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Does opting out from auditing decrease earnings quality and/or increase tax aggressiveness? An analysis of small companies from Norway.

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Abstract

Following a new legislation in Norway from 2011, smaller unlisted Norwegian companies now have an opportunity to opt out from auditing. We hypothesize that this has led to a decrease in earnings quality and an increase in tax aggressiveness for these opt out firms. A large Norwegian private limited liability company data sample rejects our hypotheses and indicate better quality earnings and less tax aggressiveness amongst opt out firms.

Earnings quality is operationalized using an OLS and a fixed effects research design using regressions on discretionary accruals and discretionary revenues, while tax aggressiveness is operationalized in the same way, using the Cash Effective Tax Rate (CETR) and Book-Tax-Difference (BTD).

The results increase understanding of side-effects from this new legislation and provide insights into the economics and accounting standards in a Norwegian setting. Further, our paper adds to the understanding of auditor effects on private companies, a scarcely researched field, possibly due to difficulty in obtaining data in some countries.

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1. Introduction

Do smaller, private companies that opt out from auditing report lower quality earnings than its audited peers? And do they hold more aggressive tax positions? These are especially interesting questions as smaller Norwegian unlisted companies have the option to opt out from auditing.

The reason for being audited is essentially to verify the quality of financial information. For an audited company, this can potentially lead to several desirable effects such as lower borrowing costs and increased access to capital. Hence, auditors become increasingly important where there is a high demand for accounting data. However, for smaller unlisted companies, the demand for accounting numbers is not comparable to larger listed companies. As Langli (2009) notes, “the joint utility of auditory is outweighed by the cost connected to these activities for smaller companies”. As it was not deemed necessary for all small companies to be audited, smaller Norwegian companies were given the option to opt out from auditing following a legislation that took effect in 2011.

In this paper, we investigate the impact this new legislation has on earnings quality and tax aggressiveness between firms that opted out of auditing and those that did not. It is intended to be a research on side-effects of this new legislation. Hence, it is relevant to policy makers and accounting information users.

There have been prior international articles (e.g. Dedman et al. 2014, Dedman and Kausar 2012) discussing the necessity of auditing for smaller companies in the UK and studies done in Norway comparing companies before and after opting-out from auditing (e.g. Downing and Langli, 2017, Langli and Che, 2016). However, we find no such study that focus on the effect of opting out from auditing versus keeping it regarding the effects on earnings quality and tax aggressiveness. We hence wish to mitigate this gap by conducting this study.

While several prior studies are conducted on larger companies, the findings might be different in our test group for several reasons. While it is reasonable to expect that the

presence of an auditor can mitigate earnings management, we cannot attribute financial reporting “mistakes” to opportunistic earnings management only. It is reasonable to expect a fair amount of “honest mistakes” when the bookkeeping is conducted in-house by someone who is not necessarily an accounting expert. As Dechow et al. (2010) notes, earnings quality can vary even in the absence of earnings management through varying accruals. As accruals are subject to forecasts and assumptions, they are susceptible to both honest mistakes and opportunistic manipulation. Hence, investigating differences in earnings quality is of more relevance to our study. Ball and Shivakumar (2005) interpret earnings quality as “The usefulness of financial statements to investors, creditors managers and all other parties contracting with the firms”. The usefulness of financial statements depends on to what degree they reflect the underlying economic reality of the firm. Earnings quality is under threat from financial reporting “noise”, which jeopardize truthful reflection of underlying economic reality.

Tax aggressiveness is “the extent to which firms use ambiguity in the tax law to reduce their tax payments” (Guenther et al. 2013). Further, Frank et al. (2009) define tax aggressiveness as “downward manipulation of taxable income through tax planning that may or may not be considered fraudulent tax evasion”. We find that the existing literature use tax avoidance and tax aggressiveness rather interchangeably, without further definitions. We can expect shareholders to prefer tax aggressiveness, as it represent a cut in costs and corresponding higher profits. However, the fear of appearing tax aggressive, which can potentially lead to a loss of reputation and subsequent difficulties in raising capital from outside investors, works in the opposite direction. Of course, there is also the potential punishment from tax authorities.

1.1 The Norwegian Setting

Prior to 2011, all Norwegian firms were required to be audited. In 2011 a new legislation passed that allowed for smaller companies to opt out from auditing. This was due to auditing expenses being deemed too high for it to warrant smaller unlisted companies. Audited financial statements are also less relevant for smaller compared

to larger companies (Langli, 2009). The relevant paragraph is §7-6 from the Norwegian Public Limited Liability Companies Act.

The paragraph is applicable for companies that operate within the following thresholds;

1. Revenue below 5 million NOK
2. A balance of less than 20 million NOK
3. Average number of employees throughout the year does not exceed 10 full-time equivalents (FTE's).

Parent and daughter companies are consolidated within these thresholds and they apply for the group company as a whole. All companies had to make public audited financial statements until May 2011.

The thresholds are subject to revision, which first happened in 2018. January 10. It then changed to 6 and 23 million respectively, while 10 employees are still the limit. As the fiscal year has not yet ended, data from 2018 is not available to us and the test is conducted with the respect to the old thresholds. The thresholds in Norway are considerably lower compared to those of the EU where about 90% of all companies are below the threshold for mandatory audit (Langli, 2009).

Even though small companies in Norway have been given the opportunity to opt out from auditing, all limited liability firms are required to disclose a complete set of financial statements. These are available to the public through the Brønnøysund Register Centre. So even though smaller companies can opt out from being audited, they still must disclose financial information and hence have to keep up with bookkeeping. The bookkeeping can be done by either in-house accountants or external accountants, while the financial statements can be done by in-house accountants, external accountants or auditors. Hence, some companies can choose to continue being audited as an auditor could help with the preparation of financial statements as well.

While companies are obligated to register auditor company through the Norwegian Directorate of Taxes, there is no such obligation to register accountants, be it internal or external accountant. Still, several companies have voluntarily registered an accountant with the Brønnøysund Register Centre.

Section 2 provides a literature review. Section 3 is then dedicated to hypothesis development, while section 4 describes our data and research method. Section 5 is a discussion of results before providing the conclusion in section 6.

2. Literature Review

2.1 Auditor Exemption

There might be endogenous factors that determine whether a company opt out or not. The following two subsections are dedicated to the two most important and extensively researched ones; financing costs and agency theory. Drawing upon results from Chow (1982), Senkow et al. (2001), Collis et al. (2004), Collis (2010), Niemi et al. (2012) and Dedman et al. (2014), Langli (2015, ch. 4) conducted a Norwegian research to see what influences managers decision on opting out or not. The previous studies are also conducted on smaller companies where having an audit has been made voluntary (Denmark, Finland, UK). Ownership and external financing proved to be dominant factors, but Langli (2015) also note that the role of the auditor, the longevity of the auditor-client relationship and ownership's perceived quality of the auditor firms are relevant factors.

2.1.1 Auditor and Financing Costs

In this section we will relate to prior research that has focused on the effects of audit exemptions. Whether a company benefits from opting-out from auditing may depend on the company characteristics. According to Berry and Robertson (2006), audited financial statements and personal interviews are the two most important sources of information a lender has when assessing a potential loan. If banks were to assess loans to opt out companies as riskier, it would result in higher borrowing cost for these companies and/or poorer access to capital. However, prior literature has concluded that this is not always the case (Langli and Che 2016). Langli and Che (2016) conducted an analysis to see if Norwegian companies that opted out from auditing has received lower interest expenses and/or poorer access to capital compared to firms who continued with auditing. They concluded that companies that opted out did not get higher interest expenses, nor did they get reduced access to capital. This is also in accordance with a study from Langli (2015 ch. 5) where the effects of auditor exemption on financing terms is closer investigated due to inconsistency in prior literature on this topic. The results from this study also showed no negative impact on opting out regarding financing terms (Langli 2015 ch. 5).

Minnis (2011) conducted an analysis of US companies to see if verification of financial statements influences debt pricing. This study concluded that audited firms have a significantly lower cost of debt and that lenders place more weight on audited financial information in setting the interest rate (Minnis 2011). Further, Minnis (2011) found that larger companies and companies with negative equity are more likely to choose auditing in the US, which might suggest some self-selection bias. A study by Dedman et al. (2014) aimed to examine the effects of voluntary audits in UK private firms. They found that large companies that are less profitable, but have more shareholders are more likely to be audited in the UK. Pressure from stakeholders can hence be an important factor in deciding whether to be audited or not. Smaller companies may face less external pressure to audit financial statements as there are fewer stakeholders involved compared to larger companies. This does not mean that smaller companies do not face external pressure at all. Firms that issue equity for example, face external pressure to have their financial statements audited (Downing and Langli 2017). Furthermore, Downing and Langli (2017) concluded that firms that opted out after 2011 had a lower compliance with accounting and tax regulations than those that did not. Continuing to be audited does not only send a positive message to external parties but can also help with the company's compliance to certain regulations.

Choosing to be audited can send a positive message to third parties such as credit agencies and potential investors. Dedman and Kausar (2012) conducted a study to see if the increased threshold for size-based audit exemption in the UK has led to a reduction in financial statement quality and credit ratings. Their results from both conservatism and accruals-based tests indicate that opting out from auditing is associated with less conservative financial reporting, consistent with the concerns of the accounting bodies and the credit rating agencies (Dedman and Kausar 2012). Moreover, their results are providing an explanation for why opt out firms report higher profits but receive lower credit scores. These results indicate that mandatory audit encourages conservatism in the reporting of net income (Dedman and Kausar 2012). Thus, companies can experience positive effects by continue to be audited. This is also consistent with Vanstraelen and Schelleman's (2017) review of auditing

among private firms where the conclusion supports improved financial reporting quality and economic benefits due to private company audits. However, having a mandatory audit in place is no guarantee for universally high audit quality (Vanstraelen and Schelleman 2017). The effect of audit exemption may hence vary across test groups and firms.

Downing and Langli (2017) wanted to see if audit exemption in Norway influenced compliance with accounting and tax regulations for the respective firms. The impact of compliance in opt out firms were strongest in the areas that require in-depth knowledge of relevant accounting and tax regulations (Downing and Langli 2017). This is where the auditors' expertise would be plausibly largest relative to the firm's expertise. Moreover, Downing and Langli (2017) get results that suggests that even though firms chose to opt out, they have access to alternate sources of expertise that could help with compliance with accounting and tax regulations.

Other studies have been conducted comparing companies that choose to be audited compared to companies who do not (e.g. Minnis 2011 and Dedman et al. 2014) in the UK and the US. As 2011 was relatively recent, it means that many Norwegian companies have had experience with being audited, however this can be similar to other countries like the UK when the threshold for mandatory auditing is increased.

2.1.2 Agency Theory

Agency conflict is one factor that can influence a firm's decision to be audited or not. We have discussed earlier the influence of stakeholders in the decision of audit exemption and larger firms are likely to face more significant agency conflicts and hence have a greater need for monitoring (Jensen and Meckling, 1976, Watts and Zimmerman, 1986, Minnis, 2011).

Langli (2015 ch. 4) researched the determining factors regarding firms that choose to opt out or be audited for the same companies that we are researching, namely smaller Norwegian private companies. He found that there is a rational thinking behind managers choice of having an audit or not. The test is done using 100 variables across

ten factors that are thought to influence managers' decision. He concluded that size is a very prominent factor for managers. Expectedly, larger companies are more likely to keep auditing in line with the corresponding increased demand in the market for financial information.

Increased agency conflict may also arise from within a firm. Ownership structure can reflect the degree to which firms potentially face agency conflicts and hence affects the company's demand for an external audit (Downing and Langli 2017). If the CEO desires higher levels of attestation to ensure that the financial statements are accurate, it can mitigate agency conflicts (Minnis 2011). The separation of ownership, the size of the firm and the degree of external financing have been positively associated with voluntary audit when investigating the relationship between voluntary audit and agency costs in the UK (Dedman et al. 2014). Their results indicated that companies are more likely to purchase an audit when facing higher agency costs (Dedman et al. 2014).

Seow (2001) investigated the demand for audit in small companies in the UK and provided some insight into whether the demand for small company audits can be left to market forces. Moreover, in a situation where there is separation between ownership and control, principals will in fact be willing to incur a financial cost to monitor the activities of their agents and it is also in the agent's interest to bear some of this cost, as the agent probably already produces most of the information required by the principal (Seow 2001).

