



The governance role of lender monitoring: Evidence from Borrowers' tax planning

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ABSTRACT

We posit that lender monitoring increases the general outcomes of borrowers' tax avoidance while reducing opportunistic tax aggressive behaviors. We identify four lender related monitoring measures that could affect borrowers' tax planning. We find firms with a larger portion of loan shares held by lead lenders, with loans led by reputable lenders, and with a single lending relationship to have more tax avoidance and less tax aggressiveness, and firms with loan sales that weaken lenders' monitoring incentives to have less tax avoidance and more tax aggressiveness. We further find the lender monitoring effect on tax planning to be more pronounced for firms closer to financial distress and bankruptcy.

1. Introduction

This study examines the corporate governance role of lenders in borrowers' tax planning.¹ It has been well established that banks play an active role in shaping borrowers' corporate governance through continuous monitoring over the life of loans (e.g., [Bharath, Dahiya, Saunders, & Srinivasan, 2011](#); [Nini, Smith, & Sufi, 2012](#)). There is also ample evidence that banks influence a wide range of corporate finance activities, including capital spending, dividend payouts, debt financing, and earnings management ([Ahn & Choi, 2009](#); [Denis & Wang, 2014](#); [Overesch & Wamser, 2014](#)).² However, how banks may affect firms' tax planning remains an understudied question.³ Like shareholders and managers, banks, as firms' debtholders, are interested in increasing firm tax planning ([Gallemore, Gipper, & Maydew, 2019](#)). That being said,

banks have different perspectives on the priority of compliance and the adequate level of risk that a firm should take in its tax planning strategies. In order to better understand how banks interact with borrowers and influence their tax planning in the context of conflicts of interest between shareholders and debtholders, we investigate the specific dynamics at play by identifying various lending characteristics that affect borrowers' tax planning strategies. As such, our study provides additional evidence to the literature on how external parties impact firms' tax planning ([Cen, Maydew, Zhang, & Zuo, 2017](#); [Chyz, Leung, Li, & Rui, 2013](#); [Moore, 2012](#); [Omer, Bedard, & Falsetta, 2006](#)).

One of the challenges to studying corporate tax planning is dealing with its duality, meaning there is no clear dividing line distinguishing 'good' from 'bad' tax planning practices. Corporate tax planning encompasses a continuum of activities ranging from clearly legal and

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¹ We follow extant literature in interchangeably using tax avoidance and tax planning ([Edwards et al., 2016](#); [Gallemore et al., 2019](#); [Hanlon & Heitzman, 2010](#); [Rego & Wilson, 2012](#)).

² Additionally, a large volume of banking literature offers theoretical frameworks and empirical evidence that support the positive impact of bank monitoring on firm value and performance ([Best & Zhang, 1993](#); [Blaylock, 2016](#); [Diamond, 1984](#); [Fama, 1985](#); [James, 1987](#); [Rajan & Winton, 1995](#); among others).

³ Two recent papers address this question by studying banks specializing in tax planning services ([Gallemore et al., 2019](#)) and by investigating firms' tax planning behavior when they violate loan covenants ([Cook et al., 2020](#)).

unaggressive to highly aggressive, for example, underreporting income, profit shifting, non-compliance and abusive tax sheltering (Hanlon & Heitzman, 2010). As in Dyreng, Hanlon, and Maydew (2008), we broadly define 'tax avoidance' as anything that reduces taxes relative to a borrower's pre-tax accounting income. We define tax aggressiveness as tax planning activities that push the boundaries of the tax law such that they come with higher risks of detection, disallowance, reputation damage, and cash penalties.

Firms are highly incentivized to engage in tax planning to enhance cash flow through tax savings (Chen, Chen, Cheng, & Shevlin, 2010). Edwards, Schwab, and Shevlin (2016) show that financially constrained firms can increase internally generated funds via tax avoidance, and evidence provided by Rego and Wilson (2012) and Blaylock (2016) suggests that tax avoidance is generally a value-enhancing activity. Agency problems, however, may lead firms to engage in a degree of tax planning inconsistent with shareholder preferences (Armstrong, Blouin, Jagolinzer, & Larcker, 2015). For instance, less tax avoidance may reflect intentional shirking or effort aversion on the part of managers (Guenther, Wilson, & Wu, 2019; Hong, Lobo, & Ryou, 2019), whereas the equity incentives of compensation may lead managers to engage in more tax avoidance (Rego & Wilson, 2012). Monitoring from other stakeholders, such as lenders, may help attenuate this agency cost of equity, leading managers to adopt less aggressive tax planning strategies to avoid penalties or other costs (Kubick & Lockhart, 2017).⁴

From a lender perspective, banks have the incentive to intervene in borrower tax strategies to reduce lending risk, tax savings being an important source of cash flow that helps cover debt service costs and principal payments. Tax planning strategies that enhance borrower cash flow and reduce the probability of default can lower banks' lending risk. Evidence of banks' ability to influence borrowers' tax planning strategies is provided by, among others, Platikanova (2017), who shows lenders monitor tax-avoiding borrowers more frequently by shortening loan maturity, and Gallemore et al. (2019), who show that borrowers can realize significant tax savings consequent to initiating a relationship with a bank (i.e., a tax planning intermediary) whose existing clients engage in above-median level tax planning activities. In addition, several studies in the debt-contracting literature document lenders to exert more influence on corporate decisions and governance including investments, capital structure, dividend payout, CEO turnover (Chava & Roberts, 2008; Chu, 2017; Nini et al., 2012; Roberts & Sufi, 2009)⁵ and tax avoidance (Cook, Ma, & Zhao, 2020) when a borrower is in technical default (e.g., commits a covenant violation).

Whereas increased cash flow arising from borrowers' tax avoidance can benefit lenders and reduce lending risk, borrowers' highly aggressive tax planning can hurt lenders and increase lending risk. Under the Jensen and Meckling (1976), the agency cost of debt arises from conflicting interests between debtholders as fixed, and shareholders as residual, claimants of the cash flows generated by a firm. Although lenders enjoy enhanced debt repayment capacity from tax savings, aggressive tax planning tends to yield greater benefits to shareholders than to debtholders (Hasan, Hoi, Wu, & Zhang, 2014). This is because borrowers may incur substantial costs from tax aggressiveness that undermine their

⁴ Other parties from which firms may also face monitoring include tax authorities, financial analysts, and shareholders. Firms with unfavorable tax settlements that forfeit more benefits than expected, for instance, may elicit tax authorities' vigilant monitoring (Finley, 2019); greater analyst coverage increases the visibility of, and hence reduces, tax aggressiveness (Allen, Francis, Wu, & Zhao, 2016); and shareholder monitoring of managers results in less aggressive tax avoidance activities (Chen et al., 2010).

⁵ Triantis and Daniels (1995) and Baird and Rasmussen (2005) argue that lenders may also use the threat of exit to influence board decisions and prompt other stakeholders to intervene. Denis and Wang (2014) show debt contract renegotiations to be an important vehicle by which lenders exercise strong control rights over borrowers' operations and financing even absent payment default or covenant violation.

debt repayment ability, thereby increasing risk to lenders. These include the costs of implementing an aggressive tax plan (e.g., promoter and attorney fees), potential IRS-mandated audit and subsequent litigation costs (e.g., accounting and legal fees), and reputational costs arising from public disclosure of tax shelter activity (Rego & Wilson, 2012).⁶ In other words, lenders consider tax aggressiveness a borrower moral hazard. Lenders thus have incentives and the ability both to help clients increase tax avoidance and to discourage them from engaging in tax aggressiveness.

The prior banking literature having shown monitoring borrowers to be one way that lenders can mitigate borrower moral hazard problems (e.g., Bharath et al., 2011; Park, 2000), we postulate that stronger lender monitoring could increase borrowers' overall tax avoidance and reduce their aggressive tax planning. Building on previous work focused on banks' monitoring role,⁷ we use four measures of lender monitoring—loan shares held by lead lenders, presence of reputable lenders, single lending relationship, and presence of loan sales that could affect tax planning activities—to investigate, independently, how lender monitoring influences borrowers' general tax avoidance practice and tax aggressiveness behavior. We further explore how the lender monitoring effect on tax planning varies with borrower proximity to financial distress and bankruptcy.

Our empirical results are consistent with our hypothesis. Specifically, we find borrowers with stronger lender monitoring to tend to have a lower effective tax rate in the coming year, indicating generally increased tax planning, and to experience a decrease in various tax aggressiveness measures indicative of reduced tax aggressive behavior. The four bank monitoring measures deliver a consistent message. In particular, our results show that borrowers' tax avoidance increases, and their tax aggressiveness decreases when lead lenders retain a higher percentage of loan share in a syndicated loan, when lenders are reputable, or when borrowers have a single bank relationship. Conversely, borrowers' tax planning declines and their tax aggressiveness increases when lender monitoring is weakened by the onset of loan sales in the secondary loan market. Moreover, our findings also suggest that the effect of lender monitoring on borrowers' tax planning is significantly amplified for firms that are closer to financial distress and potential bankruptcy (proxied by firm size and Ohlson's bankruptcy probability). Recognizing that the lender monitoring characteristics examined may be subject to endogeneity, we perform sensitivity analyses using two-stage least squares (2SLS) regressions, which yield robust results.

Our study sheds light on how lenders' governance role affects borrowers' tax planning and its relevance to the conflicts of interest between lenders and shareholders. Although closely related, our study differs from Gallemore et al. (2019) and Cook et al. (2020) in that we identify different lender characteristics that might influence tax planning activities during the regular course of business, outside the borrowers' default stage, and beyond the covenant violation stage. Adding to the banking literature is our finding of a more pronounced lender monitoring effect for financially constrained firms, which suggests that lenders are more likely to intervene as borrowers move closer to default.

The rest of the paper is organized as follows. We review the literature and develop our hypothesis in Section 2. Our sample, tax avoidance and lender monitoring measures are discussed in Section 3. Finally, we discuss our research design and present our empirical results in Section 4 and draw our conclusions in Section 5.

⁶ Banks that assist clients with tax aggressiveness may face penalties and additional legal risks. For example, a major Swiss bank, BSISA, was fined by the US Department of Justice for helping clients evade taxes (US Department of Justice, 2015).

⁷ See, for example, Fok et al., 2004, Sufi, 2007, Ross, 2010, Kamstra et al., 2014, and Deng, Li, Lobo, & Shao, 2018, among others.

2. Related literature and hypothesis development

2.1. Tax avoidance and tax aggressiveness

Tax reduction strategies employed in corporate tax planning can range from clearly legal and unaggressive to highly aggressive. Tax avoidance is broadly defined as a reduction of tax liabilities resulting from various tax planning strategies. Tax avoidance achieved through effective tax planning contributes to net earnings by directly reducing current tax expenses and increasing current cash flows, net earnings, and shareholder wealth (Hanlon & Heitzman, 2010). Robinson, Sikes, and Weaver (2010) having shown that firms with a tax department as a profit center have lower GAAP effective tax rates consequent to developing strategies aiming at improving accounting outcomes,⁸ we use the effective tax rate (ETR) to capture the outcome of firms' overall tax planning activities.

