. The test variable of interest in panel A is *FamilyFirm.* The first two columns of panel B present the coefficients and corresponding *z*-statistics of regressing *ImpDec* on test and control variables using logistic regression. The last two columns of panel A presents the results of regressing *ImpAsset* on test and control variables using ordinary least squares (OLS) regression. The test variables of interest in panel B are *FamilyCEO* and *BoardInd,* and the regressions are run in a sample of family firms only. The variables are defined in Section 3.2. Fixed effects on year and industry are included. The *t*-and *z*-statistics are adjusted for within-cluster correlation using the Huber-White Sandwich Estimator. * (**) *** indicates significance at the 10 (5) 1 percent levels using two-tailed tests.

## Table 4. Future Economic Fundamentals

| | **Panel A: CFO** | | **Panel B: GROWTH** | | **Panel C: ROA** | |
|---|---|---|---|---|---|---|
| | *ImpAsset* | | *ImpAsset* | | *ImpAsset* | |
| | *Coefficients* | *t-stat* | *Coefficients* | *t-stat* | *Coefficients* | *t-stat* |
| *Familyfirm* | -0.018*** | (-4.08) | -0.018*** | (-4.11) | -0.022*** | (-4.35) |
| $CFO_{t+1}$ | -0.058*** | (-4.73) | | | | |
| *FamilyFirm** $CFO_{t+1}$ | 0.035** | (2.45) | | | | |
| $GROWTH_{t+1}$ | | | -0.082*** | (-6.46) | | |
| *FamilyFirm** $GROWTH_{t+1}$ | | | 0.042*** | (2.83) | | |
| $ROA_{t+1}$ | | | | | -0.183*** | (-8.49) |
| *FamilyFirm** $ROA_{t+1}$ | | | | | 0.093*** | (4.02) |
| *preROA* | -0.043** | (-2.20) | -0.061*** | (-3.16) | 0.003 | (0.11) |
| *GROWTH* | -0.025*** | (-3.96) | -0.024*** | (-3.86) | -0.027*** | (-4.31) |
| *preSIZE* | 0.025*** | (10.75) | 0.026*** | (11.13) | 0.025*** | (10.69) |
| *preDebtRatio* | 0.003 | (0.32) | 0.005 | (0.53) | 0.007 | (0.82) |
| *Hist* | 0.139*** | (7.27) | 0.139*** | (7.27) | 0.139*** | (7.27) |
| *Big4* | 0.035*** | (8.17) | 0.035*** | (8.16) | 0.035*** | (8.13) |
| *lnAF* | 0.005 | (1.43) | 0.004 | (1.22) | 0.005 | (1.43) |
| *SecondLargest* | -0.031*** | (-3.54) | -0.032*** | (-3.66) | -0.029*** | (-3.36) |
| *lnFirmAge* | -0.022*** | (-9.88) | -0.023*** | (-10.26) | -0.021*** | (-9.80) |
| *Year fixed effects* | Yes | | Yes | | Yes | |
| *Industry fixed effects* | Yes | | Yes | | Yes | |
| *Constant* | -0.299*** | (-8.87) | -0.312*** | (-9.27) | -0.298*** | (-8.87) |
| *N* | 501 236 | | 501 236 | | 501 236 | |
| adj. $R^2$ | 0.022 | | 0.022 | | 0.022 | |

This table presents the results from equation (5). Panel A presents the coefficients and corresponding *t*-statistics from regressing *ImpAsset* on test and control variables using ordinary least squares (OLS) regression. The economic fundamentals variable of interest in this regression is future *CFO*. Panel B presents the coefficients and corresponding *t*-statistics from regressing *ImpAsset* on test and control variables using ordinary least squares (OLS) regression. The economic fundamentals variable of interest in this regression is future *GROWTH*. Panel C presents the coefficients and corresponding *t*-statistics from regressing *ImpAsset* on test and control variables using ordinary least squares (OLS) regression. The economic fundamentals variable of interest in this regression is future *ROA*. Fixed effects on year and industry are included. The *t*-statistics are adjusted for within-cluster correlation using the Huber-White Sandwich Estimator. * (**) *** indicates significance at the 10 (5) 1 percent levels using two-tailed tests.