External financial statement audits have been suggested to be a partial solution to the agency costs arising from the separation of ownership and control in organizations (Jensen and Meckling 1976). Jensen and Meckling's (1976) hypotheses regarding audit are applicable to companies where the manager does not own a hundred percent of the assets under his/her control. In this case, agency costs can be reduced by having the financial information verified by a third party (Dedman et al. 2014). In smaller companies it is reasonable to assume that in some cases the manager is also the owner of the company's assets. However, agency cost can arise in any situation

involving cooperative effort by two or more people even though there is no clear principal-agent relationship (Jensen and Meckling 1976).

Cho and Wu (2014) conducted a research on Chinese companies. They find evidence for companies with bigger agency conflict issues to be more likely to hire a high-quality audit (Big N). They also find that some companies with milder agency conflict issues still hire an audit, which they explain through governance indicators, or rather as hiring an audit to fill a gap in governance. However, Adjaoud et al. (2008), Hay et al. (2008) and Lin and Liu (2009) conclude that there are complementary effects between internal corporate governance and auditor selection in Canada, New Zealand and China. They find that better governance is positively related to likelihood of hiring an external audit.

2.2 Earnings Quality

Earnings management is the purposeful intervention of the external financial reporting process, with the intent of obtaining some private gain (as opposed to merely facilitating the neutral operation of the process) (Schipper 1989). Further, earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Healy and Wahlen 1999, p. 368). With these definitions in mind, the presence of earnings managements is a threat to earnings quality. Myers et al. (2003) assert that earnings quality can be used to draw inferences about auditor quality. This because a high-quality audit is more likely to constrain at least extreme earnings management. Further, it is reasonable to expect less earnings management when an auditor is present instead of an accountant as they are presumably of higher quality.

Dechow et al. (2010) assert that quality earnings represent the annuity of expected cash flow and is likely to be both persistent and predictable as that is desirable for financial analysts. However, they also note that persistence and predictability is not

necessarily a good proxy alone, as managers are likely to manage earnings to seem predictable and persistent, thereby increasing standing amongst analysts. They find that earnings, which contain accruals, are more persistent than cash flows, which is an indicative of earnings being manipulated through accruals to seem more persistent. Dechow et al. (2010) further elaborate that magnitude of accruals represent low quality earnings, as they are a less persistent component of earnings. They have also examined the residuals of accruals as they represent management discretion and estimation errors.

Accruals represent a particularly attractive option for manipulation, as it is subject to estimation and forecasts. As mentioned, “noise” in financial reporting threaten earnings quality. One such “noise” is conservatism (Basu, 1997), which is the tendency to recognize economic losses earlier than economic gain. This asymmetric recognition of earnings is another threat to earnings quality. Ball and Shivakumar (2005) performed a similar analysis on timely loss recognition, concluding that private companies report lower quality earnings through less timely loss recognition in relation to public companies.

Size has been shown as an important factor on accrual quality. Hribar and Nichols (2007) concluded that size is positively correlated with accrual quality. Accrual quality has also been proven to relate positively to the employment of a “Big 4” auditor and there is a large quantity of literature that supports “Big N” as a determinant of accrual quality (e.g., Becker et al. 1998, Reynolds and Francis, 2000, DeFond and Zhang, 2014). This is due to the “Big N” auditing companies having access to more resources and having more expertise with which to more effectively conduct the audit. This will as a result possibly limit managers’ potential manipulative reporting behavior. Firms that use a “Big N” auditing company are also more likely to be larger relative to companies that do not (Hribar and Nichols 2007). Hope et al. (2013) shows that for public companies, the high demand for financial information leads to better accrual quality and increased conservatism. However, this effect is mitigated by managers incentive to manage earnings upward to achieve bonus-related benchmarks.

In the absence of intentional earnings management, Dechow and Dichev (2002) argue that earnings quality will be systematically related to firm and industry characteristics. They further explain that distinguishing between the two are important, but since both are related to earnings quality, their targeted measure, they do not attempt to distinguish in their tests. For private companies we can, as mentioned, expect that a large portion of estimation errors is related to unintentional errors in estimating accruals.

Prior literature has correlated proxies for earnings management with various audit characteristics (Lennox et al. 2016). Examples of these characteristics are audit firm size, non-audit fees and auditor industry expertise. Frankel et al. (2002) examine whether auditor fees are associated with earnings management, as there have been concerns about the effect of auditors' provision of non-audit services on the credibility of financial reports. Their results indicate that audit fees are negatively associated with earnings management indicators, while non-audit fees are positively associated with the same earnings management indicators (Frankel et al. 2002). It has been hypothesized in prior literature that auditor industry specialization also contributes to audit quality (Balsam et al. 2003). Balsam et al. (2003) conducted a study to further examine this, by looking at association between measures of earnings quality and auditor industry specialization. Their results indicate that clients of industry specialist auditors are associated with higher earnings quality than clients of non-specialist auditors (Balsam et al. 2003). Different auditor characteristics have hence been proven in prior literature to have the potential to influence earnings quality.

Due to an ongoing debate in literature about the costs and benefits of conforming book and taxable income, Blaylock et al. (2015) conducted a study that examines the relationship between book/tax conformity and earnings management. They discovered that higher levels of book-tax conformity are associated with significantly more, not less, earnings management. Further, book-tax conforming would likely influence earnings management, but would also leave managers with less discretion,

potentially harming the reflection of underlying economic reality. Desai and Dharmapala (2006) shows how tax saving transactions can be used to mask earnings management, potentially weakening this relationship.

To summarize, we find that extensive research has been done on earnings quality and that we do not presume to fully cover this area of research in our paper. However, the bulk of these tests are conducted on public companies or private versus public companies. The likely explanation here is that large, public companies have more analyst following, creditors and investors, which makes earnings quality relatively more important. It also should be mentioned that it is often the case that private company information is harder to obtain than public company information. This makes it hard to draw too many conclusions related to our paper and we intend to help mitigate this gap in private company literature.

2.3 Tax Aggressiveness

Some studies have already been conducted with regards to tax differences amongst firms that opted out and firms that kept auditing in Norway. Langli and Willekens (2017) investigate the effect of a high-quality auditor on horizontal agency conflict and tax avoidance, hypothesizing and finding that high-quality auditors remove hindrance of tax avoidance activity in private firms. The data sample is collected between 2000 and 2014 and thus investigate difference post and pre the new legislation, just as our study does.

According to Ojala et al. (2015) and their Finnish study on small companies, “the link between voluntary audit and tax adjustments rests on the joint-assumption that (i) voluntary auditing of financial statements has a positive effect on the quality of financial statements in terms of their faithfulness, and (ii) the higher the quality of financial statements, the lower the need for tax authorities to make tax adjustments”. They find evidence to support this assumption i.e. that having a voluntary audit decrease likelihood of tax authorities not accepting financial reports.

The issue we investigate in our article is related to differences in tax preparer type and more specifically, whether the tax has been prepared by an audit or non-audit tax worker. To some extent, this has already been researched by Klassen et al. (2015), who present several findings from this area. They find that firms that internally prepare their tax numbers are more tax aggressive than firms that also use their financial statement auditor for tax preparation. Further, there are no significant differences between internal tax preparers and non-audit external tax preparers. However, there are some key differences between our studies. First, while Klassen et al. (2015) examines the dual role of audit and tax preparer, we only examine audit versus non-audit tax preparer. Second, ours is a post- and pre-2011 research across the two tax preparer groups. And third and perhaps most importantly, while Klassen et al. (2015) focus on publicly listed US firms, we only examine smaller unlisted Norwegian companies.

As mentioned, there has been several studies conducted on tax aggressiveness and various factors impacting it. Chen et al. (2010) find that family firms are less tax aggressive than its counterpart. For this paper, we expect tax aggressiveness to be higher for opt out firms, as auditors, in particular the Big N, are highly dependent on their good reputation and are thought to have higher degree of expertise. Chen et al. (2010) investigates differences in tax aggressiveness arising from boardroom composition and find that family firms tend to be less tax aggressive than non-family firms. This is since family firms are willing to forgo tax benefits to avoid non-tax costs like organizational cost and risk. Hence, we can expect differences in tax aggressiveness for our private firms compared to Klassen et al. (2015) and their public US firms. Due to potential costs of being tax aggressive, like non-tax costs arising from managers' hidden actions, we can hence not assume that tax aggressiveness necessarily leads to firm value maximization (Scholes et al. 2005). Enron offers an example of manufacturing earnings through tax aggressiveness activities. Enron manufactured accounting earnings through extensive use of tax shelters that essentially led to no incremental tax benefit, as mentioned in a detailed analysis report done by the Joint Committee of Taxation of the US Congress in 2003 (Chen et al. 2010). This is worth mentioning as an example as these measures do not

always have a positive outcome for the firm. DeBarket et al. (2015) examine corruption in the US across companies that origin from foreign cultures, discovering that size is the most prominent factor. They find that tax evasion and noncompliance in general to be negatively associated with firm size.

On tax aggressiveness in general, several articles have been written on different determining factors that are not related to firm characteristics, but rather personnel. Dyreng et al. (2010) examines the role of the CEO in tax aggressiveness, while Armstrong et al. (2012) examines the role of tax directors. Tax aggressiveness is also affected by the motivation and skill of the auditor, according to Balakrishnan et al. (2012). Kanagaretnam et al. (2016) further investigates the impact from auditor quality on tax aggressiveness, finding that high-quality auditors are negatively associated with likelihood of tax aggressiveness. These findings are likely to be transferable to our study, assuming that auditors are of higher quality than internal tax experts.

As mentioned, these studies are largely related to personnel. We find few studies focusing on firm characteristics and tax aggressiveness and hence wish to mitigate this gap.

3. Hypothesis Development

The first hypothesis we want to test is whether opt out firms on average have lower earnings quality than audited firms. As the role of an auditor is to verify and control financial statements, we find it reasonable to expect that opting out will lead to lower earnings quality. We formulate the following hypothesis:

Hypothesis 1: All else equal, opt out firms' have lower earnings quality than audited firms.

We also want to test whether the same companies experienced a decline in earnings quality after opting out. There might be fundamental characteristics that differ across the test and control group which leads to biased results. As discussed in Langli (2015 ch. 4) and Dedman et al. (2014), managers are rational when deciding whether to opt out from auditing. Hence, we want to test whether the same company that had auditing, experienced a corresponding drop-off in earnings quality after dropping out with the following hypothesis:

Hypothesis 2: All else equal, the firms that opted out from auditing on average experienced a corresponding decline in earnings quality.

With an expected drop-off in earnings quality after opting out, we also want to test if it matters whether they hire an external accountant to do the financial statements or do them internally. As all external accountants are professional accountants, we expect them to produce higher-quality earning than those who produce them in-house. This is also in line with Downing and Langli (2017). Hence, we formulate the following hypothesis:

Hypothesis 3: All else equal, firms that employ external accountant(s) to prepare the annual financial statements after opting out, experience a smaller decline in earnings quality than those who do the financial statements in-house.

Desai and Dharmapala (2006), claim that managers distort earnings upwards and tax downwards for-profit maximizing, hiding them through financial statement manipulation. Hence, there might be a positive link between earnings management and tax aggressiveness. Thus, we want investigate tax aggressiveness as well.

Following the arguments in Klassen (2015), we expect more tax aggressiveness when an auditor is not present. However, while Klassen (2015) investigated public companies, it is once again reasonable to expect more honest mistakes from accountants in smaller, private companies. Still, we propose the following hypothesis:

Hypothesis 4: All else equal, opt out firms are more tax aggressive than audited firms.

Following our arguments for hypothesis 2, we also want to test tax aggressiveness before and after opting out. We expect that with no auditor present to mitigate tax aggressiveness and perform adjustments, firms will be more tax aggressive. We formulate our final hypothesis:

Hypothesis 5: All else equal, the firms that opted out from auditing on average experienced a corresponding decline in tax aggressiveness.