On the other hand, aggressive tax planning might run afoul of the tax authorities and incur extra taxes and penalty interest on unpaid/late tax payments, resulting in a large cash outflow and a concomitant decrease in firm value (Hoopes, Mescall, & Pittman, 2012). Implicit costs like pre-tax cash flows forgone and non-tax costs incurred can further reduce the benefits of tax avoidance for firms that invest in tax-advantaged assets exclusively for purposes of tax avoidance (Berger, 1993; Hanlon & Heitzman, 2010). Reputational (Graham, Hanlon, Shevlin, & Shroff, 2014) and additional financing (Hasan et al., 2014; Moore & Xu, 2018; Shevlin, Urcan, & Vasvari, 2020) costs can also accrue to tax aggressiveness. Graham et al.'s (2014) analyses of tax executives' survey responses reveal more than half of tax managers to agree that potential reputational cost is among the most important factors they consider when forming tax-planning strategies.

2.2. Lender monitoring, corporate governance, and tax planning

The financial intermediation literature establishes that lenders play an essential role in corporate governance as delegated monitors. Borrower credibility can be certified, and firm value enhanced through bank screening and monitoring (Diamond, 1984). Banks also develop close relationships with borrowers through which they obtain and produce proprietary information that mitigates information asymmetry and moral hazard problems.⁹ In their role as creditors, banks can assume management of a defaulting firm's assets and corporate governance when a bankruptcy filing is triggered. Existing research has shown banks to play a crucial role in corporate governance for borrowers in bankruptcy (Gale & Hellwig, 1985; Hart & Moore, 1998) as well as in technical default preceding bankruptcy (Nini et al., 2012; Roberts & Sufi, 2009). One may argue that lenders' incentives to monitor a firm's tax behavior might not be as strong as shareholders' because reducing firm resources to pay lenders might not necessarily lead to a loan default. However, prior literature shows that lenders do monitor borrowers during the normal course of business (Baird & Rasmussen, 2005). Especially, Byers, Fields, and Fraser (2008) provide evidence that bank monitoring throughout loan maturities substitutes for some internal corporate governance mechanisms.

Good corporate governance has been documented to be associated with effective corporate tax planning practices yielding increased tax savings (Armstrong et al., 2015) and less tax aggressiveness (Olsen & Stekelberg, 2016). Armstrong et al. (2015), for example, document firms' financial sophistication and the independence of the board of directors to be positively related to tax savings, and Desai and Dharmapala (2009a) and Hanlon and Slemrod (2009) find the soundness of corporate

governance to strengthen the positive effect of firms' tax avoidance on investor welfare. As lender monitoring helps to strengthen borrowers' corporate governance, we expect stronger lender monitoring to be associated with increased overall tax avoidance and reduced tax aggressiveness. Prior studies show lenders to exert more influence on borrowers' corporate governance leading to higher management turnover when loan covenants are violated (Nini et al., 2012). Consistent with this finding, Cook et al. (2020) provide evidence of increased tax planning of borrowers subsequent to loan covenant violations (i.e., technical defaults). Our study extends Cook et al. (2020) by investigating how lender monitoring affects borrower tax avoidance beyond the stage of technical default, given the threat of lender intervention that may occasion management turnover.

Lenders prefer that borrowers have a higher level of tax avoidance to the extent that tax savings enhance borrower solvency and render loan payments more secure (Cook et al., 2020), but restrict tax aggressiveness that might risk an IRS audit (Mills & Sansing, 2000). We expect stronger monitoring to result in a higher level of tax avoidance and a lower level of tax aggressiveness.

The loan characteristics we identify through which lenders enhance/reduce monitoring and thereby influence borrowers' tax planning strategies are motivated by the existing literature: loan shares held by lead lenders (Sufi, 2007); reputable lead lender (Ross, 2010); single bank relationship (Fok, Chang, & Lee, 2004) and the onset of loan sales (Li, Saunders, & Shao, 2015). As delegated monitors, lead lenders of a loan syndicate, holding a higher percentage of loan ownership, have a stronger incentive to monitor and produce information about borrowers (Leland & Pyle, 1977). Sufi (2007) shows lead lenders to tend to hold larger proportions of loans issued to informationally opaque borrowers that call for more intense due diligence and monitoring. Higher shares enable lead lenders to exert a stronger influence on borrowers' tax avoidance and tax aggressiveness. Lead lenders' reputations, moreover, may serve as a bonding device that motivates lenders to fulfill their fiduciary duty to monitor borrowers (Booth & Smith II, 1986; Chemmanur & Fulghieri, 1994a, 1994b). According to Sufi (2007), even absent retention of a large ownership stake in a loan, highly reputable lenders play an important role in mitigating borrower moral hazard problems, and Ross (2010) points out that reputable lenders with larger market shares are more capable of evaluating borrowers' true credit risk, enabling them to monitor borrowers proactively. Reputable lenders may thus help to increase (restrict) borrowers' tax avoidance (tax aggressiveness). Diamond's (1984) theory of financial intermediation posits that it is more cost-efficient to delegate costly monitoring to one bank than to multiple banks, the latter being subject to duplication of effort or free-rider problems. Single lenders, moreover, bearing a higher lending risk, might be expected to have more substantial incentives to screen and monitor borrowers including increasing (restricting) tax avoidance (aggressiveness).

Loan sales on the secondary market weaken monitoring incentives as lenders transform from monitors to originators and distributors of loans (Boot, 2000; Kamstra, Roberts, & Shao, 2014). Monitoring incentives are reduced for transactional lenders under the originate-to-distribute model (Li et al., 2015), the ability of new lenders who purchase loans from the secondary market to exert influence on borrowers being limited by the smaller proportions of loan shares typically obtained and reduced access, relative to the original syndicate lenders, to private information about the borrowers.¹⁰ We therefore expect borrowers subjected to loan sales that weaken lender monitoring to exhibit a lower level of tax avoidance and higher level of tax aggressiveness compared to borrowers not subject to loan sales.

⁸ Increased tax avoidance may, however, reduce the marginal benefit of the interest tax shield (Graham & Tucker, 2006; Hanlon & Heitzman, 2010).

⁹ See, for instance, Ramakrishnan and Thakor (1984), Boyd and Prescott (1986), James (1987), Allen (1990), and Li et al. (2015).

¹⁰ Deng et al. (2018) show the onset of loan sales in the secondary market to reduce lenders' monitoring incentives, resulting in a significant decline in borrowers' accounting conservatism.

Table 1
Descriptive statistics.

variable	N	Mean	25%	Median	75%
Dependent variables					
Tax avoidance measures					
<i>ETR</i>	51,002	0.291	0.213	0.310	0.375
<i>CETR</i>	51,060	0.229	0.081	0.204	0.322
Tax aggressiveness measures					
<i>SHELTER</i>	49,753	0.261	0.000	0.000	1.000
<i>UTB_LN</i>	13,969	2.390	0.745	2.111	3.693
Key variables of interest					
<i>Lead Lender Share</i>	31,574	0.556	0.245	0.483	1.000
<i>Reputable Lender</i>	51,205	0.487	0.000	0.000	1.000
<i>Single Lender</i>	51,205	0.194	0.000	0.000	0.000
<i>Loan Sales</i>	51,205	0.142	0.000	0.000	0.000
Control variables					
<i>Z Score</i>	51,205	3.051	1.675	2.850	4.381
<i>ROA</i>	51,205	0.025	-0.007	0.054	0.107
<i>Sales</i>	51,205	3.433	0.143	0.535	1.910
<i>Sales Growth</i>	51,205	0.164	-0.015	0.079	0.217
<i>Book to Market</i>	51,205	3.402	1.194	2.001	3.411
<i>Foreign Operation</i>	51,205	0.422	0.000	0.000	1.000
<i>Leverage</i>	51,205	0.247	0.075	0.214	0.359
<i>PPE</i>	51,205	0.310	0.121	0.245	0.448
<i>Inventory</i>	51,205	0.163	0.016	0.115	0.240
<i>R&D</i>	51,205	0.024	0.000	0.000	0.021
<i>Discretionary Accruals</i>	51,205	-0.086	-0.138	-0.054	0.016
<i>NOL</i>	51,205	0.408	0.000	0.000	1.000

Table 1 presents the descriptive statistics for sample firms over the period from 1988 to 2018. The table reports the number of observations (N), mean value (Mean), 25th percentile (25%), median value (Median), and 75th percentile (75%) for main variables. All variables are defined in the Appendix.

2.3. Agency costs and tax planning

According to Jensen and Meckling (1976), firms experience two types of agency costs: cost of equity arising from conflicting interests between shareholders and managers; and cost of debt arising from conflicting interests between shareholders and debtholders. Given these conflicts, the respective parties may be inclined to pursue their own goals and/or hold different opinions about corporate tax planning. Managers, for example, may engage in more or less tax planning than desired by shareholders who favor tax planning strategies that maximize tax savings that boost their wealth (Armstrong et al., 2015), either engaging in less tax avoidance through intentional shirking (Guenther et al., 2019; Hong et al., 2019) or more aggressive tax avoidance in an effort to secure excess equity-based compensation (Rego & Wilson, 2012). In such cases, lenders, as delegated monitors, may play a role in helping firms adopt efficient tax planning strategies.

As well documented, lenders' and shareholders' risk preferences and required rate of return differ significantly (Goh, Lee, Lim, & Shevlin, 2016). Views on corporate tax planning may also differ between lenders and shareholders. Lenders have incentives to help optimize borrowers tax avoidance (not necessarily tax minimization), given that resulting cash savings directly increase borrowers' debt repayment capacity and reduce lending risk. However, lenders also face concerns and additional risks associated with borrowers engaging aggressively in tax avoidance (Kubick & Lockhart, 2017). IRS imposition of nontrivial costs (such as fines and penalty interest) on rule violators, for example, can precipitate a greater risk of firm default (Shevlin et al., 2020).

While tax savings may primarily benefit shareholders, they may not necessarily provide an advantage to lenders because lenders are typically fixed claimants who expect to receive fixed future incomes and may be exposed to substantial downside risk (Goh et al., 2016; Hasan et al., 2014). Although lenders may benefit from borrowers' enhanced liquidity and cash flow position, they do not want borrowers to achieve these benefits at the expense of taking on excessive risk (Kubick & Lockhart, 2017). Aggressive tax planning by borrowers may potentially result in additional costs and counteract the interests of lenders.

Therefore, lenders are likely to discourage opportunistic behaviors from shareholders who are more willing to take risks to pursue tax aggressiveness. Consequently, lenders would exert influence to restrict borrowers' tax aggressiveness, prioritizing efficient over aggressive tax planning, with stronger monitoring resulting in increased tax savings for borrowers.