4. Research Design

4.1 Sample and Data

Our data is obtained from the Centre for Corporate Governance Research and the Norwegian Directorate of Taxes. It consists of data from unlisted public limited liability companies and has been randomized. It spans from 2006 to 2015 with 356,098 observations that are below the relevant threshold for audit exemption. We have been able to obtain a variable for number of employees but have chosen to disregard it. The Norwegian Public Limited Liability Companies Act threshold of 10 years is for FTEs, not actual number of employees. Further, we opine that it is unlikely that many companies will have a revenue of below 5 million and still employ above 10 FTEs as that is not economically feasible. We hence felt it would be more accurate and efficient to exclude companies based on the threshold for revenue and balance only. Due to leading and lagging of variables used in our models some observations are excluded and for our regression models 253,187 observations are used.

To simplify and to avoid difference in legislation between companies, we dropped all observations for group companies as The Norwegian Public Limited Liability Companies Act states that thresholds are for the group as a whole. Further, we dropped all companies that cannot exempt from auditing regardless of their thresholds following the Norwegian Public Limited Liability Companies Act of 1997 § 7-6 and the Norwegian Auditors Act of 1999 § 2-1. Since some industries cannot exempt from auditing regardless of their size, revenue and balance like accountant firms, law firms and real estate firms, we excluded these industries from our data set.

We were unable to obtain data regarding auditor name, county and industry for 2015. Hence, we assume it to remain unchanged from their last recorded value. We find it unlikely that many companies have changed aforementioned characteristics from the previous year.

4.2 Main Variables

As we want to compare the mean average with respect to earnings quality and tax aggressiveness between opt out firms and audited firms in hypothesis 1 and 4, those hypotheses are operationalized using OLS. For hypotheses 2, 3 and 5 we compare the corresponding average change in earnings quality and change in tax aggressiveness. As our test results are likely to be driven by some fundamental differences between opt out firms and audited firms, we test our hypotheses using a Fixed Effects research design adjusting for year and firm fixed effects.

We have three main variables of interest:

To examine opt out firms, we use the variable *OptOut*, which equals 1 if the firm at some point has opted out and 0 for continuously audited firms for all years the firm is included in the sample. This is our main variable to test our first and fourth hypothesis and our regression is from the years prior to opting out (i.e. 2006-2010).

To separate between the years when opt out firms did use an auditor and those years they did not, we use *NoAudit*. For audited firms *NoAudit* will always equal 0. For opt out firms *NoAudit* will equal 1 in those years when they exempt from auditing and equal 0 in the years that they were audited. *NoAudit* is our main variable to test our second and fifth hypothesis.

To test our third hypothesis, we create an interaction variable between *NoAudit* and *ExtAcc*. *ExtAcc* is an indicator variable that equals 1 if the company uses an external accountant to prepare their financial statements and 0 if they use an internal accountant. *NoAudit*ExtAcc* will hence equal 1 if the company is not audited and uses an external accountant to prepare its financial statements. This interaction term will always equal 0 if the company is audited and/or do not use an external accountant. As a result, this interaction variable allows for the impact on earnings quality between opt out firms that uses an external accountant compared to an internal accountant.

4.2.1 Earnings Quality

To measure accrual quality, we use two popular methods from previous literature, following Hope et al. (2013) based on Kothari et al. (2005) and a modification of the model in Dechow and Dichev (2002). In Hope et al. (2013), they measure financial reporting quality (*FRQ*), but we find that most of the measures are applicable to measure earnings quality and the sustainability of earnings. As earnings quality of smaller private companies are a relatively under-researched area and we cannot find any universally accepted measure (Dechow et al. 2010, Hope et al. 2013). We will triangulate our results through several regressions.

We further use a discretionary revenue model based on McNichols and Stubben (2008), Stubben (2010) and Hope et al. (2013) to measure revenue accrual quality.

We are following the measurements used by Hope et al. (2013) and use both discretionary accruals and discretionary revenues as indicators of earnings quality. Our first model is based on Kothari et al. (2005) and Hope et al. (2013) which recommend performance-adjusted discretionary accruals. The following model have been estimated for each firm-year:

$$Accr_{i,t} = \beta_0 + \beta_1(1/Assets_{i,t-1}) + \beta_2\Delta Rev_{i,t} + \beta_3NCA_{i,t} + \beta_4ROA_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where:

Accr = Total accruals, measured as the change in non-cash current assets minus the change in current non-interest-bearing liabilities, minus depreciation and amortization expense for firm *i* in year *t*, scaled by lagged total assets.

ΔRev = Annual change in revenue scaled by lagged total assets.

NCA = Non-current assets for firm *i* in year *t*, scaled by lagged total assets.

ROA = Net income for firm *i* in year *t*, scaled by average total assets.

The residuals from the regression model are used as a proxy for discretionary accruals and we use the absolute values of discretionary accruals as proxy for earnings quality. We multiply the absolute values of total discretionary accruals (*DisTA*) by -1 so that higher values of *DisTA* represent higher earnings quality.

Our second measure of accrual quality on Dechow and Dichev (2002) and Hope et al. (2013). Dechow and Dichev's (2002) measure focuses on the strength of the relation between current accruals and past, present and future cash flows. They developed a model for expected accruals and the deviation from this expected value can be interpreted as the estimation error in accruals (Hope et al. 2013). This can be used as a measure of earnings quality. We estimate the following model:

$$WCA_{i,t} = \beta_0 + \beta_1 OCF_{i,t-1} + \beta_2 OCF_{i,t} + \beta_3 OCF_{i,t+1} + \beta_4 \Delta Rev_{i,t} + \beta_5 NCA_{i,t} + \beta_6 DOCF_{i,t} + \beta_7 OCF_{i,t} \times DOCF_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where:

WCA = Working capital accruals, measured as the change in non-cash current assets minus the change in current non-interest-bearing liabilities other than taxes payable, scaled by lagged total assets.

OCF = Cash flow from operations, measured as the sum of net income, depreciation and amortization, minus *WCA*, scaled by lagged total assets.

ΔRev = Annual change in revenues, scaled by lagged total assets.

NCA = Non-current assets for firm *i* in year *t*, scaled by lagged total assets.

DOCF = An indicator variable for negative operating cash flow.

The error term from equation (2) explains the estimation errors in the current accruals that are not associated with operating cash flow and cannot be explained by the change in revenue or the level of non-current assets. We use the absolute value of

these residuals as a proxy for accrual quality. We further multiply this absolute value for discretionary working capital accruals (*DisWCA*) with -1 so that higher values of *DisWCA* represent higher accrual quality.

In our last equation we use discretionary revenues based on McNichols and Stubben (2008), Stubben (2010) and Hope et al. (2013). We use the following model:

$$\Delta AR_{i,t} = \beta_0 + \beta_1 \Delta Rev_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where:

ΔAR = Annual change in accounts receivable, scaled by lagged total assets

ΔRev = Annual change in revenues, scaled by lagged total assets.

The absolute value of the error term from equation (3) will be used as a proxy for discretionary revenues. We multiply the absolute value of discretionary revenues (*DisRev*) with -1 so that higher values of *DisRev* represent higher accrual quality.

4.2.2 Tax Aggressiveness

According to Desai (2003), book income deviates from taxable and simulated book income (essentially, what book income should have been given genuine differences between financial accounting and tax reporting). This results in a difference between corporate tax rates and effective tax rates. There is an ongoing discussion in tax aggressiveness literature as to what is the best proxy and we have not found a generally established consensus. However, we find that we can divide them into two main groupings, one focusing on the effective tax rate (*ETR*), where low effective tax rate in relation to statutory tax rate is an indication of tax aggressiveness (Chen et al. 2010). The other focus is on book-tax differences (*BTD*) and is related to auditor adjustments (Mills, 1998) which then again is related to tax aggressiveness.

A rather straightforward measure of *ETR* is using total tax expense divided by pretax income, which capture permanent book-tax differences. Zimmerman (1983) and Porcano (1986) use total current tax expense in the numerator, thereby capturing

current tax burdens. However, we find more recent literature that shows the *CETR* measures, a modification of *ETR* measures using cash taxes paid in numerator and pretax income in the denominator, to be a better proxy for tax aggressiveness as it captures both permanent and short-term differences. By focusing on cash taxes paid, this measure avoids the overstatement of current tax benefits from employee stock options (Chen et al. 2010). Hence, we look at *CETR* as in Chen et al. (2010) and Dyreng et al. (2008). The difference between the two variables is that Dyreng et al. (2008) use the adjusted pretax income as denominator, adjusting for special items.

Dyreng et al. (2017) explains that *CETR* is widely used in tax avoidance (and aggressiveness) literature as it captures a broad range of tax avoidance activities such as the use of tax havens, investments in tax favored assets, accelerated depreciation, tax credits and so on. The first variable of interest, the *CETR* from Dyreng et al. (2008) is then computed as:

$$CETR = \text{Cash taxes paid} / (\text{pretax income} - \text{extraordinary items})$$

As in previous literature (Chen et al. 2010, Langli and Willekens 2017), we only include observations with a positive adjusted pretax income. We winsorize (reset) to fit all values of *CETR* between 0 and 1. When all values are fitted between 0 and 1, GLM-regression is more appropriate, and we use the Stata command “glm” instead of “reg” for *CETR* regressions.

We use the *BTD* measures from Manzon and Plesko (2001) and Chen et al. (2010). As we do not have the current tax, we estimate this using the cash taxes paid, and deferred taxes divided by statutory tax rate and subtract that number from pretax income, scaling it by lagged total assets:

$$BTD = (\text{Pretax income} - ((\text{Cash taxes paid} + \text{deferred tax asset})/\text{statutory tax rate}) / \text{Lagged total assets}$$

When the *BTD* is zero it means that there are no book-tax-differences and that there is no tax aggressiveness. A positive *BTD* is indicative of the company taking up tax aggressive positions.

4.2.3 Regression Models

As mentioned, managers are rational in deciding whether to opt out or not. Deciding to opt out or not depend on firm characteristics. Hence, the variable *OptOut* is endogenous. To adjust for endogeneity, we perform a two-staged probit estimation (Heckman approach). We do this in line with several time relevant articles (e.g. Lennox et al. 2012, Koren et al. 2014, Peel 2014, Downing and Langli, 2017).

The first-stage probit model considers the probability of opting out. Our probit model is as follows:

$$\begin{aligned}
 OptOut_{i,t} = & \beta_0 + \beta_1 ExtAcc_{i,t} + \beta_2 BookExtAcc_{i,t} + \beta_3 Big5_{i,t} + \beta_4 LnAuditFee_{i,t} + \\
 & \beta_5 NonAuditFee_{i,t} + \beta_6 LnAssets_{i,t} + \beta_7 LnSales_{i,t} + \beta_8 Lev_{i,t} + \beta_9 NegEquity_{i,t} \\
 & + \beta_{10} EquityIssue_{i,t} + \beta_{11} ROA_{i,t} + \beta_{12} InvAccRec_{i,t} + \beta_{13} Growth_{i,t} + \\
 & \beta_{14} LnAge_{i,t} + \beta_{15} OwnershipCEO_{i,t} + \beta_{16} LnNumOwners_{i,t} + \beta_{17} NOL_{i,t} + \\
 & \beta_{18} DNOL_{i,t} + \varepsilon_{i,t}
 \end{aligned} \tag{4}$$

Using the probit model, we calculate the inverse Mills ratio (*IMR*). The *IMR* is subsequently used as a control variable in our second-stage estimation as a control of endogeneity. However, using the same exact control variables in stage one and two, results in very high multicollinearity. Lennox et al. (2012) and Downing and Langli (2017) solve this issue by including control variables that are correlated with opting out, but uncorrelated with second-staged dependent variables in the first-stage model. Put differently, we need to include control variables in the first-stage probit that correlate with the *OptOut*, but do not correlate with our earnings quality and tax aggressive measures. In the second-stage estimation, we need to remove said variables.

As in Downing and Langli (2017) and Koren et al. (2014), we include four such variables. Two are governance-related; *OwnershipCEO* and *LnNumOwners* which is the percentage of shares owned by the CEO and the natural logarithm of number of owners respectively. We also include *EquityIssue* as an indicator variable if the company issues equity. Finally, we include the variable *LnAuditFee*. Higher audit fees are certainly a reason for opting out of having an audit as it means auditing is more expensive.

We find that in the existing literature, control variables for tax aggressiveness and earnings quality are largely the same. Hence, we use the same control variables for both. Our control variables are employed in line with previous literature, namely Hope et al. (2013), Downing and Langli (2017), Langli and Willekens (2017), Klassen et al. (2015), Chen et al. (2010), Dyreng et al. (2010) and Manzon and Plesko (2001)

We control for Big 5 effects on agency costs on both earnings quality and tax aggressiveness. Klassen et al. (2015) explain how high-quality auditors are more concerned with having their clients' tax position overturned by tax authorities, while Big N auditors have also been proven to mitigate at least extreme earnings management. Thus, firms who employ Big 5 auditors are expected to be less tax aggressive and produce better quality earnings. We also include *NonAuditFee* to control for audits performing non-auditing tasks.

Several studies, such as Hribar and Nichols (2007) and Lennox et al. (2016), shows how size is positively correlated with accrual quality. However, in tax aggressiveness literature there seems to be no established consensus as to the effect size has on tax aggressiveness (Armstrong, Bluoïn and Larcker (2012) and Armstrong, Bluoïn, Larcker and Jagolinzer (2015) offer contrasting views to generally established consensus). Thus, we do not make any predictions for our size controls, namely *LnAssets* and *LnSales*.

More levered firms have stronger incentives to be more involved in earnings management and be more tax aggressive, thus we include the control variable *Lev* (debt/total assets). They have incentives to be more tax aggressive as they can benefit more from tax shields and they have incentives to smooth and manipulate earnings when raising debt or when creditor assess riskiness. As another variable relating to riskiness, we include *NegEquity*, following Minnis (2011). On the other hand, highly levered companies might be less likely to opt out from auditing if they fear worse financing terms. Still, in line with existing literature, we expect highly levered firms to be more tax aggressive and to produce lower quality earnings.

We include *ROA* as a measure of profitability, scaling net income by average total assets. *ROA* is frequently applied in the existing literature to control for accounting quality and we expect it to be negatively related to accrual quality as in Hope et al. (2013). *Growth* is the change in total assets and is also usually included in accounting quality analysis, as it requires investment that might be expensed directly or depreciated over time. It also requires capital raising, which might incentivize managers to manipulate earnings. *Growth* is also expected to be negatively correlated with accrual quality. We have no predictions for these two variables regarding tax aggressiveness.

As a measure of the companies age since established, the variable *LnAge* is included. Younger companies might not have experienced with being audited and it is difficult to predict their accruals. We make no predictions about this variable.

We include two variables (as in Langli and Willekens, 2017) for tax loss carry forward. *NOL* is an indicator variable for positive deferred tax assets and *DNOL* is the change in deferred tax assets. Tax loss carry forwards can be used to lower tax rates and thus, we expect that companies with *NOL* to be more tax aggressive. We make no predictions for these two variables regarding earnings quality.

Finally, as the companies that choose to opt out from auditing will have fixed effects impacting our results, we include firms fixed effects when testing hypothesis 2, 3 and 5.

For the second-stage estimation, we estimate the following model:

$$\begin{aligned}
 (DisTA, DisWCA, DisRev, CETR \text{ or } BTD)_{i,t} = & \\
 & \beta_0 + \beta_1 OptOut_{i,t} + \beta_2 NoAudit_{i,t} + \beta_3 NoAudit_{i,t} * ExtAcc_{i,t} + \beta_4 ExtAcc_{i,t} + \beta_5 BookExtAcc_{i,t} + \\
 & \beta_6 Big5_{i,t} + \beta_7 NonAuditFee_{i,t} + \beta_8 LnAssets_{i,t} + \beta_9 LnSales_{i,t} + \beta_{10} Lev_{i,t} + \beta_{11} NegEquity_{i,t} + \\
 & \beta_{12} ROA_{i,t} + \beta_{13} InvAccRec_{i,t} + \beta_{14} Growth_{i,t} + \beta_{15} LnAge_{i,t} + \beta_{16} NOL_{i,t} + \beta_{17} DNOL_{i,t} + \beta_{18} IMR_{i,t} \\
 & + \varepsilon_{i,t}
 \end{aligned} \tag{5}$$

4.3 Descriptive Statistics

Table 1 shows an overview of summary statistics from all the variables used in our regression analyses. First, we remove firms that are above the threshold for audit exemption. We remove firms that have more than 5 million in operating income and a total balance more than 20 million. We do not exclude companies based on employees. The resulting sample consists of 253,187 firm-year observations.

-- Insert Table 1 Here --

Table 2 is an overview of summary statistics and compares opt out and audited firms prior to 2011. We observe that the means for *DisTA* and *DisRev* are lower (-0.068 compared to -0.064 and -1.455 compared to -1.430, respectively) for firms that opted out compared to those who did not. This suggests that opt out firms may on average have lower accrual quality than audited firms. However, we also observe that the medians are slightly higher for all our accrual quality measures.

The same table shows how the means and medians for *CETR* are lower (15.3% and 0% versus 18.1% and 7.7%) and *BTD* bigger (-0.078 and -0.016 versus -0.066 and -0,018) for opt out firms. Both our measures suggest that the firms that opted out on average are more tax aggressive than those who did not for *CETR* and *BTD*.

-- Insert Table 2 Here --

Table 3 shows a comparison of opt out firms pre- and post-2011. We observe that opt out firms have slightly higher accrual quality measures prior to 2011. *CETR* indicates less tax aggressiveness, while *BTD* indicates more tax aggressiveness prior to 2011. Table 4 compares opt out firms that used an external accountant to prepare their financial statements after opting out, to those that used an internal accountant. Two of our accrual quality measures are identical for both internal and external accountant, while *DisRev* is slightly higher for opt out firms that used an external accountant. This can indicate higher accrual quality for firms that used an external accountant. There is little difference in *CETR* between the two, while *BTD* is higher for opt out firms with external accountants. This indicates less tax aggressiveness for opt out firms with an external accountant.

-- Insert Table 3 Here --

-- Insert Table 4 Here --

Table 5 is a correlation matrix for the accrual quality measures and the control variables. As can be expected we see that *LnAssets* is positively correlated with the accrual quality measures. Further, we also notice that *OptOut* and *NoAudit* is negatively correlated with the accrual quality measures. We see that *Lev*, *ROA* and *NegEquity* are the most correlated with *CETR*. *BTD* is most correlated with *ROA*, *NOL*, *Lev* and *NegEquity*. Since the results of the correlation matrix do not control for differences in firm and year characteristics, we will have to analyze multivariate regression test results.

-- Insert Table 5 Here --

5. Results and Discussion

5.1 Initial Analyses

To test our first hypothesis, we only use observations from 2006-2010 and test for a difference between audited and opt out firms, while controlling for other factors that can relate to accrual quality. We perform an OLS regression using equation (5) to test for differences in earnings quality between opt out and non-audited firms. Since companies did not have the option to opt out in this given period, we exclude the *IMR* from this regression. *NoAudit* and *NoAuditExtAcc* is not included in testing our first and fourth hypothesis as we only use data prior to 2011 and these variables would hence be equal to zero.

The coefficient for *OptOut* represents the difference in accrual quality and tax aggressiveness between firms that have opted out and those who did not. We also include numerous control variables that can be associated with the firms' accrual quality and tax aggressiveness. All variable explanations are defined in Appendix 1. We also perform a VIF-test for all the control and indicator variables to test for multicollinearity for all three accrual quality measures. All variables are well below the recommended threshold of 10.

-- Insert Table 6 Here --

Table 6 provides results of testing our first and fourth hypothesis with three measures of earnings quality and two measures of tax aggressiveness. For the sample in table 6, we observe that opt out firms have a slightly higher value for the accrual quality measures, indicating higher earnings quality. *OptOut* is significant at the 1% level for all three accrual quality measures. The results from table 6 indicates that even when all firms were audited, the accrual quality was slightly higher among opt out firms. This is inconsistent with our first hypothesis.

In testing hypothesis 4, we use *CETR* and *BTD* as our dependent variables, while our control variables remain equal to our previous earnings quality regressions. A

positive coefficient suggests less tax aggressiveness for *CETR* as it signals a higher cash tax rate has been paid. If the variable *OptOut* brings *BTD* close to zero, it means that we have less tax aggressiveness.

The results from table 6 shows that the coefficient is positive for *CETR* (0.017) and the positive impact it has on *BTD* (0.001) brings it closer to zero. Still, only *CETR* is statistically significant. Based on these results, opt out firms are on average less, not more tax aggressive. This is inconsistent with our fourth hypothesis.

To test our second and fifth hypothesis, we use the full sample of observations and test for a difference in firms after they opt out. We are also controlling for other factors that may have an impact on accrual quality and tax aggressiveness. We also include firm and year fixed effects. We use a fixed effects model using equation (5) to test for differences in accrual quality and tax aggressiveness when a firm is opting out. We use a two-stage probit estimation to develop our regression model and include an *IMR* control variable. Table 7 shows the results from our first-stage probit estimation from equation (4).

-- Insert Table 7 Here --

For these hypotheses, *NoAudit* is the variable of interest. The coefficient for *NoAudit* represents the difference in accrual quality and tax aggressiveness when there is no audit. We first do a Hausman-test to test for consistency in our fixed effects model compared to a random effects model to ensure efficiency in our estimation method. There might be unobserved heterogeneities in our model, as there are individual effects unique to each company. If we do not account for these, we may have bias in our estimates. We hence include firm and year fixed effects in our model.

-- Insert Table 8 Here --

Table 8 provides results for testing our second, third and fifth hypothesis. We observe that *NoAudit* is slightly positive for *DisTA* (0.004) and *DisRev* (0.013), indicating an

increase in earnings quality after opting out, while it is the opposite for *DisWCA* (-0.001). However, the results are only statistically significant at the 1% level for *DisTA*. These results do nonetheless indicate that firms that opt out from auditing might be experiencing a corresponding increase in earnings quality. This is inconsistent with our second hypothesis.

For our tax aggressiveness measures, we observe that firms that opted out of auditing experienced an increase in *CETR* (0.015), indicative of a decrease in tax aggressiveness. Similarly, firms experienced an increase in *BTD* (0.002), which also indicates a decrease in tax aggressiveness. However, only *CETR* is statistically significant at all relevant levels, while *BTD* is insignificant at all levels. This is inconsistent with our fifth hypothesis.

To test our third hypothesis, *NoAuditExtAcc* is the variable of interest to test for a difference in firms using an external accountant or audit in preparing financial statements after opting out. Results from testing our second hypothesis indicated an increase in earnings quality for *NoAudit* firms, so we hence want to examine if hiring an external accountant or auditor to prepare the financial statements affects this increase, compared to using an internal accountant.

The coefficient for *NoAuditExtAcc* represents the difference in accrual quality for firms that have opted out and are using an external accountant to prepare the financial statements. We account for difference in firm characteristics by including firm and year fixed effects in this model.

From table 8 we observe that *NoAuditExtAcc* is negative for two of our accrual quality measures *DisTA* (-0.002) and *DisRev* (-0.004) and zero for *DisWCA*. This can indicate that firms that are opting out experience a smaller increase earnings quality by using an external accountant than opt out firms using an internal accountant. However, it is only the results for our *DisTA* accrual quality measure that is significant at the 10% level. This means that we cannot assume that hiring an external

accountant after opting out will influence the increase in earnings management after opting out from auditing.

5.2 Additional Analyses

To investigate why several of our results indicate the opposite of what we predicted in our hypotheses, we will perform some additional analysis to investigate why. We want to investigate the characteristics of opt out firms to learn why they have better earnings quality and are less tax aggressive.

-- Insert Table 9 Here --

From our initial analysis, we note that *OptOut* firms are largely influenced by size (*LnAssets*) and *NonAuditFee*. We first look at size as an impacting factor for earnings quality. We create an indicator variable (*LargeFirm*) that indicates if the firm is larger than the median value for size (*LnAssets*). We observe that large firms are negatively associated with opting out, i.e. that larger firms on average opt out less frequently compared to smaller firms. Further, we observe from table 9 that larger firms on average have a negative impact on all our earnings quality measures. This implies that larger firms on average have a slightly lower accrual quality than smaller firms. *DisTA* (-0.009) and *DisWCA* (-0.008) is statistically significant at the 1% level. *DisRev* (-0.005) is not statistically significant. This may influence our results as larger firms on average have a higher tendency to opt out and on average have lower accrual quality it may explain why our results indicate higher accrual quality among opt out firms. Larger firms may have more depreciable assets which impact the companies' depreciation which in turn can influence the companies' accruals. It stands to reason that larger firms have more accruals and may choose to get audited as there are more stakeholders involved, more depreciation and amortization, etc. What we observed from this additional analysis is that that our results which indicates higher accrual quality among opt out firms may, to some extent, be explained by the fact that smaller firms have on average a higher tendency to opt out than do larger firms, and that larger firms on average have a lower accrual quality than do smaller firms.