We formally present our hypotheses regarding lenders' incentives and ability to monitor borrowers and assist them in developing efficient tax avoidance strategies that result in greater tax savings and less tax aggressiveness, as follows.

Hypothesis 1a. Stronger lender monitoring increases borrowers' tax avoidance.

Hypothesis 1b. Stronger lender monitoring restricts borrowers' tax aggressiveness.

3. Sample and measures

3.1. Sample

Our primary data source for syndicated loans is Thomson Reuters LPC's DealScan. We use COMPUSTAT accounting data to construct firms' tax planning and control variables. Firms in the financial (SIC codes between 6000 and 6999) and utility (SIC codes between 4900 and 4999) industries are excluded. We aggregate DealScan data at the borrower firm-year level and match it with COMPUSTAT using the DealScan-COMPUSTAT link file compiled by Chava and Roberts (2008). Our final sample consists of 51,205 firm-year observations for US public companies with loans outstanding from 1988 to 2018.¹¹

3.2. Measuring tax avoidance and tax aggressiveness

We perform a comprehensive analysis employing two measures of tax avoidance and two measures of tax aggressiveness drawn from prior literature. Following Dyreng, Hanlon, and Maydew (2010), we use both the GAAP *ETR* (*ETR*) and cash *ETR* (*CETR*) to measure tax avoidance. The GAAP *ETR* is total tax expense divided by pre-tax book income, and the *CETR* is income taxes paid divided by pre-tax book income. Although both *ETR* and *CETR* are summary measures of tax avoidance that represent an ultimate result of tax planning activities, there are differences between them. The major difference stems from the numerator, *CETR* using cash taxes paid rather than GAAP tax expenses. For instance, *CETR* considers tax benefits of employee stock options; *ETR* does not (Dyreng et al., 2008). As illustrated in Hanlon and Heitzman (2010), the GAAP *ETR* (*CETR*) is not (is) affected by a tax strategy that defers taxes but is (is not) affected by changes in tax contingency reserve.¹² We use both measures¹³ to ensure completeness of the information.

The two measures of tax aggressiveness are tax sheltering (*SHELTER*) and unrecognized tax benefits (*UTB_LN*). Tax sheltering involves manipulating earnings while concealing negative information from investors (Desai & Dharmapala, 2009b).¹⁴ Kim, Li, and Zhang (2011) demonstrate that the predicted tax sheltering probability¹⁵ captures

¹¹ Our sample period ends in 2018 because the current version of Michael Roberts' Dealscan-Compustat Link Data file ends in 2017. More precisely, our sample period ends in 2017 for independent and 2018 for dependent variables. The Link Data file is publicly available at the following website: <https://finance.wharton.upenn.edu/~mrobert/styled-9/styled-12/index.html>.

¹² A detailed discussion can be found in Dyreng et al. (2008) and Hanlon and Heitzman (2010).

¹³ Both effective tax rate measures are winsorized (reset) to be between zero and one.

¹⁴ Hanlon and Slemrod (2009) find the market to react negatively to announcements of tax sheltering.

¹⁵ This measure was originally proposed in Wilson (2009).

firms' most aggressive and complex tax planning activities. We use unrecognized tax benefits (*UTB_LN*) as an alternative measure of tax aggressiveness. Following FIN 48, public firms are required to disclose unrecognized tax benefits.¹⁶ Prior literature documents firms' unrecognized tax benefits to strongly reflect tax aggressiveness compared to other measures (Blouin & Robinson, 2014; Brushwood, Johnston, & Lusch, 2018; Lisowsky, Robinson, & Schmidt, 2013), and is thus widely used as a measure of tax aggressiveness (Gallemore et al., 2019).¹⁷

3.3. Measuring lender characteristics and monitoring

Our primary variable of interest, lender monitoring, is proxied by *Lead Lender Share* (Sufi, 2007), *Reputable Lender* (Ross, 2010), *Single Lender* (Fok et al., 2004), and *Loan Sales* (Li et al., 2015). These lender monitoring measures are calculated at the firm-year level based on outstanding loans. *Lead Lender Share* is the mean percentage of outstanding loans retained by the lead lender aggregated at the borrower firm-year level, *Reputable Lender* a dummy variable that equals one if any outstanding loan at the borrower firm-year level is from a lender ranked in the top 10 in loan market share, and zero otherwise, *Single Lender* a dummy variable that equals one if a borrower's existing loans are all non-syndicated loans in a year, and zero otherwise, and *Loan Sales* a dummy variable that equals one if any outstanding loan at the borrower firm-year level is sold on the secondary market, and zero otherwise. All four lender monitoring measures are calculated at the firm-year level based on firms' outstanding loans at each fiscal year-end.

3.4. Control variables

As in Edwards et al. (2016), the set of control variables in our regression model includes Altman's Z Score (*Z Score*), return on assets (*ROA*), sales (*sales*), growth rate of sales (*sales growth*), book to market ratio (*book to market*), an indicator for firms that have foreign pre-tax income (*foreign operation*), debt-to-asset ratio (*leverage*), property, plant, and equipment scaled by total assets at the beginning of a fiscal year (*PPE*), inventory scaled by total assets at the beginning of a fiscal year (*inventory*), research and development (*R&D*), performance-adjusted discretionary accruals constructed following the modified Jones (1991) model (*discretionary accruals*), and an indicator for net operating loss (*NOL*). We winsorize all non-categorical variables at the 1st and 99th percentile. Variable definitions are provided in the Appendix.

3.5. Descriptive statistics and correlation coefficient matrix

Table 1 reports summary statistics on the main variables. The numbers of observations for each variable vary depending on data availability. In terms of our tax avoidance measures, the mean *ETR* and *CETR* are 0.291 and 0.229, respectively. In terms of our tax aggressiveness measures: the mean *SHELTER* and *UTB_LN* is 0.261 and 2.390, respectively. On average, lead lenders retain 55.6% of loans, there is at least one reputable lender holding the loan for about 48.7% of the firm-year sample, there is a single lender managing the loan contract for about 19.4% of the firm-year sample, and 14.2% of firm-years have loans sold on the secondary market.

¹⁶ Financial Accounting Standard Board Interpretation No. 48 (FIN 48) became effective on December 15, 2006. As a result, unrecognized tax benefits data is available only from 2007. Our tests involving unrecognized tax benefits are consequently based on a subsample period from 2007 to 2018.

¹⁷ For robustness check on our main results, we also use the permanent book-tax difference and changes in unrecognized tax benefits as alternative measures for tax aggressiveness, as suggested by the prior literature. In most cases, we obtain regression results that are statistically significant and consistent to those based on the tax aggressiveness measures of *SHELTER* and *UTB_LN* reported in this study.

Table 2 reports the Pearson correlation matrix. The statistics show the tax avoidance and tax aggressiveness variables to be significantly and negatively correlated, although the correlation coefficients are small. Specifically, *SHELTER* is negatively correlated with *ETR* (−0.09), and *UTB_LN* is also negatively correlated with *ETR* (−0.06). These statistics are consistent with those reported in Hanlon and Heitzman (2010). Although the lender monitoring and tax avoidance measures are, in general, significantly correlated, most of the correlation coefficients between the control variables and tax planning measures are statistically significant with a relatively small magnitude.¹⁸

4. Research design and empirical results

4.1. Setup of the baseline model

Our baseline regressions are a set of pooled ordinary least squares (OLS) regressions with the following specification:

$$\text{Tax Planning}_{it} = \alpha_i + \alpha_j + \beta_1 \text{LenderMonitoring}_{it-1} + \sum_k \beta_k \text{Controls}_{it-1} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (1)$$

where i indexes borrower, t indexes time, and j indexes industry. The dependent variables are two sets of tax planning variables for borrower i in year t . The first set includes *ETR* and *CETR*, which capture the overall outcome of a firm's tax planning activities. The second set includes *SHELTER* and *UTB_LN*, which capture a firm's tax aggressiveness. The main explanatory variables of concern are a set of lender monitoring measures for borrower i in year $t-1$ (*Lead Lender Share*, *Reputable Lender*, *Single Lender*, and *Loan Sales*). Control variables are also measured for borrower i in year $t-1$. All regressions control for industry fixed effect (*Industry FE*, Fama French 48 industry classification) to account for cross-sectional differences in tax planning attributable to industry features and year fixed effect (*Year FE*) to capture any shock that impacts tax planning across all sample firms within a given year.

Hypothesis 1 predicts that strong lender monitoring increases borrowers' tax avoidance (i.e., decreases effective tax rate) and restricts borrowers' tax aggressiveness. The estimated coefficient β_1 in model (1) is thus expected to be negative on all monitoring enhancing variables (*Lead Lender share*, *Reputable Lender*, and *Single Lender*) and positive on the monitoring diminishing variable (*Loan Sales*).

4.2. Addressing the endogeneity concern

We acknowledge that the proposed lender monitoring measures might be subject to endogeneity problems. For example, borrowers' tax avoidance behavior might attract lead lenders with private information to hold a larger portion of loan shares, reputable lenders with better screening and monitoring abilities, and a single lender with an information monopoly. Alternatively, borrowers' tax planning could be one of the drivers of lenders' loan sales decisions. In other words, borrowers that engage in prudent tax planning practices (i.e., involving less tax aggressiveness but increased tax avoidance outcomes) are more likely to attract a loan syndicate with a higher proportion of loans held by lead lenders, with a reputable lender, with a single lender, and/or with less loan resale activity. As these potential endogeneity problems preclude direct attribution of borrowers' tax planning outcomes to lender monitoring, we apply the 2SLS regression with an instrumental variable and repeat our analysis for each proposed lender monitoring measure.

We choose different instruments for different lender monitoring

¹⁸ We also examine the variance inflation factor (VIF) to assess multicollinearity among the variables. The untabulated diagnostic statistics show that the VIFs of all variables are well below five, suggesting that multicollinearity is not an issue in our regression analyses.