In table 9 we can observe that *LargeFirm* also has an impact on tax aggressiveness. Our tax aggressiveness measures *CETR* (-0.017) and *BTD* (0.025) are both significant at the 1% level. We observe that larger firms on average have a lower *CETR* and a higher *BTD*, implying that larger firms are more tax aggressive. Due to larger companies on average more seldomly opt out, this may also explain why our results indicate that opt out firms are less tax aggressive. Big companies invest relatively more in R&D and they have relatively more accounts receivables and PPEs. This creates relatively bigger accruals and *BTD* and gives rise to potential manipulation. Large international companies might also have more activities in foreign countries with low tax rates, thereby reducing their tax rate. Better earnings quality and less tax aggressiveness amongst smaller firms might also be explained not only by size of accruals, but also by a lack of expertise in manipulating them.

Another explanation of why smaller companies opts out more frequently and are less involved with earnings management and tax planning are agency costs. Smaller companies are more likely to be controlled by its owner, thus reducing the attractiveness of manipulating earnings and tax to meet personal bonus-related benchmarks (Dedman et al. 2014 and Langli 2015 ch. 4). Hence, agency costs are less prevalent in smaller companies. They might also face less external pressure from stakeholders to have their financial statements audited. If they face relatively less pressure of having their financial statements audited, it might also be easier to pressure the auditor to accept their financial reports, with the threat of opting out being more credible.

As mentioned, *NonAuditFee* has a significant impact on firms opting out. Previous literature has shown how *NonAuditFee* negatively relates to opting out (Downing and Langli, 2017). We find it reasonable to assume that when the auditor provides several services to a client and a deeper professional relationship is formed, the auditor is more susceptible to give in to pressure from the client. This might also be an explanation for audited firms having lower accrual quality and more tax aggressiveness.

-- Insert Table 10 Here --

We want to investigate to what level industry affect likelihood of opting out. The findings from table 9 supports our thoughts on company size affecting our results. From table 10, we discover that industry code 96 “other personal services” was the industry that opted out most frequently. Within this segment we find hairdressers, beauty-workers and dry-cleaners etc. i.e. industries with many cash transactions, little accounts receivables and little intangibles and PPE. At the other end of the scale, we find industry number 27, “production of electronic equipment” and 72, “research and development”. In other words, an industry with relatively large intangibles and PPEs.

-- Insert Table 11 Panel A Here --

From panel A table 11 we observe that accrual quality for opt out firms is higher before 2011 compared to after 2011. This indicates that opt out firms on average have a higher accrual quality before 2011. The coefficients for *OptOut* has decreased for our accrual quality measures after 2011. *DisTA*, *DisWCA* and *DisRev* have decreased from 0.010, 0.005 and 0.040 to 0.008, 0.003 and 0.024 respectively, after 2011. This indicates that opt out firms, although on average have a higher accrual quality than audited firms pre/post 2011, had a higher accrual quality before 2011 compared to after 2011.

-- Insert Table 11 Panel B Here --

We also want to see if there is a difference in tax aggressiveness in opt out firms before and after 2011. From panel B in table 11 we observe that our tax aggressiveness measures indicate lower tax aggressiveness amongst opt out firms before 2011. *CETR* have decreased from 0.014 before 2011 to 0.012 after 2011. This implies that opt out firms have a higher *CETR* before 2011 and as this lowers it indicates higher tax aggressiveness among these firms after 2011. The *BTD* coefficient has decreased from -0.001 before 2011 to -0.003 after 2011. Since *BTD* is lower after 2011, it also indicates that opt out firms are more tax aggressive after 2011. However, *BTD* is not statistically significant.

6. Conclusion

We focus on the effect of audit exemption on companies' earnings quality and tax aggressiveness. In 2011, a change in legislation gave small Norwegian firms the option to opt out from auditing and we examine some of the effects of this change. We use randomized data from the Centre for Corporate Governance Research and the Norwegian Directorate of Taxes to measure the difference in earnings quality and tax aggressiveness between audited and opt out firms. Moreover, we examine whether our earnings quality and tax aggressiveness measures were affected after the time of opting out. We also test if opting out and hiring external accountants to do the financial statements is better than doing them internally.

Our results suggest that opt out firms does not have lower accrual quality than audited firms. They also do not take up more tax aggressive positions. In fact, our results indicate that opt out firms, on average, have a slightly higher accrual quality and are less tax aggressive than audited firms. This suggests that opt out firms on average provide better insights when reporting numbers than audited firms, both when they were audited and after they opted out. Further, we also find that reporting quality (slightly) increases for those firms after opting out. We find little to no evidence that an external accountant affects earnings quality or tax aggressiveness after opting out. We find that size has an impact on both opting out, poorer accrual quality and higher tax aggressiveness. We also find that the industry which the company operates in influences the company's choice to opt out. These firm characteristics may explain part of our results. However, we also attribute some of these differences to firm characteristics that we have not researched.

There are a few limitations to our study. First, this is a randomized excerpt from the original data set. Our findings might not hold for the entire original data sample. Second, we are aware of the criticism of the models we have chosen, in particular accrual models (see Stubben, 2010). We employ three models for accrual quality and two for tax aggressiveness. Previous literature has supplied numerous variations in these models, we focused on the models of Hope et al. (2013) and Chen et al. (2010),

however future research may consider whether alternative measures can affect the conclusions. Third, in our additional analysis we explain why we think some of our results went in the opposite direction of our hypotheses. Some of these statements, we have not found adequate evidence for.

For future research, we would find it interesting to see alternative measures of earnings quality and tax aggressiveness be used. While these are popular models in researching big, public companies, we are skeptical of their fit to small, private companies. They are largely influenced by accruals, which we find is not too prevalent in these companies.

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Tables

Table 1: Summary Statistics

Variable	N	Mean	Standard deviation	Minimum	Maximum	Percentiles				
						10th	25th	50th	75th	90th
<i>DisTA</i>	253,187	-0.065	0.083	-4.347	0.000	-0.142	-0.087	-0.046	-0.017	-0.006
<i>DisWCA</i>	143,909	-0.028	0.072	-7.458	0.000	-0.060	-0.027	-0.013	-0.006	-0.002
<i>DisRev</i>	253,187	-1.435	0.839	-42.187	0.000	-1.929	-1.463	-1.330	-1.238	-0.888
<i>CETR</i>	253,187	0.159	0.230	0.000	1.000	0.000	0.000	0.000	0.278	0.346
<i>BTD</i>	253,187	-0.063	0.427	-34.323	22.834	-0.313	-0.096	-0.011	0.022	0.129
<i>OptOut</i>	253,187	0.509	0.500	0.000	1.000	0.000	0.000	1.000	1.000	1.000
<i>NoAudit</i>	253,187	0.293	0.455	0.000	1.000	0.000	0.000	0.000	1.000	1.000
<i>NoAuditExtAcc</i>	253,187	0.270	0.444	0.000	1.000	0.000	0.000	0.000	1.000	1.000
<i>ExtAcc</i>	253,187	0.795	0.404	0.000	1.000	0.000	1.000	1.000	1.000	1.000
<i>BookExtAcc</i>	253,187	0.709	0.454	0.000	1.000	0.000	0.000	1.000	1.000	1.000
<i>Big5</i>	253,187	0.197	0.398	0.000	1.000	0.000	0.000	0.000	0.000	1.000
<i>LnAuditFee</i>	253,187	2.573	0.555	1.099	3.932	1.792	2.197	2.565	2.944	3.258
<i>NonAuditFee</i>	253,187	0.005	0.009	0.000	0.056	0.000	0.000	0.002	0.006	0.014
<i>LnAssets</i>	253,187	7.487	1.178	4.605	10.115	5.966	6.633	7.427	8.380	9.145
<i>LnSales</i>	253,187	5.266	3.239	0.000	8.501	0.000	0.000	6.835	7.728	8.172
<i>Lev</i>	253,187	0.722	0.532	0.019	3.765	0.192	0.411	0.677	0.888	1.120
<i>NegEquity</i>	253,187	0.141	0.348	0.000	1.000	0.000	0.000	0.000	0.000	1.000
<i>EquityIssue</i>	253,187	0.019	0.137	0.000	1.000	0.000	0.000	0.000	0.000	0.000
<i>ROA</i>	253,187	0.050	0.189	-0.459	0.500	-0.160	-0.019	0.038	0.136	0.288
<i>InvAccRec</i>	253,187	106.503	163.466	0.000	679.533	0.000	0.080	22.997	148.980	351.429
<i>Growth</i>	253,187	0.069	0.405	-0.691	2.204	-0.285	-0.104	0.000	0.143	0.443
<i>LnAge</i>	253,187	2.210	0.832	0.693	4.220	1.099	1.609	2.197	2.833	3.258
<i>OwnershipCEO</i>	253,187	41.141	42.882	0.000	100.000	0.000	0.000	33.000	100.000	100.000
<i>LnNumOwners</i>	253,187	0.590	0.708	0.000	4.419	0.000	0.000	0.693	1.099	1.386
<i>NOL</i>	253,187	0.230	0.421	0.000	1.000	0.000	0.000	0.000	0.000	1.000
<i>DNOL</i>	253,187	0.004	1.053	-9.049	8.995	-0.050	0.000	0.000	0.000	0.156

Table 1 contains summary statistics for all the variables used in our regression analyses. The sample contains observations from 2006 to 2015 with 253,187 observations. Due to lead and lag in *OCF* in the construct of *DisWCA*, the result is fewer observations for this accrual quality measure with 143,909 observations. *OptOut* takes the value of 1 for opt out firms and 0 for audited firms. Please see Appendix 1 for variable definitions.

Table 2: Summary statistics, Opt Out Firms vs. Audited Firms, Pre-2011

Variable	Opt Out Firms		Audited Firms	
	Mean	Median	Mean	Median
<i>DisTA</i>	-0.068	-0.045	-0.064	-0.047
<i>DisWCA</i>	-0.028	-0.013	-0.028	-0.014
<i>DisRev</i>	-1.455	-1.331	-1.430	-1.333
<i>CETR</i>	0.153	0.000	0.181	0.077
<i>BTD</i>	-0.078	-0.016	-0.066	-0.018
<i>ExtAcc</i>	0.613	1.000	0.733	1.000
<i>BookExtAcc</i>	0.628	1.000	0.769	1.000
<i>Big5</i>	0.214	0.000	0.190	0.000
<i>LnAuditFee</i>	2.579	2.565	2.575	2.565
<i>NonAuditFee</i>	0.006	0.002	0.006	0.002
<i>LnAssets</i>	7.579	7.539	7.191	7.131
<i>LnSales</i>	5.092	6.721	5.662	7.039
<i>Lev</i>	0.773	0.722	0.718	0.679
<i>NegEquity</i>	0.161	0.000	0.135	0.000
<i>EquityIssue</i>	0.029	0.000	0.018	0.000
<i>ROA</i>	0.036	0.031	0.054	0.040
<i>InvAccRec</i>	107.312	19.508	118.135	38.500
<i>Growth</i>	0.077	0.000	0.069	0.000
<i>LnAge</i>	2.172	2.197	2.172	2.197
<i>OwnershipCEO</i>	32.711	0.000	52.176	50.000
<i>LnNumOwners</i>	0.610	0.693	0.508	0.693
<i>NOL</i>	0.238	0.000	0.240	0.000
<i>DNOL</i>	-0.010	0.000	0.031	0.000

Table 2 contains data from 2006-2010 only, when all the firms were required to be audited. This table shows the difference in summary statistics between opt out firms and audited firms before they opted out. Please see Appendix 1 for variable definitions.