Table 2
Pearson correlations.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
(1)	0.28																			
(2)	-0.09	0.00																		
(3)	-0.06	0.03	0.34																	
(4)	0.00	-0.04	-0.20	-0.23																
(5)	0.00	-0.05	-0.15	-0.14	0.45															
(6)	0.01	-0.02	-0.12	-0.07	0.70	0.31														
(7)	-0.04	-0.04	0.05	0.12	-0.18	-0.07	-0.20													
(8)	0.11	0.22	0.07	0.03	0.00	-0.09	0.02	-0.18												
(9)	0.10	0.23	0.05	0.17	-0.18	-0.15	-0.11	-0.01	0.68											
(10)	-0.01	0.03	0.13	0.44	-0.17	-0.11	-0.10	0.09	0.07	0.08										
(11)	0.02	-0.04	-0.03	-0.07	0.14	0.09	0.10	-0.04	0.07	0.03	-0.04									
(12)	-0.02	-0.06	0.11	0.10	-0.02	-0.02	-0.01	0.05	0.05	0.01	0.02	0.10								
(13)	-0.04	0.09	0.45	0.36	-0.28	-0.22	-0.21	0.08	0.06	0.11	0.14	-0.12	0.02							
(14)	-0.02	-0.11	-0.12	0.02	-0.15	0.01	-0.13	0.30	-0.46	-0.13	-0.02	0.01	0.15	-0.08						
(15)	-0.03	-0.12	-0.23	-0.14	-0.09	0.00	-0.03	0.00	-0.19	0.00	0.01	0.00	-0.05	-0.19	0.25					
(16)	0.06	0.15	-0.08	-0.10	0.11	0.09	0.11	-0.14	0.23	0.11	-0.03	0.08	-0.07	-0.06	-0.15	-0.28				
(17)	-0.11	-0.12	0.44	0.10	0.20	0.09	0.16	-0.10	-0.08	-0.31	-0.04	0.04	0.13	0.12	-0.19	-0.24	-0.04			
(18)	0.01	0.00	-0.07	-0.04	0.08	0.03	0.06	-0.03	-0.05	-0.05	0.00	-0.01	-0.04	-0.06	0.02	0.01	0.12	-0.02		
(19)	-0.08	-0.11	0.12	0.02	-0.04	-0.06	-0.08	0.13	-0.16	-0.14	0.00	-0.03	0.04	0.18	0.05	-0.09	0.10	0.10	-0.04	
(20)																				

Table 2 presents the correlations among the main variables including (1) ETR, (2) CETR, (3) SHELTER, (4) UTB_LN, (5) Lead Lender Share, (6) Reputable Lender, (7) Single Lender, (8) Loan Sales, (9) Z Score, (10) ROA, (11) Sales Growth, (12) Book to Market, (13) Foreign Operation, (14) Leverage, (15) Inventory, (16) PPE, (17) R&D, (18) R&D, (19) Discretionary Accruals, and (20) NOL. The numbers in bold represent statistical significance at least at the 10% level in a two-tailed test. All variables are defined in the Appendix.

variables. Specifically, as in Hasan et al. (2014) and Isin (2018), we employ the industry mean lead lender share at the four-digit SIC code level as an instrument for a borrower's lead lender share. Average lead lender shares within an industry reflect banks' general preference for holding loan shares in firms that belong to that industry. Whereas the industry convention might influence a lead lender's decision to retain shares for a particular firm within that industry, the industry average lead lender share (*Industry Lead Lender Share*) is less likely to directly affect a firm's tax planning strategy. We use borrowers' return on assets (ROA), a proxy for firm quality, as an instrument for the presence of reputable lenders, with quality borrowers being more likely to establish a banking relationship with reputable lenders (Ross, 2010). For single lenders, according to Aristei and Gallo (2017), firms more dependent on external financing tend to rely more on multiple banking relationships than a single banking relationship. Accordingly, we instrument *Single Lender* using firms' need for external financing (*External Finance*). We use loan quality (*Non-Investment Grade Dummy*) as an instrument for the onset of loan sales because the literature documents loan quality to be one of the major determinants of loan sales decisions (Kamstra et al., 2014). The foregoing instruments are less likely to influence a firm's tax planning strategy directly.

4.3. Empirical analysis

4.3.1. Baseline results

Table 3 presents the first set of baseline results in which *Lead Lender Share* is the primary explanatory variable of interest for firms' tax planning. Panel A reports results for the tax avoidance, Panel B for the tax aggressiveness, regressions. Estimated coefficients on *Lead Lender Share* in the ETR and CETR regressions are all negative and highly statistically significant at the 1% level and 5% level, with magnitudes of -0.012 and -0.012, respectively. These results suggest that the more outstanding the loan share retained by lead lenders, the lower the effective tax rate. In Panel B, coefficient estimates on *Lead Lender Share* are -0.207 and -1.594 in the SHELTER and UTB_LN regressions, respectively, significant at the 1% level. This suggests that higher loan shares retained by lead lenders are associated with less tax aggressiveness among borrowers. The findings in Panels A and B support Hypotheses 1a and 1b.

Panels C and D of Table 3 report the 2SLS regression results for the tax avoidance and tax aggressiveness regressions, respectively. In the first stage of regression, we use an industry's average lead lender share to predict the lead lender share for an individual borrower within the industry. In the second stage, we replace the actual lead lender share with the predicted lead lender share obtained from the first stage estimation. As expected, the coefficient estimate on the chosen instrumental variable appears positive and statistically significant in the first stage regressions. We test the validity of our instrument by checking via the F-test the explanatory power of the first stage of the regression. A first-stage F-statistic of less than ten suggests a weak instrument (Staiger, Stock, & Watson, 1997). All reported F-statistics in Panels C and D are greater than ten, suggesting that our instrumental variable, *Industry Lead Lender Share*, meets the relevance requirement and is a valid instrument. Columns (2), (4), (6), and (8) in Panels C and D report the results from the second-stage regression using the instrumented value for lead lender shares (labeled *Lead Lender Share**). The coefficients of *Lead Lender Share** remain statistically significant and negative in all tax avoidance and tax aggressiveness regressions.

Table 4 presents the second set of baseline results using *Reputable Lender* as a monitoring measure. In Panel A, the coefficients on *Reputable Lender* in the two tax avoidance regressions, ETR and CETR, are -0.004 and -0.008, significant at the 5% and 1% levels, respectively. This suggests that monitoring by reputable lenders results in a lower effective tax rate, i.e., increased tax avoidance. In Panel B, the coefficients of *Reputable Lender* are -0.067 and -0.450 for SHELTER and UTB_LN, respectively, significant at the 1% level, which suggests that reputable

Table 3
The impact of lead lender share on borrowers' tax planning behavior.

VARIABLES	Panel A: Effective tax rate		Panel B: Tax aggressiveness	
	(1)	(2)	(3)	(4)
	<i>ETR</i>	<i>CETR</i>	<i>SHELTER</i>	<i>UTB_LN</i>
<i>Lead Lender Share</i>	-0.012*** (0.005)	-0.012** (0.014)	-0.207*** (0.000)	-1.594*** (0.000)
<i>Z Score</i>	0.005*** (0.000)	0.006*** (0.000)	-0.002 (0.350)	-0.171*** (0.000)
<i>ROA</i>	0.029*** (0.002)	0.147*** (0.000)	0.282*** (0.000)	3.004*** (0.000)
<i>Sales</i>	-0.000 (0.364)	0.000 (0.412)	0.002** (0.030)	0.028*** (0.000)
<i>Sales Growth</i>	0.001 (0.697)	-0.017*** (0.000)	0.038*** (0.000)	-0.348*** (0.001)
<i>Book to Market</i>	-0.001*** (0.004)	-0.002*** (0.000)	0.003*** (0.000)	0.024*** (0.000)
<i>Foreign Operation</i>	0.002 (0.500)	0.034*** (0.000)	0.204*** (0.000)	1.106*** (0.000)
<i>Leverage</i>	0.002 (0.803)	-0.036*** (0.000)	-0.016 (0.441)	0.079 (0.751)
<i>PPE</i>	-0.034*** (0.000)	-0.065*** (0.000)	-0.137*** (0.000)	-1.021*** (0.000)
<i>Inventory</i>	0.006 (0.477)	0.064*** (0.000)	-0.245*** (0.000)	-1.730*** (0.000)
<i>R&D</i>	-0.176*** (0.000)	-0.241*** (0.000)	2.567*** (0.000)	3.912*** (0.001)
<i>Discretionary Accruals</i>	-0.004 (0.207)	-0.009** (0.012)	-0.024*** (0.000)	-0.006 (0.892)
<i>NOL</i>	-0.007*** (0.007)	-0.029*** (0.000)	0.008 (0.372)	0.023 (0.751)
Constant	0.358*** (0.000)	0.279*** (0.000)	0.270*** (0.000)	1.371*** (0.002)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	31,457	31,490	30,746	6997
R-squared	0.065	0.136	0.490	0.457

	Panel C: Robustness check for effective tax rate				Panel D: Robustness check for tax aggressiveness			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Lead Lender Share</i>	<i>ETR</i>	<i>Lead Lender Share</i>	<i>CETR</i>	<i>Lead Lender Share</i>	<i>SHELTER</i>	<i>Lead Lender Share</i>	<i>UTB_LN</i>
	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage
<i>Lead Lender Share*</i>		-0.021*** (0.001)		-0.021*** (0.003)		-0.239*** (0.000)		-1.758*** (0.000)
<i>Industry Lead Lender Share</i>	0.895*** (0.000)		0.895*** (0.000)		0.891*** (0.000)		0.937*** (0.000)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.261*** (0.000)	0.322*** (0.000)	0.152*** (0.008)	0.136*** (0.002)	0.152*** (0.008)	0.981*** (0.000)	-0.197 (0.316)	2.423 (0.111)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Statistics	328.8		329.6		322.4		76.94	
Observations	31,457	31,457	31,490	31,490	30,746	30,746	6997	6997
R-squared	0.471	0.065	0.472	0.136	0.472	0.490	0.430	0.457

Table 3 reports the OLS regression results with *Lead Lender Share* as the key variable of interest. Panel A reports the results on tax avoidance, in which the dependent variables are *ETR* and *CETR*. Panel B reports the results on tax aggressiveness, in which the dependent variables are *SHELTER* and *UTB_LN*. Panels C and D report the robustness results by using *Industry Lead Lender Share* as the instrumental variable. In these two panels, columns (1), (3), (5), and (7) show the first-stage regression results, whereas columns (2), (4), (6), and (8) show the second-stage regression results where the dependent variables are *ETR*, *CETR*, *SHELTER*, and *UTB_LN*, respectively. *Lead lender share** is the instrumented *lead lender share*. The control variables include *Z Score*, *ROA*, *Sales*, *Sales Growth*, *Book to Market*, *Foreign Operation*, *Leverage*, *PPE*, *Inventory*, *R&D*, *Discretionary Accruals*, and *NOL*. All variables are defined in the Appendix. Standard errors are clustered at the firm level. *P*-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

lenders tend to curb borrowers' tax aggressiveness behavior. Panels C and D report the 2SLS regression results using *Reputable Lender* as an endogenous variable. We employ *ROA* as an instrument for reputable lenders because quality borrowers with higher *ROA* are more likely to borrow from reputable lenders (Ross, 2010). That the reported F-statistics are all greater than ten suggests that our instrumental variable *ROA* meets the relevance requirement and is a valid instrument. The impact of reputable lenders on tax planning is robust to substituting the

instrumented value for the reputable lender dummy. The results in Table 4 also support Hypotheses 1a and 1b.

Table 5 reports the third set of baseline results using *Single Lender* as a monitoring measure. In Panel A, the estimated coefficients of *Single Lender* in the *ETR* and *CETR* regressions are -0.012 and -0.014, respectively, significant at the 1% level. These results indicate strong monitoring in a single lending relationship enhances borrowers' overall tax avoidance outcomes. In Panel B, the estimated coefficients for *Single*

Table 4
The impact of reputable lender on borrowers' tax planning behavior.

VARIABLES	Panel A: Effective tax rate		Panel B: Tax aggressiveness	
	(1)	(2)	(3)	(4)
	<i>ETR</i>	<i>CETR</i>	<i>SHELTER</i>	<i>UTB_LN</i>
<i>Reputable Lender</i>	-0.004** (0.041)	-0.008*** (0.001)	-0.067*** (0.000)	-0.450*** (0.000)
<i>Z Score</i>	0.006*** (0.000)	0.005*** (0.000)	-0.000 (0.826)	-0.097*** (0.000)
<i>ROA</i>	0.024*** (0.002)	0.136*** (0.000)	0.301*** (0.000)	2.432*** (0.000)
<i>Sales</i>	-0.000 (0.559)	0.000 (0.306)	0.002*** (0.006)	0.034*** (0.000)
<i>Sales Growth</i>	-0.001 (0.571)	-0.016*** (0.000)	0.026*** (0.000)	-0.276*** (0.000)
<i>Book to Market</i>	-0.001*** (0.006)	-0.002*** (0.000)	0.003*** (0.000)	0.013*** (0.001)
<i>Foreign Operation</i>	0.005** (0.037)	0.035*** (0.000)	0.230*** (0.000)	1.139*** (0.000)
<i>Leverage</i>	0.002 (0.676)	-0.033*** (0.000)	0.035** (0.039)	0.446*** (0.009)
<i>PPE</i>	-0.028*** (0.000)	-0.068*** (0.000)	-0.131*** (0.000)	-0.670*** (0.001)
<i>Inventory</i>	0.010 (0.179)	0.066*** (0.000)	-0.291*** (0.000)	-1.791*** (0.000)
<i>R&D</i>	-0.174*** (0.000)	-0.235*** (0.000)	2.625*** (0.000)	2.388*** (0.002)
<i>Discretionary Accruals</i>	-0.002 (0.300)	-0.006** (0.024)	-0.019*** (0.001)	-0.015 (0.637)
<i>NOL</i>	-0.006*** (0.003)	-0.029*** (0.000)	0.012 (0.105)	0.033 (0.579)
Constant	0.348*** (0.000)	0.284*** (0.000)	0.161*** (0.000)	0.561* (0.097)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	51,002	51,060	49,753	13,969
R-squared	0.061	0.134	0.484	0.400

	Panel C: Robustness check for effective tax rate				Panel D: Robustness check for tax aggressiveness			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Reputable Lender</i>	<i>ETR</i>	<i>Reputable Lender</i>	<i>CETR</i>	<i>Reputable Lender</i>	<i>SHELTER</i>	<i>Reputable Lender</i>	<i>UTB_LN</i>
	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage
<i>Reputable Lender*</i>		-0.109*** (0.000)		-0.602*** (0.000)		-1.367*** (0.000)		-12.831*** (0.000)
<i>ROA</i>	-0.228*** (0.000)		-0.229*** (0.000)		-0.232*** (0.000)		-0.196*** (0.000)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.299*** (0.000)	0.451*** (0.000)	0.298*** (0.000)	0.552*** (0.000)	0.135* (0.094)	0.746*** (0.000)	-0.200 (0.646)	-0.656 (0.907)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Statistics	103.5		103.7		103.3		19.33	
Observations	51,002	51,002	51,060	51,060	49,753	49,753	13,969	13,969
R-squared	0.146	0.061	0.146	0.134	0.149	0.479	0.085	0.390

Table 4 reports the OLS regression results with *Reputable Lender* as the key variable of interest. Panel A reports the results on tax avoidance, in which the dependent variables are *ETR* and *CETR*. Panel B reports the results on tax aggressiveness, in which the dependent variables are *SHELTER* and *UTB_LN*. Panels C and D report the robustness results by using *return on assets (ROA)* as the instrumental variable. In these two panels, columns (1), (3), (5), and (7) show the first-stage regression results, whereas columns (2), (4), (6), and (8) show the second-stage regression results where the dependent variables are *ETR*, *CETR*, *SHELTER*, and *UTB_LN*, respectively. *Reputable Lender** is the instrumented *Reputable Lender*. The control variables include *Z Score*, *Sales*, *Sales Growth*, *Book to Market*, *Foreign Operation*, *Leverage*, *PPE*, *Inventory*, *R&D*, *Discretionary Accruals*, and *NOL*. All variables are defined in the Appendix. Standard errors are clustered at the firm level. P-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Lender in the borrowers' aggressive tax avoidance regressions, *SHELTER* and *UTB_LN*, are -0.125 and -0.850, respectively, significant at the 1% level. These results indicate that a single lending relationship discourages opportunistic tax avoidance behavior by borrowers. Because firms that need more external financing tend to develop and build multiple lending relationships rather than relying on a single banking relationship (Carey, Post, & Sharpe, 1998), we instrument *Single Lender* with a need for external financing to address the endogeneity concern. The F-

statistics in Panels C and D of Table 5 suggest that our instrument is valid in most cases. The results from the 2SLS regressions are consistent with those reported in Panels A and B.

Table 6 reports the fourth and final set of baseline regression results using *Loan Sales* as a measure of diminished lender monitoring. As discussed earlier, the presence of loan sales weakens, by providing an "exit" option, lenders' monitoring incentives (Gande & Saunders, 2012; Kamstra et al., 2014). That the coefficient estimates on *Loan Sales* for *ETR* and

Table 5
The impact of single lender on borrowers' tax planning behavior.

VARIABLES	Panel A: Effective tax rate		Panel B: Tax aggressiveness	
	(1)	(2)	(3)	(4)
	<i>ETR</i>	<i>CETR</i>	<i>SHELTER</i>	<i>UTB_LN</i>
<i>Single Lender</i>	-0.012*** (0.000)	-0.014*** (0.000)	-0.125*** (0.000)	-0.850*** (0.000)
<i>Z Score</i>	0.006*** (0.000)	0.005*** (0.000)	0.001 (0.637)	-0.086*** (0.000)
<i>ROA</i>	0.022*** (0.004)	0.134*** (0.000)	0.288*** (0.000)	2.491*** (0.000)
<i>Sales</i>	-0.000 (0.578)	0.000 (0.276)	0.002*** (0.005)	0.034*** (0.000)
<i>Sales Growth</i>	-0.001 (0.664)	-0.016*** (0.000)	0.027*** (0.000)	-0.302*** (0.000)
<i>Book to Market</i>	-0.000*** (0.007)	-0.002*** (0.000)	0.003*** (0.000)	0.012*** (0.002)
<i>Foreign Operation</i>	0.004* (0.097)	0.035*** (0.000)	0.224*** (0.000)	1.169*** (0.000)
<i>Leverage</i>	-0.000 (0.961)	-0.036*** (0.000)	0.008 (0.624)	0.442*** (0.009)
<i>PPE</i>	-0.028*** (0.000)	-0.068*** (0.000)	-0.131*** (0.000)	-0.653*** (0.001)
<i>Inventory</i>	0.010 (0.166)	0.066*** (0.000)	-0.294*** (0.000)	-1.800*** (0.000)
<i>R&D</i>	-0.168*** (0.000)	-0.229*** (0.000)	2.677*** (0.000)	2.270*** (0.003)
<i>Discretionary Accruals</i>	-0.002 (0.345)	-0.005** (0.030)	-0.017*** (0.002)	-0.015 (0.637)
<i>NOL</i>	-0.006*** (0.004)	-0.029*** (0.000)	0.013* (0.079)	0.025 (0.675)
Constant	0.353*** (0.000)	0.288*** (0.000)	0.201*** (0.000)	1.799*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	51,002	51,060	49,753	13,969
R-squared	0.061	0.134	0.488	0.393

	Panel C: Robustness check for effective tax rate				Panel D: Robustness check for tax aggressiveness			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Single Lender</i>	<i>ETR</i>	<i>Single Lender</i>	<i>CETR</i>	<i>Single Lender</i>	<i>SHELTER</i>	<i>Single Lender</i>	<i>UTB_LN</i>
	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage
<i>Single Lender*</i>		-0.130*** (0.000)		-0.064*** (0.003)		-0.950*** (0.000)		-55.920*** (0.003)
<i>External Finance</i>	-0.080*** (0.000)		-0.080*** (0.000)		-0.078*** (0.000)		-0.007*** (0.003)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.074 (0.211)	0.305*** (0.000)	0.074 (0.211)	0.290*** (0.000)	0.079 (0.172)	0.614*** (0.000)	0.043 (0.746)	3.375 (0.653)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Statistics	213.4		213.9		211		7.028	
Observations	50,965	50,965	51,023	51,023	49,719	49,719	13,952	13,952
R-squared	0.263	0.002	0.263	0.127	0.265	0.094	0.033	0.384

Table 5 reports the OLS regression results with *Single Lender* as the key variable of interest. Panel A reports the results on tax avoidance, in which the dependent variables are *ETR* and *CETR*. Panel B reports the results on tax aggressiveness, in which the dependent variables are *SHELTER* and *UTB_LN*. Panels C and D report the robustness results by using *External Finance* as the instrumental variable. In these two panels, columns (1), (3), (5), and (7) show the first-stage regression results, whereas columns (2), (4), (6), and (8) show the second-stage regression results where the dependent variables are *ETR*, *CETR*, *SHELTER*, and *UTB_LN*, respectively. *Single Lender** is the instrumented *Single Lender*. The control variables include *Z Score*, *ROA*, *Sales*, *Sales Growth*, *Book to Market*, *Foreign Operation*, *Leverage*, *PPE*, *Inventory*, *R&D*, *Discretionary Accruals*, and *NOL*. All variables are defined in the Appendix. Standard errors are clustered at the firm level. P-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

CETR are statistically insignificant in Panel A of Table 6 suggests that borrowers' overall tax avoidance outcomes are not affected when loans are sold on the secondary loan market. In Panel B, the coefficients of *Loan Sales* for *SHELTER* and *UTB_LN* are significantly positive at the 1% level, indicating that loan sales, a measure of diminishing lender monitoring, may result in a more severe borrower moral hazard problem regarding tax aggressiveness. Loan quality being one of the drivers of lenders' loan resale decisions (Kamstra et al., 2014), we use loan quality

proxied by investment grade as an instrument. The F-statistics results suggest that the instrument is valid. As seen in Panels C and D of Table 6, the estimated coefficients on the instrumented variable remain significantly positive when we replace the *Loan Sales* variable with the instrumented loan sales in the second stage regression.

Overall, baseline results for the four lender characteristics deliver a consistent message, supporting Hypotheses 1a and 1b.

Table 6
The impact of loan sales on borrowers' tax planning behavior.