Table 3: Summary Statistics, Opt Out Firms Only, Pre- vs. Post-Opt Out

Variable	Pre-Opt Out		Post-Opt Out	
	Mean	Median	Mean	Median
<i>DisTA</i>	-0.063	-0.046	-0.069	-0.052
<i>DisWCA</i>	-0.028	-0.014	-0.031	-0.015
<i>DisRev</i>	-1.426	-1.332	-1.453	-1.330
<i>CETR</i>	0.175	0.032	0.168	0.000
<i>BTD</i>	-0.068	-0.017	-0.058	-0.010
<i>ExtAcc</i>	0.761	1.000	0.921	1.000
<i>BookExtAcc</i>	0.758	1.000	0.841	1.000
<i>Big5</i>	0.215	0.000	0.021	0.000
<i>LnAuditFee</i>	2.580	2.565	2.546	2.565
<i>NonAuditFee</i>	0.006	0.002	0.005	0.001
<i>LnAssets</i>	7.245	7.178	7.138	7.082
<i>LnSales</i>	5.599	7.021	5.784	7.003
<i>Lev</i>	0.722	0.682	0.699	0.642
<i>NegEquity</i>	0.140	0.000	0.141	0.000
<i>EquityIssue</i>	0.018	0.000	0.011	0.000
<i>ROA</i>	0.052	0.038	0.062	0.046
<i>InvAccRec</i>	116.725	36.155	118.362	36.568
<i>Growth</i>	0.067	-0.002	0.069	0.000
<i>LnAge</i>	2.194	2.303	2.135	2.197
<i>OwnershipCEO</i>	50.568	50.000	52.644	50.000
<i>LnNumOwners</i>	0.524	0.693	0.465	0.000
<i>NOL</i>	0.238	0.000	0.216	0.000
<i>DNOL</i>	0.029	0.000	-0.002	0.000

Table 3 contains data for opt out firms only. This table shows the difference in summary statistics between opt out firms before and after they opted out. Please see Appendix 1 for variable definitions.

Table 4: Summary Statistics, Opt Out Firms, Post-Opt Out, External Accountant vs. No External Accountant

Variable	External Accountant		No External Accountant	
	Mean	Median	Mean	Median
<i>DisTA</i>	-0.068	-0.050	-0.068	-0.051
<i>DisWCA</i>	-0.031	-0.014	-0.031	-0.015
<i>DisRev</i>	-1.423	-1.327	-1.450	-1.330
<i>CETR</i>	0.165	0.000	0.166	0.000
<i>BTD</i>	-0.041	-0.003	-0.061	-0.011
<i>BookExtAcc</i>	0.161	0.000	0.885	1.000
<i>Big5</i>	0.088	0.000	0.055	0.000
<i>LnAuditFee</i>	2.510	2.565	2.556	2.565
<i>NonAuditFee</i>	0.006	0.002	0.005	0.001
<i>LnAssets</i>	7.232	7.147	7.175	7.123
<i>LnSales</i>	5.297	6.565	5.768	7.030
<i>Lev</i>	0.694	0.633	0.705	0.650
<i>NegEquity</i>	0.136	0.000	0.144	0.000
<i>EquityIssue</i>	0.015	0.000	0.012	0.000
<i>ROA</i>	0.059	0.042	0.059	0.044
<i>InvAccRec</i>	108.043	23.878	118.267	36.396
<i>Growth</i>	0.058	0.000	0.068	0.000
<i>LnAge</i>	2.242	2.197	2.146	2.197
<i>OwnershipCEO</i>	43.275	35.000	52.291	50.000
<i>LnNumOwners</i>	0.567	0.693	0.472	0.000
<i>NOL</i>	0.196	0.000	0.219	0.000
<i>DNOL</i>	0.005	0.000	0.000	0.000

Table 4 contains data for opt out firms only, for the years after these firms opted out. Data in the columns “External Accountant” are for opt out firms that used an external accountant or auditor to prepare their financial statements after opting out. Data in the columns “No External Accountant” are for those opt out firms that used an internal accountant to prepare their financial statements after opting out. Please see Appendix 1 for variable definitions.

Table 5: Correlation Matrix

	<i>DisTA</i>	<i>DisWCA</i>	<i>DisRev</i>	<i>CETR</i>	<i>BTD</i>	<i>OptOut</i>	<i>NoAudit</i>	<i>NoAuditExtAcc</i>	<i>ExtAcc</i>	<i>BookExtAcc</i>	<i>Big5</i>	<i>LnAuditFee</i>	<i>NonAuditFee</i>
<i>DisTA</i>	1.0000												
<i>DisWCA</i>	0.4833*	1.0000											
<i>DisRev</i>	0.2359*	0.3403*	1.0000										
<i>CETR</i>	0.0326*	0.0269*	-0.0063*	1.0000									
<i>BTD</i>	0.0528*	-0.3505*	-0.1068*	0.0364*	1.0000								
<i>OptOut</i>	-0.0179*	-0.0185*	-0.0077*	0.0521*	0.0017	1.0000							
<i>NoAudit</i>	-0.0319*	-0.0250*	-0.0137*	0.0239*	0.0075*	0.6318*	1.0000						
<i>NoAuditExtAcc</i>	-0.0293*	-0.0225*	-0.0140*	0.0230*	0.0048*	0.5967*	0.9445*	1.0000					
<i>ExtAcc</i>	-0.0021	-0.0085*	0.0002	-0.0013	-0.0007	0.1468*	0.2010*	0.3084*	1.0000				
<i>BookExtAcc</i>	-0.0267*	-0.0219*	-0.0157*	0.0122*	-0.0120*	0.2157*	0.1860*	0.2553*	0.4300*	1.0000			
<i>Big5</i>	0.0342*	0.0208*	0.0196*	-0.0353*	-0.0050*	-0.2390*	-0.2843*	-0.2693*	-0.0477*	-0.0906*	1.0000		
<i>LnAuditFee</i>	-0.0619*	-0.0226*	-0.0002	-0.0531*	-0.0621*	-0.0224*	-0.0306*	-0.0250*	0.0300*	0.0536*	0.0892*	1.0000	
<i>NonAuditFee</i>	-0.1426*	-0.0751*	-0.0314*	-0.0290*	-0.0598*	0.0227*	-0.0095*	-0.0129*	-0.0319*	-0.0326*	-0.0205*	0.0371*	1.0000
<i>LnAssets</i>	0.2588*	0.1140*	0.0642*	0.0026	0.1136*	-0.2624*	-0.1905*	-0.1814*	-0.0501*	-0.1188*	0.1706*	0.0322*	-0.3670*
<i>LnSales</i>	-0.1960*	-0.1083*	-0.1035*	0.0047*	-0.0549*	0.1382*	0.1030*	0.1038*	0.0442*	0.1078*	-0.1083*	0.2476*	0.1191*
<i>Lev</i>	-0.1912*	-0.0330*	-0.0547*	-0.1979*	-0.2206*	-0.0251*	-0.0275*	-0.0253*	-0.0060*	0.0189*	-0.0049*	0.0929*	0.1485*
<i>NegEquity</i>	-0.1297*	-0.0135*	-0.0207*	-0.2199*	-0.2133*	-0.0002	0.0013	0.0022	0.0029	0.0273*	-0.0118*	0.0854*	0.1204*
<i>EquityIssue</i>	-0.0520*	-0.0095*	-0.0188*	-0.0575*	-0.1002*	-0.0385*	-0.0377*	-0.0373*	-0.0120*	-0.0051*	0.0196*	0.0527*	0.0210*
<i>ROA</i>	-0.2272*	-0.3620*	-0.1999*	0.1959*	0.5086*	0.0396*	0.0402*	0.0381*	0.0059*	0.0096*	-0.0249*	-0.0628*	-0.0725*
<i>InvAccRec</i>	-0.1543*	-0.1106*	-0.1352*	0.0130*	-0.0214*	0.0695*	0.0467*	0.0469*	0.0174*	0.0490*	-0.0723*	0.0905*	0.1344*
<i>Growth</i>	-0.1867*	-0.3770*	-0.4275*	0.0290*	0.1347*	-0.0021	0.0000	0.0009	-0.0072*	0.0064*	-0.0112*	-0.0169*	-0.0548*
<i>LnAge</i>	0.0620*	0.0279*	0.0923*	0.0204*	0.0368*	-0.0604*	-0.0576*	-0.0587*	-0.0324*	-0.0584*	0.0389*	0.0148*	-0.0382*
<i>OwnershipCEO</i>	-0.0752*	-0.0587*	-0.0266*	0.0687*	0.0255*	0.2521*	0.1725*	0.1724*	0.0806*	0.1414*	-0.1610*	0.0202*	0.0391*
<i>LnNumOwners</i>	0.0725*	0.0510*	0.0069*	-0.0346*	-0.0423*	-0.1434*	-0.1135*	-0.1129*	-0.0575*	-0.1049*	0.1220*	0.0032	-0.0317*
<i>NOL</i>	0.0622*	0.0370*	0.0257*	-0.0362*	-0.2580*	-0.0124*	-0.0225*	-0.0186*	-0.0090*	0.0045*	0.0281*	0.0598*	-0.0252*
<i>DNOL</i>	0.0424*	0.0127*	0.0314*	0.0262*	-0.1540*	0.0068*	-0.0036	-0.0039	0.0028	0.0038	-0.0028	0.0043*	-0.0056*

	<i>LnAssets</i>	<i>LnSales</i>	<i>Lev</i>	<i>NegEquity</i>	<i>EquityIssue</i>	<i>ROA</i>	<i>InvAccRec</i>	<i>Growth</i>	<i>LnAge</i>	<i>OwnershipCEO</i>	<i>LnNumOwners</i>	<i>NOL</i>	<i>DNOL</i>
<i>LnAssets</i>	1.0000												
<i>LnSales</i>	-0.3919*	1.0000											
<i>Lev</i>	-0.1909*	0.0633*	1.0000										
<i>NegEquity</i>	-0.1794*	0.0571*	0.6895*	1.0000									
<i>EquityIssue</i>	0.0238*	0.0171*	0.0372*	0.0419*	1.0000								
<i>ROA</i>	0.0910*	0.0265*	-0.3389*	-0.3419*	-0.0997*	1.0000							
<i>InvAccRec</i>	-0.3630*	0.3566*	0.1143*	0.0674*	-0.0048*	0.0237*	1.0000						
<i>Growth</i>	0.1256*	0.0594*	-0.0578*	-0.0766*	0.0618*	0.3330*	0.0712*	1.0000					
<i>LnAge</i>	0.1405*	-0.1358*	-0.1176*	-0.0869*	-0.0495*	0.0267*	-0.1027*	-0.0646*	1.0000				
<i>OwnershipCEO</i>	-0.2392*	0.2693*	-0.0558*	-0.0216*	-0.0356*	0.0861*	0.1335*	0.0352*	-0.0381*	1.0000			
<i>LnNumOwners</i>	0.1698*	-0.1484*	0.0172*	0.0032	0.0702*	-0.0707*	-0.0544*	-0.0145*	0.0395*	-0.4178*	1.0000		
<i>NOL</i>	0.0186*	0.0368*	-0.0375*	-0.0294*	0.0057*	-0.0449*	0.0033	-0.0243*	0.0386*	-0.0204*	0.0314*	1.0000	
<i>DNOL</i>	0.0061*	0.0082*	-0.0189*	-0.0110*	0.0050*	-0.0531*	-0.0012	-0.0098*	-0.0243*	0.0095*	0.0025	0.3266*	1.0000

Table 5 contains a correlation matrix for all the variables used in our earnings quality and tax aggressiveness regression analyses. * indicates statistical significance at the 5 percent levels. Please see Appendix 1 for variable definitions.