VARIABLES	Panel A: Effective tax rate		Panel B: Tax aggressiveness	
	(1)	(2)	(3)	(4)
	<i>ETR</i>	<i>CETR</i>	<i>SHELTER</i>	<i>UTB_LN</i>
<i>Loan Sales</i>	-0.003 (0.372)	0.002 (0.598)	0.039*** (0.000)	0.256*** (0.000)
<i>Z Score</i>	0.006*** (0.000)	0.005*** (0.000)	0.001 (0.703)	-0.082*** (0.000)
<i>ROA</i>	0.025*** (0.001)	0.137*** (0.000)	0.311*** (0.000)	2.469*** (0.000)
<i>Sales</i>	-0.000 (0.668)	0.000 (0.258)	0.002*** (0.006)	0.033*** (0.000)
<i>Sales Growth</i>	-0.001 (0.514)	-0.016*** (0.000)	0.023*** (0.000)	-0.312*** (0.000)
<i>Book to Market</i>	-0.001*** (0.006)	-0.002*** (0.000)	0.003*** (0.000)	0.012*** (0.001)
<i>Foreign Operation</i>	0.006** (0.015)	0.037*** (0.000)	0.240*** (0.000)	1.168*** (0.000)
<i>Leverage</i>	0.004 (0.554)	-0.034*** (0.000)	0.019 (0.267)	0.286* (0.098)
<i>PPE</i>	-0.028*** (0.000)	-0.067*** (0.000)	-0.123*** (0.000)	-0.584*** (0.005)
<i>Inventory</i>	0.009 (0.228)	0.064*** (0.000)	-0.302*** (0.000)	-1.737*** (0.000)
<i>R&D</i>	-0.177*** (0.000)	-0.238*** (0.000)	2.607*** (0.000)	2.241*** (0.004)
<i>Discretionary Accruals</i>	-0.002 (0.301)	-0.006** (0.023)	-0.019*** (0.000)	-0.013 (0.671)
<i>NOL</i>	-0.006*** (0.003)	-0.029*** (0.000)	0.010 (0.185)	0.023 (0.701)
Constant	0.346*** (0.000)	0.280*** (0.000)	0.131*** (0.000)	0.620* (0.067)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	51,002	51,060	49,753	13,969
R-squared	0.061	0.134	0.480	0.392

	Panel C: Robustness check for effective tax rate				Panel D: Robustness check for tax aggressiveness			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Loan Sales</i>	<i>ETR</i>	<i>Loan Sales</i>	<i>CETR</i>	<i>Loan Sales</i>	<i>SHELTER</i>	<i>Loan Sales</i>	<i>UTB_LN</i>
	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage
<i>Loan Sales*</i>		0.033 (0.108)		-0.034 (0.149)		0.294*** (0.000)		2.709*** (0.000)
<i>Non-Investment Grade Dummy</i>	0.110*** (0.000)		0.110*** (0.000)		0.110*** (0.000)		0.142*** (0.000)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.036 (0.323)	0.418*** (0.000)	-0.036 (0.321)	0.373*** (0.000)	0.125** (0.021)	0.521*** (0.000)	-0.135 (0.729)	2.309 (0.197)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Statistics	177.9		178.1		175.1		74.86	
Observations	51,002	51,002	51,060	51,060	49,753	49,753	13,969	13,969
R-squared	0.229	0.056	0.229	0.131	0.231	0.447	0.268	0.147

Table 6 reports the OLS regression results with *Loan Sales* as the key variable of interest. Panel A reports the results on tax avoidance, in which the dependent variables are *ETR* and *CETR*. Panel B reports the results on tax aggressiveness, in which the dependent variables are *SHELTER* and *UTB_LN*. Panels C and D report the robustness results by using *Non-Investment Grade Dummy* as the instrumental variable. In these two panels, columns (1), (3), (5), and (7) show the first-stage regression results, whereas columns (2), (4), (6), and (8) show the second-stage regression results where the dependent variables are *ETR*, *CETR*, *SHELTER*, and *UTB_LN*, respectively. *Loan Sales** is the instrumented *Loan Sales*. The control variables include *Z Score*, *ROA*, *Sales*, *Sales Growth*, *Book to Market*, *Foreign Operation*, *Leverage*, *PPE*, *Inventory*, *R&D*, *Discretionary Accruals*, and *NOL*. All variables are defined in the Appendix. Standard errors are clustered at the firm level. *P*-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

4.3.2. Lender monitoring effect on financially constrained borrowers

Next, we examine the lender monitoring effect on financially constrained borrowers' tax avoidance and aggressiveness. Facing a higher cost of and more difficult access to external financing, financially constrained firms are more eager to acquire funds through tax planning (Edwards et al., 2016). Following the prior literature (Bhagat, Moyen, & Suh, 2005; Denis & Sibilkov, 2010; Huang & Mazouz, 2018; Ohlson, 1980), we use firm size and Ohlson's predicted bankruptcy probability

(O-Score) to measure firms' financial constraints. Smaller firms being more likely to be financially constrained than larger firms, we define *Small Firm* as a dummy variable equal to one if firm size (calculated as the natural log of one plus total assets) is smaller than or equal to the median firm size of all the sampled firms in a year, and zero otherwise. For firms approaching bankruptcy, we follow Ohlson's (1980) approach in calculating the O-Score to measure the probability of bankruptcy. We define *High O-Score* as a dummy variable equal to one if a firm's Ohlson's

bankruptcy probability is greater than or equal to the median bankruptcy probability of all the sampled firms in a year, and zero otherwise.

As previously argued, lenders play a role in increasing borrowers' overall tax avoidance outcomes and preventing them from engaging in tax aggressiveness. We expect such effects (i.e., of lender monitoring on tax avoidance and tax aggressiveness) to be more pronounced among financially constrained firms (proxied by small firms or firms with a higher O-Score).

Table 7 presents the regression analysis results when we add to our baseline model a small firm indicator, *Small Firm*, and an interaction term between *Small Firm* and each of the lender monitoring measures. In each of the panels, the dependent variables *ETR* and *CETR* (in columns (1) and (2), respectively) proxy for tax avoidance, and *SHELTER* and *UTB* (in columns (3) and (4), respectively) proxy for tax aggressiveness. Control variables are the same as in model (1). In Panel A, we observe that (1) the coefficients on *Lead Lender Share* become statistically insignificant in the tax avoidance regressions, but remain negative and statistically significant at the 1% level in the tax aggressiveness regressions; (2) the coefficients on *Small Firm* are positive and significant at least at 10% level in the tax avoidance regressions and negative and significant at 1% level in the tax aggressiveness regressions, suggesting that, compared to larger firms, smaller firms on average face a higher level of effective tax rate while they are less likely engaging in the aggressive tax planning; (3) the coefficients of the interaction term *Lead Lender Share*Small Firm* in both the tax avoidance and tax aggressiveness regressions appear to be negative and significant at the 1% level (the *UTB* regression being the only exception). Overall, the results suggest that the effect of lead lender share on increasing tax avoidance is primarily driven by financially constrained firms (i.e., smaller firms). Moreover, the impact of lead lender share in restraining tax aggressiveness is more pronounced for smaller firms compared to larger firms. Taking the results reported in column (1) as an example, the coefficient on *Lead Lender Share* is -0.001 (statistically insignificant) and that on *Lead Lender Share*Small Firm* is -0.018 (statistically significant at the 1% level). This finding suggests that changes in lead lender loan share do not have a significant impact on tax avoidance among larger firms. In contrast, for smaller firms, a 1% increase in the average loan share held by lead lenders is associated with an average additional 1.8% decrease in the effective tax rate (*ETR*) compared to larger firms. Furthermore, upon examining the results of the tax aggressiveness tests in column (3), the coefficient on lead lender share is -0.056 (statistically significant at the 1% level) while the coefficient on *Lead Lender Share*Small Firm* is -0.086 (also statistically significant at the 1% level). These results suggest that, for larger firms, a 1% increase in the average loan share held by lead lenders results in an average 5.6% decrease in the probability of being classified in the top quartile of tax sheltering. However, for smaller firms, the same 1% increase in the average lead lender loan share leads to an average 14.2% decrease (an additional 8.6% decrease compared to larger firms) in the probability of being classified in the top quartile of tax sheltering.

To maintain the paper's length efficiency, in the remaining discussions for Tables 7 and 8, our focus will be on the conceptual implications of coefficient related to lender monitoring measure and the interaction term, rather than providing detailed numerical explanations. In Panel B, the coefficients on *Reputable Lender* are statistically insignificant in tax avoidance regressions. However, the negative and significant coefficients on the interaction term, *Reputable Lender*Small Firm*, suggest that the effect of reputable lenders in increasing tax avoidance is observed in financially constrained firms (smaller firms). Furthermore, the regression results on tax aggressiveness indicate that the influence of reputable lenders in curbing tax aggressiveness is effective across all firms. However, it is particularly pronounced for smaller firms (financially constrained firms), compared to larger firms.

Panel C shows some mixed results. The coefficient on *Single Lender* is positive and significant in the *CETR* regression and insignificant in the *ETR* regression. However, the coefficients on the interaction term *Single*

*Lender*Small Firm*, in both regressions, are negative and significant at the 1% level. As the coefficients of *Single Lender* and the interaction term in column (2) are both significant but have opposite signs, netting a negative effect, we conduct a joint significance test on the coefficients and examine the combined effect. The *p*-value from the joint significance test is less than 0.000, suggesting that the combined effect is negative and statistically significant. These findings suggest that, for large firms, maintaining a single lending relationship may decrease tax avoidance, resulting in an increase in the effective tax rate. In contrast, for smaller firms, the effect of a single lender on tax avoidance leads to a significant decrease in the effective tax rate. Turning to the tax aggressiveness regression results, we observe similar patterns. The coefficient on *Single Lender* is positive and significant only in the *SHELTER* regression, but not in the *UTB* regression. Similarly, the coefficient on *Single Lender*Small Firm* is only significant in the *SHELTER* regression, except for a negative sign. Given the coefficient on *Single Lender* and that on the interaction term in *SHELTER* regression are both significant but have opposite signs, we perform a joint test on the two coefficients, which indicates a statistically significant net negative effect. These results imply that while there is a chance that the single lending relationship is associated with an increase in tax aggressiveness for larger firms, it is associated with a decrease in tax aggressiveness among smaller firms.

In Panel D, while the coefficients on *Loan Sale* are negative and significant in half of the tax avoidance and tax aggressiveness regressions, the coefficients on the interaction term *Loan Sales*Small Firm* appear to be positive and significant for one of the tax avoidance regressions and for both tax aggressiveness regressions. Similar to our approach in Panel C, we conduct a joint significance test on the coefficients of *Loan Sales* and the interaction term *Loan Sales*Small Firm*. The *p*-value of the joint significant test for the *ETR* and *SHELTER* regressions is 0.018 and 0.000, respectively, indicating that the net effect of *Loan Sale* on both tax avoidance and tax aggressiveness is significant and positive. These results suggest that while the initiation of loan sales for large firms may be potentially associated with an increase in their tax avoidance and a decrease in their tax aggressiveness, the reduced incentive for lenders to monitor smaller firms (financially constrained firms), however, is likely to lead to a decrease in tax avoidance and an increase in tax aggressiveness.

Overall, when using the small firm indicator as a proxy for financially constrained firms, our test results suggest that the impact of lender monitoring on increasing firms' tax avoidance and decreasing their tax aggressiveness is predominantly observed among financially constrained firms, indicating a more pronounced impact in those firms.

Table 8 repeats our analysis in Table 7 using *High O-Score* as an alternative financial constraint measure. Specifically, we regress *ETR*, *CETR*, *SHELTER*, and *UTB* on the same set of variables, replacing *Small Firm* with *High O-Score* in the model. As shown in Panel A, the coefficients on *Lead Lender Share* provide mixed results: while it is negative but insignificant in the *ETR* regression, it turns positive and marginally significant in the *CETR* regression. These findings suggest that the effect of *Lead Lender Share* on tax avoidance among low O-score firms is not entirely clear. Meanwhile, the coefficients on the interaction term *Lead Lender Share*High O-Score* are negative and statistically significant in the two tax avoidance regressions. Due to the conflict signs found in the *CETR* regression, we perform the joint significance test on *Lead Lender Share* and the interaction term. The results confirm that the net effect is negative and statistically significant (at the 1% level), suggesting that the influence of *Lead Lender Share* on firms' tax avoidance is primarily driven by a group of financially constrained firms. Turning to the tax aggressiveness regression, similar to the results reported in Table 7 Panel A, the negative and significant coefficients on *Lead Lender Share*, combined with the negative and significant coefficients on the interaction term *Lead Lender Share*High O-Score* (with the exception of the *UTB* regression), suggest that the effect of lead lender share in increasing tax avoidance applies to all firms, but it is more pronounced among financially constrained firms.

Table 7
The interactive effect of lender monitoring and firm financial constraint on borrowers' tax planning behavior.

Panel A Lead lender share.				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Lead Lender Share</i>	-0.001 (0.783)	0.008 (0.185)	-0.056*** (0.000)	-0.508*** (0.000)
<i>Small Firm</i>	0.008* (0.066)	0.011** (0.032)	-0.104*** (0.000)	-1.793*** (0.000)
<i>Lead Lender Share*Small Firm</i>	-0.018*** (0.006)	-0.031*** (0.000)	-0.086*** (0.000)	-0.138 (0.293)
Controls	Yes	Yes	Yes	Yes
Constant	0.233*** (0.000)	0.189*** (0.000)	0.545*** (0.000)	3.440*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Lead Lender Share</i> and <i>Lead Lender Share*Small Firm</i>)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	31,457	31,490	30,746	6997
R-squared	0.065	0.137	0.509	0.608

Panel B Reputable lender				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Reputable Lender</i>	-0.001 (0.517)	-0.003 (0.169)	-0.017*** (0.000)	-0.009 (0.815)
<i>Small Firm</i>	0.002 (0.405)	-0.001 (0.734)	-0.160*** (0.000)	-1.840*** (0.000)
<i>Reputable Lender*Small Firm</i>	-0.006** (0.045)	-0.009** (0.010)	-0.012** (0.047)	-0.182*** (0.000)
Controls	Yes	Yes	Yes	Yes
Constant	0.227*** (0.000)	0.225*** (0.000)	0.571*** (0.000)	3.318*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Reputable Lender</i> and <i>Reputable Lender*Small Firm</i>)	(0.003)	(0.000)	(0.000)	(0.000)
Observations	51,002	51,060	49,753	13,969
R-squared	0.059	0.132	0.453	0.585

Panel C Single lender				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Single Lender</i>	-0.002 (0.657)	0.011** (0.018)	0.044*** (0.000)	-0.264 (0.170)
<i>Small Firm</i>	0.003 (0.120)	0.000 (0.881)	-0.149*** (0.000)	-1.897*** (0.000)
<i>Single Lender*Small Firm</i>	-0.016*** (0.001)	-0.034*** (0.000)	-0.115*** (0.000)	-0.094 (0.655)
Controls	Yes	Yes	Yes	Yes
Constant	0.226*** (0.000)	0.222*** (0.000)	0.562*** (0.000)	3.290*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Single Lender</i> and <i>Single Lender*Small Firm</i>)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	51,002	51,060	49,753	13,969
R-squared	0.060	0.133	0.455	0.585

(continued on next page)

Table 7 (continued)

Panel D Loan sales				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Loan Sales</i>	-0.006** (0.033)	0.003 (0.398)	-0.028*** (0.000)	-0.051 (0.109)
<i>Small Firm</i>	-0.004** (0.026)	-0.007*** (0.001)	-0.181*** (0.000)	-1.964*** (0.000)
<i>Loan Sales* Small Firm</i>	0.012*** (0.008)	-0.002 (0.674)	0.078*** (0.000)	0.244*** (0.000)
<i>Controls</i>	Yes	Yes	Yes	Yes
Constant	0.229*** (0.000)	0.224*** (0.000)	0.576*** (0.000)	3.335*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Loan Sales</i> and <i>Loan Sales* Small Firm</i>)	(0.018)	(0.700)	(0.000)	(0.000)
Observations	51,002	51,060	49,753	13,969
R-squared	0.059	0.132	0.453	0.585

Table 7 reports the OLS regression results of the interactive effect of lender monitoring and small firm on tax avoidance and tax aggressiveness. The dependent variables are *ETR*, *CETR*, *SHELTER* and *UTB_LN*. In panels A to D, the key variables of interest are the interaction terms between *Small Firm* and *Lead Lender Share*, *Reputable Lender*, *Single Lender*, and *Loan Sales*, respectively. The control variables include *Z Score*, *ROA*, *Sales*, *Sales Growth*, *Book to Market*, *Foreign Operation*, *Leverage*, *PPE*, *Inventory*, *R&D*, *Discretionary Accruals*, and *NOL*. All variables are defined in the Appendix. Both the industry fixed effects and year fixed effects are controlled for in the regressions. The *p*-values of a joint significance test on the coefficient of a lender monitoring measure and the coefficient of the interaction between the lender monitoring and financial constraint measures are reported. Standard errors are clustered at the firm level. *P*-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

In Panel B tax avoidance regressions, the insignificant coefficients on *Reputable Lender*, along with the negative and significant coefficients on the interaction term *Reputable Lender*High O-Score* suggest the reputable lender effect in increasing tax avoidance only applies to financial constrained firms. In the tax aggressiveness regressions, the negative and significant coefficients on *Reputable Lender*, combined with the negative and significant coefficients on the interaction term *Reputable Lender*High O-Score*, suggest that the influence of reputable lenders in curbing tax aggressiveness applies to all firms, but has a greater impact on financially constrained firms.

The estimated coefficients on *Single Lender* in Panel C yield mixed results in both tax avoidance and tax aggressiveness regressions: the coefficient on *Single Lender* is insignificant in the *ETR* regression, positive and significant in the *CETR* and *SHELTER* regressions, and negative and significant in the *UTB* regression, making it difficult to interpret the effect of single lending relationship on firms' tax planning among firms with a low *O*-score. However, after considering the coefficients on both *Single Lender* and *Single Lender*High O-Score* and performing a joint significance test, we find that, with the exception of the *UTB* regression result, the effect of single lending relationship in increasing firms' tax avoidance and curbing firms' tax aggressiveness is primarily driven by a group of financially constrained firms (i.e., firms with a high *O*-score).

The results in Panel D show a strong resemblance to those reported in Panel D of Table 7. We observe a negative and significant coefficient on *Loan Sales* in half of the tax avoidance and tax aggressiveness regressions. In addition, we find the coefficients on the interaction term *Loan Sales*High O-Score* are positive and significant at least at the 5% level in all but one of the tax avoidance regressions. Upon conducting a joint significance test on *Loan Sales* and the interaction term, we confirm that the combined effect of *Loan Sales* (indicating reduced lender monitoring) leads to a decrease in firms' tax avoidance and an increase

in firms' tax aggressiveness, primarily driven by financially constrained firms (those with a high *O*-score). The findings presented in Table 8, utilizing *High O-Score* as an alternative measure of financial constraint, align with those reported in Table 7. This consistency suggests that the impact of lender monitoring on tax avoidance and tax aggressiveness is stronger for, if not entirely driven by financially constrained firms.

5. Conclusions

Our study expands on prior work on the corporate governance role of banks by examining the effect of lender monitoring on the outcomes of borrowers' tax avoidance and tax aggressiveness behavior. We extend, for example, recent studies exploring how covenant violations affect (Cook et al., 2020) and intermediary banks assist clients in (Gallemore et al., 2019) tax planning by identifying various lender characteristics that can affect borrowers' tax planning. Using four lender monitoring proxies—lead lender share, reputable lender, single lender, and loan sales—we present strong evidence that lenders help borrowers increase their overall tax planning and avoid opportunistic tax aggressiveness. Moreover, we show that lender monitoring plays an even more prominent role in the presence of financial constraints, which typically afflict firms that are small or face a higher probability of bankruptcy.

Our study makes several contributions to the accounting, banking, and corporate governance literature. Principally, it enhances understanding of the impact of lender monitoring on borrowers' tax planning. We differentiate this impact over tax avoidance outcomes and tax aggressiveness. Our findings further reveal lenders exert more influence on borrowers with financial constraints. Overall, our study sheds new light on lenders' governance role by demonstrating lender monitoring to help borrowers increase cash savings through tax avoidance and refrain from tax aggressiveness.

Table 8
The interactive effect of lender monitoring and firm bankruptcy probability on borrowers' tax planning behavior.