Table 6: Regression Results Pre-2011

Dependent Variable:	<i>DisTA</i>	<i>DisWCA</i>	<i>DisRev</i>	<i>CETR</i>	<i>BTD</i>
<i>OptOut</i>	0.011*** (23.469)	0.005*** (8.046)	0.046*** (9.317)	0.017*** (11.893)	0.001 (0.388)
<i>ExtAcc</i>	0.001 (1.008)	0.000 (0.649)	0.007 (1.152)	-0.004** (-2.426)	0.002 (0.724)
<i>BookExtAcc</i>	0.001** (2.364)	-0.001 (-1.423)	0.002 (0.392)	0.004** (2.306)	-0.002 (-0.765)
<i>Big5</i>	-0.005*** (-7.264)	-0.002*** (-2.994)	-0.008 (-1.421)	-0.009*** (-5.139)	-0.003 (-0.948)
<i>NonAuditFee</i>	-0.438*** (-8.997)	-0.290*** (-4.097)	-0.892** (-2.372)	-0.363*** (-4.195)	0.292 (1.596)
<i>LnAssets</i>	0.016*** (51.378)	0.008*** (16.799)	0.060*** (21.002)	-0.005*** (-6.282)	0.022*** (15.136)
<i>LnSales</i>	-0.002*** (-23.933)	-0.000*** (-4.003)	-0.004*** (-6.712)	0.000 (-1.638)	-0.004*** (-11.034)
<i>Lev</i>	-0.039*** (-19.436)	-0.013*** (-7.690)	-0.145*** (-16.714)	-0.023*** (-13.824)	-0.045*** (-6.641)
<i>NegEquity</i>	-0.009*** (-6.045)	-0.011*** (-9.167)	-0.023** (-2.110)	-0.099*** (-42.068)	-0.011* (-1.945)
<i>ROA</i>	-0.115*** (-42.004)	-0.124*** (-41.784)	-0.497*** (-21.577)	0.180*** (59.318)	1.105*** (79.917)
<i>InvAccRec</i>	0.000 (-0.044)	0.000 (-1.315)	-0.000*** (-12.584)	0.000*** (6.076)	0.000* (1.714)
<i>Growth</i>	-0.031*** (-20.094)	-0.054*** (-14.599)	-0.841*** (-40.949)	-0.017*** (-10.276)	-0.055*** (-5.136)
<i>LnAge</i>	0.000 (-1.536)	-0.001 (-1.258)	0.039*** (13.560)	0.005*** (5.382)	0.003** (2.487)
<i>NOL</i>	0.007*** (14.794)	0.004*** (7.461)	-0.005 (-0.964)	-0.026*** (-15.093)	-0.214*** (-73.091)
<i>DNOL</i>	0.001*** (3.868)	-0.001*** (-2.930)	0.012*** (3.790)	0.011*** (18.865)	-0.021*** (-9.350)
<i>Constant</i>	-0.138*** (-51.863)	-0.066*** (-19.897)	-1.739*** (-65.828)	0.219*** (29.073)	-0.182*** (-14.235)
R-squared	0.198	0.195	0.216	-	0.315
Firm years	105,745	57,830	105,745	105,745	105,745

Table 6 reports coefficient estimates from a regression of three measures of accrual quality and two measures of tax aggressiveness on *OptOut* plus control variables. Only observations from 2006-2010 were used in these regressions. All models were estimated using standard OLS, except from *CETR* where we used GLM. This is why no R-squared is observed for *CETR*. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Table 7: Regression Results, First-Stage Probit Estimation

Dependent Variable:	<i>OptOut</i>	
<i>ExtAcc</i>	0.208***	(16.278)
<i>BookExtAcc</i>	0.400***	(28.981)
<i>Big5</i>	-0.609***	(-45.534)
<i>LnAuditFee</i>	0.005	(0.501)
<i>NonAuditFee</i>	-7.614***	(-12.072)
<i>LnAssets</i>	-0.272***	(-42.936)
<i>LnSales</i>	-0.003	(-1.505)
<i>Lev</i>	-0.132***	(-10.264)
<i>NegEquity</i>	0.027	(1.490)
<i>EquityIssue</i>	-0.214***	(-9.760)
<i>ROA</i>	0.149***	(6.270)
<i>InvAccRec</i>	-0.000***	(-10.493)
<i>Growth</i>	0.036***	(4.742)
<i>LnAge</i>	-0.034***	(-4.762)
<i>OwnershipCEO</i>	0.005***	(31.404)
<i>LnNumOwners</i>	-0.018*	(-1.954)
<i>NOL</i>	-0.014	(-0.981)
<i>DNOL</i>	0.009***	(3.390)
<i>Constant</i>	1.780***	(30.430)
Pseudo R-squared	0.1344	
Firm years	253,187	

Table 7 shows the results of the first-stage probit estimation model that predicts the probability of a firm opting out. The model includes firm and year fixed effects. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Table 8: Regression Results, Fixed Effects Model

Dependent Variable:	<i>DisTA</i>	<i>DisWCA</i>	<i>DisRev</i>	<i>CETR</i>	<i>BTD</i>
<i>NoAudit</i>	0.004*** (2.580)	-0.001 (-0.675)	0.013 (0.852)	0.015*** (2.663)	0.002 (0.298)
<i>NoAuditExtAcc</i>	-0.002* (-1.664)	0.000 (0.183)	-0.004 (-0.262)	-0.014** (-2.513)	-0.008 (-0.972)
<i>ExtAcc</i>	-0.005*** (-6.693)	-0.004** (-2.520)	-0.001 (-0.076)	-0.008*** (-3.395)	0.002 (0.343)
<i>BookExtAcc</i>	-0.011*** (-9.249)	-0.006** (-2.146)	0.020* (1.677)	-0.016*** (-4.714)	-0.006 (-0.818)
<i>Big5</i>	0.015*** (9.402)	0.007 (1.564)	-0.024 (-1.501)	0.024*** (5.588)	0.005 (0.491)
<i>LnAssets</i>	0.032*** (30.601)	0.021*** (14.878)	0.125*** (13.281)	0.028*** (13.110)	0.020*** (4.311)
<i>LnSales</i>	0.001*** (4.410)	0.000 (0.446)	-0.043*** (-29.367)	0.002*** (3.657)	-0.004*** (-5.683)
<i>Lev</i>	-0.033*** (-17.907)	0.005* (1.890)	-0.098*** (-7.511)	-0.011*** (-5.591)	-0.065*** (-7.335)
<i>NegEquity</i>	-0.013*** (-12.070)	-0.009*** (-5.236)	-0.038*** (-3.335)	-0.041*** (-17.483)	-0.030*** (-5.915)
<i>ROA</i>	-0.113*** (-53.060)	-0.139*** (-48.277)	-0.771*** (-35.848)	0.095*** (31.269)	1.142*** (-105.371)
<i>InvAccRec</i>	0.000*** (11.656)	0.000** (2.278)	-0.000*** (-12.202)	0.000*** (9.021)	0.000*** (3.515)
<i>Growth</i>	-0.029*** (-29.621)	-0.057*** (-27.253)	-0.729*** (-51.553)	-0.020*** (-14.101)	-0.040*** (-5.677)
<i>LnAge</i>	-0.001 (-1.049)	-0.001 (-0.567)	0.087*** (8.718)	0.003 (0.849)	0.008 (1.587)
<i>NOL</i>	0.006*** (9.276)	0.004*** (3.618)	-0.019*** (-2.795)	-0.045*** (-18.579)	-0.125*** (-29.259)
<i>DNOL</i>	0.000* (1.657)	-0.002*** (-4.461)	0.018*** (8.404)	0.009*** (20.468)	-0.031*** (-15.921)
<i>IMR</i>	-0.039*** (-10.575)	-0.019** (-1.976)	0.064* (1.889)	-0.064*** (-7.316)	-0.005 (-0.211)
<i>Constant</i>	-0.229*** (-32.883)	-0.157*** (-13.636)	-2.196*** (-33.548)	0.044*** (3.132)	-0.185*** (-5.405)
Firm and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
R-squared	0.143	0.232	0.216	0.019	0.326
Firm years	253,187	143,909	253,187	253,187	253,187

Table 8 reports coefficient estimates from a regression of three measures of accrual quality and two measures of tax aggressiveness on *NoAudit* plus control variables. Observations from all years were used in these regressions. All estimations include firm and year fixed effects. *NoAuditExtAcc* is an interaction term between *NoAudit* and *ExtAcc*. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Table 9: Regression Results, with *LargeFirm* Indicator Variable

Dependent variable:	<i>DisTA</i>	<i>DisWCA</i>	<i>DisRev</i>	<i>CETR</i>	<i>BTD</i>
<i>OptOut</i>	0.010*** (21.637)	0.005*** (7.458)	0.040*** (8.042)	0.014*** (9.160)	-0.001 (-0.457)
<i>LargeFirm</i>	-0.009*** (-10.404)	-0.008*** (-8.671)	-0.005 (-0.657)	-0.017*** (-6.667)	0.025*** (5.927)
<i>ExtAcc</i>	-0.002*** (-3.019)	-0.001 (-1.123)	-0.013** (-2.090)	-0.015*** (-8.232)	-0.005 (-1.564)
<i>BookExtAcc</i>	-0.004*** (-4.422)	-0.003*** (-3.003)	-0.037*** (-4.596)	-0.019*** (-7.962)	-0.015*** (-3.897)
<i>Big5</i>	0.003*** (2.940)	0.001 (0.863)	0.052*** (5.035)	0.026*** (8.808)	0.017*** (3.570)
<i>NonAuditFee</i>	-0.328*** (-6.733)	-0.227*** (-3.460)	-0.205 (-0.533)	0.070 (0.768)	0.441** (2.417)
<i>LnAssets</i>	0.022*** (35.268)	0.012*** (17.055)	0.088*** (14.473)	0.015*** (9.525)	0.022*** (7.735)
<i>LnSales</i>	-0.002*** (-26.965)	-0.000*** (-5.612)	-0.005*** (-7.944)	-0.001*** (-4.442)	-0.004*** (-10.554)
<i>Lev</i>	-0.037*** (-18.963)	-0.012*** (-7.086)	-0.131*** (-14.655)	-0.015*** (-8.437)	-0.041*** (-6.134)
<i>NegEquity</i>	-0.009*** (-6.350)	-0.011*** (-9.227)	-0.026** (-2.428)	-0.101*** (-42.726)	-0.013** (-2.186)
<i>ROA</i>	-0.118*** (-43.365)	-0.126*** (-40.688)	-0.519*** (-22.470)	0.167*** (52.795)	1.100*** (80.757)
<i>InvAccRec</i>	0.000 (1.268)	0.000 (-0.838)	-0.000*** (-11.572)	0.000*** (8.850)	0.000*** (2.918)
<i>Growth</i>	-0.031*** (-20.331)	-0.055*** (-14.608)	-0.844*** (-40.889)	-0.019*** (-11.544)	-0.055*** (-5.160)
<i>LnAge</i>	0.000 (-0.585)	0.000 (-0.912)	0.041*** (14.098)	0.006*** (6.809)	0.004*** (2.966)
<i>NOL</i>	0.007*** (15.109)	0.004*** (7.331)	-0.002 (-0.382)	-0.024*** (-14.228)	-0.213*** (-72.532)
<i>DNOL</i>	0.001*** (3.239)	-0.001*** (-3.196)	0.011*** (3.392)	0.010*** (17.578)	-0.022*** (-9.430)
<i>IMR</i>	-0.017*** (-8.570)	-0.009*** (-3.122)	-0.139*** (-7.319)	-0.080*** (-14.662)	-0.046*** (-4.764)
<i>Constant</i>	-0.164*** (-45.302)	-0.086*** (-22.973)	-1.812*** (-50.236)	0.150*** (15.141)	-0.150*** (-9.295)
R-squared	0.200	0.196	0.216	-	0.316
Firm years	105,745	57,830	105,745	105,745	105,745

Table 9 panel B reports the coefficient estimates from a regression of three measures of accrual quality and two measures of tax aggressiveness on *OptOut* plus control variables. This estimation includes a *LargeFirm* indicator variable. *LargeFirm* equals 1 if the firm has assets higher than the median of total assets and equals 0 if the firm has assets smaller or equal to the median of total assets. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Table 10: Regression Results, Industry Analysis

Dependent Variable:	<i>OptOut</i>						
1.industry	0.571*** (34.381)	32.industry	0.584*** (33.099)	58.industry	0.444*** (34.889)	78.industry	0.451*** (24.337)
2.industry	0.575*** (23.252)	33.industry	0.577*** (35.777)	59.industry	0.592*** (38.424)	79.industry	0.525*** (31.741)
3.industry	0.558*** (36.047)	35.industry	0.384*** (22.536)	61.industry	0.398*** (16.655)	81.industry	0.593*** (46.825)
8.industry	0.567*** (21.905)	41.industry	0.486*** (53.690)	62.industry	0.491*** (48.878)	82.industry	0.413*** (35.437)
10.industry	0.495*** (28.106)	42.industry	0.524*** (22.223)	63.industry	0.419*** (22.343)	85.industry	0.583*** (50.856)
13.industry	0.552*** (15.012)	43.industry	0.626*** (70.843)	68.industry	0.351*** (43.499)	86.industry	0.672*** (72.214)
16.industry	0.505*** (27.727)	45.industry	0.521*** (48.420)	69.industry	0.311*** (18.198)	88.industry	0.290*** (18.680)
18.industry	0.579*** (39.091)	46.industry	0.497*** (56.198)	70.industry	0.486*** (51.620)	90.industry	0.584*** (39.321)
22.industry	0.537*** (14.505)	47.industry	0.572*** (66.496)	71.industry	0.559*** (62.299)	93.industry	0.532*** (42.463)
23.industry	0.409*** (15.710)	49.industry	0.616*** (58.868)	72.industry	0.272*** (9.909)	95.industry	0.574*** (25.649)
25.industry	0.591*** (39.864)	50.industry	0.389*** (21.163)	73.industry	0.589*** (45.090)	96.industry	0.696*** (68.463)
27.industry	0.270*** (7.016)	52.industry	0.332*** (23.609)	74.industry	0.636*** (59.925)	Constant	0.033*** (4.209)
28.industry	0.609*** (34.193)	55.industry	0.480*** (35.502)	75.industry	0.633*** (30.756)		
31.industry	0.588*** (25.628)	56.industry	0.517*** (50.496)	77.industry	0.380*** (31.699)	R-squared	0.064
						Firm years	253,187

Table 10 reports a coefficient estimate from a regression of Industry on *OptOut*. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Table 11 Panel A: Regression Results, Pre- vs. Post-2011 Earnings Quality

Dependent Variable:	Pre-2011			Post-2011		
	<i>DisTA</i>	<i>DisWCA</i>	<i>DisRev</i>	<i>DisTA</i>	<i>DisWCA</i>	<i>DisRev</i>
<i>OptOut</i>	0.010*** (21.772)	0.005*** (7.450)	0.040*** (8.050)	0.008*** (18.679)	0.003*** (6.571)	0.024*** (5.257)
<i>ExtAcc</i>	-0.002*** (-3.014)	-0.001 (-1.099)	-0.013** (-2.090)	0.001 (1.523)	0.001 (0.875)	-0.024*** (-3.728)
<i>BookExtAcc</i>	-0.004*** (-4.457)	-0.003*** (-3.001)	-0.037*** (-4.596)	-0.002*** (-3.859)	-0.002*** (-3.438)	-0.051*** (-8.185)
<i>Big5</i>	0.003*** (3.014)	0.001 (0.873)	0.052*** (5.037)	0.001 (1.501)	0.001 (1.445)	0.070*** (8.190)
<i>NonAuditFee</i>	-0.353*** (-7.261)	-0.249*** (-3.773)	-0.22 (-0.572)	-0.335*** (-9.040)	-0.316*** (-6.045)	-0.018 (-0.051)
<i>LnAssets</i>	0.019*** (37.173)	0.009*** (14.230)	0.086*** (18.104)	0.017*** (46.424)	0.009*** (23.315)	0.083*** (21.272)
<i>LnSales</i>	-0.002*** (-25.171)	-0.000*** (-4.513)	-0.005*** (-7.933)	-0.002*** (-39.913)	-0.000*** (-9.150)	-0.006*** (-12.893)
<i>Lev</i>	-0.037*** (-19.020)	-0.012*** (-7.149)	-0.131*** (-14.650)	-0.029*** (-21.733)	-0.011*** (-12.858)	-0.086*** (-11.697)
<i>NegEquity</i>	-0.009*** (-6.401)	-0.011*** (-9.339)	-0.026** (-2.432)	-0.011*** (-10.141)	-0.010*** (-12.618)	-0.032*** (-3.519)
<i>ROA</i>	-0.117*** (-43.282)	-0.125*** (-40.691)	-0.519*** (-22.543)	-0.140*** (-61.734)	-0.134*** (-69.503)	-0.453*** (-22.886)
<i>InvAccRec</i>	0.000* (1.706)	0.000 (-0.568)	-0.000*** (-11.522)	0.000 (0.235)	-0.000*** (-3.012)	-0.000*** (-12.096)
<i>Growth</i>	-0.031*** (-20.253)	-0.055*** (-14.584)	-0.844*** (-40.905)	-0.024*** (-18.082)	-0.060*** (-23.381)	-0.824*** (-48.116)
<i>LnAge</i>	0.000 (-0.599)	0.000 (-0.911)	0.041*** (14.10)	-0.001*** (-4.648)	-0.001** (-2.267)	0.048*** (19.989)
<i>NOL</i>	0.007*** (15.321)	0.004*** (7.490)	-0.002 (-0.369)	0.006*** (16.192)	0.004*** (9.352)	0.003 (0.768)
<i>DNOL</i>	0.001*** (3.279)	-0.001*** (-3.142)	0.011*** (3.396)	0.000 (0.979)	-0.002*** (-3.345)	0.019*** (8.788)
<i>IMR</i>	-0.018*** (-8.598)	-0.009*** (-3.105)	-0.139*** (-7.318)	-0.006*** (-3.594)	-0.005*** (-3.194)	-0.173*** (-11.669)
<i>Constant</i>	-0.146*** (-51.685)	-0.069*** (-20.548)	-1.801*** (-62.761)	-0.144*** (-64.636)	-0.069*** (-27.178)	-1.791*** (-73.100)
R-squared	0.199	0.196	0.216	0.238	0.291	0.216
Firm years	105,745	57,830	105,745	147,442	86,079	147,442

Table 11 panel A shows regression results for our three earnings quality measures before and after 2011. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Table 11 Panel B: Regression Results, Pre- vs. Post-2011 Tax Aggressiveness

Dependent Variable:	Pre-2011		Post-2011	
	<i>CETR</i>	<i>BTD</i>	<i>CETR</i>	<i>BTD</i>
<i>OptOut</i>	0.014*** (9.247)	-0.001 (-0.546)	0.012*** (9.372)	-0.003 (-1.585)
<i>ExtAcc</i>	-0.015*** (-8.230)	-0.005 (-1.566)	-0.012*** (-5.501)	-0.005 (-1.364)
<i>BookExtAcc</i>	-0.019*** (-7.986)	-0.015*** (-3.873)	-0.022*** (-11.206)	-0.010*** (-3.244)
<i>Big5</i>	0.026*** (8.854)	0.017*** (3.524)	0.026*** (10.100)	0.009** (2.110)
<i>NonAuditFee</i>	0.023 (0.250)	0.514*** (2.815)	0.230*** (3.008)	-0.182 (-0.820)
<i>LnAssets</i>	0.010*** (7.463)	0.031*** (12.432)	0.010*** (8.913)	0.024*** (14.098)
<i>LnSales</i>	-0.001*** (-3.522)	-0.005*** (-11.640)	-0.001*** (-5.587)	-0.004*** (-14.624)
<i>Lev</i>	-0.015*** (-8.603)	-0.040*** (-6.071)	-0.024*** (-16.291)	-0.029*** (-6.449)
<i>NegEquity</i>	-0.101*** (-42.788)	-0.012** (-2.147)	-0.085*** (-40.123)	-0.022*** (-4.934)
<i>ROA</i>	0.168*** (53.247)	1.098*** (80.797)	0.144*** (55.600)	1.079*** (95.721)
<i>InvAccRec</i>	0.000*** (9.20)	0.000*** (2.64)	0.000*** (8.805)	0.000*** (5.284)
<i>Growth</i>	-0.019*** (-11.419)	-0.056*** (-5.191)	-0.019*** (-13.152)	-0.035*** (-3.902)
<i>LnAge</i>	0.006*** (6.80)	0.004*** (2.97)	0.001 (1.411)	0.007*** (6.190)
<i>NOL</i>	-0.024*** (-14.109)	-0.213*** (-72.701)	-0.029*** (-20.095)	-0.231*** (-91.294)
<i>DNOL</i>	0.010*** (17.606)	-0.022*** (-9.451)	0.009*** (18.260)	-0.025*** (-8.939)
<i>IMR</i>	-0.080*** (-14.682)	-0.046*** (-4.743)	-0.085*** (-19.093)	-0.023*** (-2.826)
<i>Constant</i>	0.184*** (22.959)	-0.203*** (-14.687)	0.193*** (28.341)	-0.182*** (-16.436)
R-squared	-	0.316	-	0.338
Firm years	105,745	105,745	147,442	147,442

Table 11 panel B shows regression results for our two tax aggressiveness measures before and after 2011. Robust t-statistics are in parentheses. *, **, *** indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively. Please see Appendix 1 for variable definitions.

Appendix 1: Variable Definitions

- Big5* = Indicator variable for if the company uses a Big 5 auditing firm. 1 if the company employs a Big 5 auditor firm, 0 otherwise. For firms opting out, Big 5 uses the audit firm in the last year with auditor.
- BookExtAcc* = Indicator variable that equals 1 if the bookkeeping is done by an external accountant, 0 otherwise. If *BookExtAcc* is not observed for a given year, the value will be equal to last year with observed value.
- DNOL* = Change in net operating loss, measured as: $\log(1 + \text{deferred tax assets in year } t) - \log(1 + \text{deferred tax assets in year } t-1)$. We use deferred tax assets as a proxy variable as in Langli and Willekens (2017). If *DNOL* is not observed for a given year, the value will be equal to last year with observed value.
- EquityIssue* = Indicator variable that equals 1 if the firm issues share capital, 0 otherwise. If *EquityIssue* is not observed for a given year, the value will be equal to last year with observed value.
- ExtAcc* = Indicator variable that equals 1 if the company uses an external accountant or auditor to prepare its financial statements, and 0 otherwise. If *ExtAcc* is not observed for a given year, the value will be equal to last year with observed value.
- Growth* = Growth in total assets in the current year compared with the previous year. Winsorized at the 1st and 99th percentiles.
- InvAccRec* = Inventories and accounts receivable divided by total assets.

Winsorized at the 2nd and 98th percentiles.

- LargeFirm* = Indicator variable for large firms. Equals 1 if the logarithm of assets is larger than the median value for *LnAssets*, equals 0 if the logarithm of assets is smaller or equal to the median.
- Lev* = The company's financial leverage, measured as total liabilities divided by total assets. Winsorized at the 1st and 99th percentiles.
- LnAge* = The natural logarithm of the company's age. Winsorized at the 1st and 99th percentiles.
- LnAssets* = The natural logarithm of the company's total assets.
- LnAuditFee* = The natural logarithm of the company's audit fee. For opt out firms the audit fee is set equal to the audit fee for the last year with an auditor. Winsorized at the 1st and 99th percentiles.
- LnNumOwners* = The natural logarithm of number of owners. If *LnNumOwners* is not observed for a given year, the value will be equal to last year with observed value.
- LnSales* = The natural logarithm of the company's sales. Winsorized at the 0.5th and 99.5th percentiles.
- NegEquity* = An indicator variable for companies with negative equity. Equals 1 if the company have negative equity, 0 otherwise.
- NoAudit* = 1 if the company is not audited and 0 otherwise. No audit equals 1 if and when the firm has opted out, and 0 before the firm opted out. If *NoAudit* is not observed for a given year, the

value will be equal to last year with observed value.

- NOL* = 1 if the firm has deferred income tax assets and 0 otherwise. We use this as an indicator variable for deferred tax assets because operating loss carryforward is not available following Langli and Willekens (2017).
- NonAuditFee* = Cost of non-audit services from auditors. If *NonAuditFee* is not observed for a given year, the value will be equal to last year with observed value.
- OptOut* = 1 if the firm opts out from auditing and 0 otherwise. Equals 1 for all years if the firm at some point has opted out.
- OwnershipCEO* = The percentage of shares owned by the CEO. These numbers were missing for the 2015 and we hence assumed that values for 2015 were equal to 2015. If values were missing it is reasonable to assume that no shares are owned by the CEO and hence the missing values are assumed to be 0.
- ROA* = The company's return on assets calculated as net income divided by average total assets. Winsorized at the 3rd and 97th percentiles.