Panel A Lead lender share				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Lead Lender Share</i>	-0.005 (0.277)	0.011* (0.056)	-0.076*** (0.000)	-0.683*** (0.000)
<i>High O-Score</i>	0.006 (0.163)	0.013*** (0.010)	-0.102*** (0.000)	-1.620*** (0.000)
<i>Lead Lender Share*High O-Score</i>	-0.011* (0.077)	-0.037*** (0.000)	-0.075*** (0.000)	-0.150 (0.266)
Controls	Yes	Yes	Yes	Yes
Constant	0.235*** (0.000)	0.188*** (0.000)	0.560*** (0.000)	3.604*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Lead Lender Share</i> and <i>Lead Lender Share*High O-Score</i>)	(0.002)	(0.000)	(0.000)	(0.000)
Observations	30,590	30,623	29,893	6830
R-squared	0.066	0.137	0.505	0.584

Panel B Reputable lender				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Reputable Lender</i>	-0.002 (0.465)	-0.001 (0.585)	-0.017*** (0.000)	-0.103*** (0.007)
<i>High O-Score</i>	0.003 (0.222)	-0.001 (0.721)	-0.152*** (0.000)	-1.688*** (0.000)
<i>Reputable Lender* High O-Score</i>	-0.006* (0.066)	-0.013*** (0.000)	-0.017*** (0.007)	-0.099* (0.050)
Controls	Yes	Yes	Yes	Yes
Constant	0.227*** (0.000)	0.224*** (0.000)	0.572*** (0.000)	3.315*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Reputable Lender</i> and <i>Reputable Lender* High O-Score</i>)	(0.004)	(0.000)	(0.000)	(0.000)
Observations	49,642	49,700	48,417	13,665
R-squared	0.060	0.133	0.449	0.553

Panel C Single lender				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
<i>Single Lender</i>	-0.006 (0.128)	0.011** (0.017)	0.016* (0.050)	-0.330* (0.057)
<i>High O-Score</i>	0.003* (0.080)	-0.002 (0.417)	-0.144*** (0.000)	-1.732*** (0.000)
<i>Single Lender* High O-Score</i>	-0.011** (0.016)	-0.034*** (0.000)	-0.091*** (0.000)	0.004 (0.983)
Controls	Yes	Yes	Yes	Yes
Constant	0.226*** (0.000)	0.223*** (0.000)	0.565*** (0.000)	3.272*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Single Lender</i> and <i>Single Lender* High O-Score</i>)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	49,642	49,700	48,417	13,665
R-squared	0.060	0.134	0.451	0.552

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Table 8 (continued)

Panel D Loan sales				
VARIABLES	Effective tax rate		Tax aggressiveness	
	(1)	(2)	(3)	(4)
	ETR	CETR	SHELTER	UTB_LN
Panel D Loan sales				
<i>Loan Sales</i>	-0.005* (0.090)	-0.002 (0.564)	-0.027*** (0.000)	-0.005 (0.879)
<i>High O-Score</i>	-0.002 (0.163)	-0.010*** (0.000)	-0.178*** (0.000)	-1.790*** (0.000)
<i>Loan Sales* High O-Score</i>	0.010** (0.023)	0.006 (0.258)	0.089*** (0.000)	0.211*** (0.000)
<i>Controls</i>	Yes	Yes	Yes	Yes
Constant	0.228*** (0.000)	0.225*** (0.000)	0.581*** (0.000)	3.319*** (0.000)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Joint significance test (<i>Loan Sales</i> and <i>Loan Sales* High O-Score</i>)	(0.066)	(0.527)	(0.000)	(0.000)
Observations	49,642	49,700	48,417	13,665
R-squared	0.060	0.133	0.449	0.552

Table 8 reports the OLS regression results of the interactive effect of lender monitoring and O-score on tax avoidance and tax aggressiveness. The dependent variables are ETR, CETR, SHELTER and UTB_LN. In panels A to D, the key variables of interest are the interaction terms between High O-Score and Lead Lender Share, Reputable Lender, Single Lender, and Loan Sales, respectively. The control variables include Z Score, ROA, Sales, Sales Growth, Book to Market, Foreign Operation, Leverage, PPE, Inventory, R&D, Discretionary Accruals, and NOL. All variables are defined in the Appendix. Both the industry fixed effects and year fixed effects are controlled for in the regressions. The p-values of a joint significance test on the coefficient of a lender monitoring measure and the coefficient of the interaction between the lender monitoring and financial constraint measures are reported. Standard errors are clustered at the firm level. P-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Declaration of Competing Interest

None.

Data availability

Data are available from the public sources cited in the text.

Appendix A. Variable definitions and construction

Variable	Description
Dependent Variables	
ETR	GAAP ETR, financial accounting effective tax rate, defined as the ratio of total income taxes divided by pre-tax book income before special items. When the denominator ≤ 0, we define ETR as missing. In addition, we set ETR as zero if the numerator is missing. We then replace missing ETR values with the mean values of the respective industry year. ETR is winsorized at zero and one. See Dyreng et al. (2010).
CETR	Cash ETR, cash effective tax rate, defined as the ratio of cash tax paid divided by pre-tax book income before special items. When the denominator ≤ 0, we define CETR as missing. In addition, we set CETR as zero if the numerator is missing. We then replace missing CETR values with the mean values of the respective industry year. CETR is winsorized at zero and one. See Dyreng et al. (2010).
SHELTER	A dummy variable equal to one if shelter probability is in the top quartile in a year, and zero otherwise. Shelter is calculated as $(-4.86 + 5.2 \times \text{BTD}_{it} + 4.08 \times \text{DA}_{it} - 0.41 \times \text{LEV}_{it} + 0.76 \times \text{AT}_{it} + 3.51 \times \text{ROA}_{it} + 1.72 \times \text{FI}_{it} + 2.43 \times \text{XRD}_{it})$. BTD is calculated as $\{[\text{PI}_{it} - (\text{TXFED}_{it} + \text{TXFO}_{it})/0.35 - \text{DTLFCF}_{it}]/\text{AT}_{it}\}$ when TXFED is not missing, otherwise $\{[\text{PI}_{it} - (\text{TXT}_{it} - \text{TXDI}_{it} - \text{TXS}_{it} - \text{TXO}_{it} + \text{TXFO}_{it})/0.35] - \text{DTLFCF}_{it}\}/\text{AT}_{it-1}$; DA _{it} is calculated as discretionary accruals from performance adjusted modified cross-sectional Jones model; LEV _{it} is long-term debt divided by total assets (DLTT _{it} /AT _{it}); AT _{it} is total assets; ROA _{it} is income divided by total assets (NI _{it} /AT _{it}); FI _{it} is a dummy variable equals one if the firm has foreign pretax income (PIFO _{it}), zero otherwise; XRD _{it} is research and development expenses divided by total assets; PI _{it} is pretax income; TXFED _{it} is federal income taxes; TXFO _{it} is foreign income taxes; DTLFCF _{it} is the change of TDCF from year t-1 to t. TXT _{it} is income taxes; TXDI _{it} is deferred income taxes; TXS _{it} is state income taxes; TXO _{it} is other income taxes. See Rego and Wilson (2012); Hoi, Wu, and Zhang (2013).
UTB_LN	Unrecognized tax benefits, defined as the natural log of the sum of one and unrecognized tax benefit. See Lisowsky et al. (2013).
Key Variables of Interest	
Lead Lender Share	Mean of the percentage of the outstanding loan retained by the lead lender, aggregated at the borrower's firm-year level.
Reputable Lender	A dummy variable equal to one if any outstanding loan at the borrower's firm-year level is from a lender ranked in the top 10 in terms of loan market share, and zero otherwise.
Single Lender	A dummy variable equal to one if a borrower's existing loans are all non-syndicated loans in a year, and zero otherwise.
Loan Sales	A dummy variable equal to one if any outstanding loan at the borrower's firm-year level is sold on the secondary market, and zero otherwise.
Instrumental Variables	
Industry Lead Lender Share	Industry mean of the percentage of the outstanding loan retained by the lead lender aggregated at the borrowers' industry-year level.
ROA	Income before extraordinary items divided by total assets.
External Finance	A dummy variable equal to one if a firm's annual change of total liabilities is greater than the median value of the annual change of total liabilities of sample firms in the year, and zero otherwise.
Non-Investment Grade Dummy	A dummy variable equal to one if all the outstanding loans are non-investment grade at the borrower's firm-year level, and zero otherwise.

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Variable	Description
Financial Constraint	
High O-Score	A dummy variable equal to one if a firm's Ohlson's bankruptcy probability is greater than or equal to the median value in the year, and zero otherwise. Ohlson's bankruptcy probability is calculated as $1/(1 + e^{y_{it}})$ where $y = -1.32 - 0.407 * SIZE_{it} + 6.03 * TLTA_{it} - 1.43 * WCTA_{it} + 0.757 * CLCA_{it} - 2.37 * NITA_{it} - 1.83 * FUTL_{it} + 0.285 * INTWO_{it} - 1.72 * OENEG_{it} - 0.521 * CHIN_{it}$. We follow Bhagat et al. (2005) to omit the effect of FUTL since this variable restricts the sample size. See Ohlson (1980); Bhagat et al. (2005).
Small Firm	A dummy variable equal to one if a firm's size calculated as natural log of one plus total assets is smaller than or equal to the median value in the year, and zero otherwise. See Denis & Sibilkov, 2010; Huang and Mazouz (2018).
Control Variables	
Z Score	Altman's Z Score is calculated as $1.2 X_1 + 1.4 X_2 + 3.3 X_3 + 0.6 X_4 + 1.0 X_5$ where X_1 is working capital/total assets, X_2 is retained earnings/total assets, X_3 is earnings before interest and taxes/total assets, X_4 is market value of equity/book value of total liabilities and X_5 is sales/total assets. Each of the X variables is winsorized at -4 and 8.
ROA	Income before extraordinary items divided by total assets.
Sales	Annual sales in \$ billions.
Sales Growth	Growth rate of annual sales.
Book to Market	Book value of equity divided by market value of equity.
Foreign Operation	A dummy variable equal to one if the firm has foreign pretax income, and zero otherwise.
Leverage	The ratio of long-term debt to the beginning of the year's total assets.
PPE	Property, plant and equipment divided by the beginning of the year's total assets.
Inventory	Inventory divided by the beginning of the year's total assets.
R&D	Research and development divided by total assets.
Discretionary Accruals	Discretionary accruals, constructed by following the modified cross-sectional Jones model (Dechow, Sloan, & Sweeney, 1995; Jones, 1991) with ROA as described in Kothari, Leone, and Wasley (2005).
NOL	A dummy variable equal to one if the firm reports a net operating loss, and zero otherwise.

References

- Ahn, S., & Choi, W. (2009). The role of bank monitoring in corporate governance: Evidence from borrowers' earnings management behavior. *Journal of Banking & Finance*, 33(2), 425–434.
- Allen, A., Francis, B. B., Wu, Q., & Zhao, Y. (2016). Analyst coverage and corporate tax aggressiveness. *Journal of Banking & Finance*, 73, 84–98.
- Allen, F. (1990). The market for information and the origin of financial intermediation. *Journal of Financial Intermediation*, 1(1), 3–30.
- Aristei, D., & Gallo, M. (2017). The determinants of firm–bank relationships in Italy: Bank ownership type, diversification and multiple banking relationships. *The European Journal of Finance*, 23(15), 1512–1543.
- Armstrong, C. S., Blouin, J. L., Jagolinzer, A. D., & Larcker, D. F. (2015). Corporate governance, incentives, and tax avoidance. *Journal of Accounting and Economics*, 60(1), 1–17.
- Baird, D. G., & Rasmussen, R. K. (2005). Private debt and the missing lever of corporate governance. *University of Pennsylvania Law Review*, 154, 1209–1251.
- Berger, P. G. (1993). Explicit and implicit tax effects of the R & D tax credit. *Journal of Accounting Research*, 31(2), 131–171.
- Best, R., & Zhang, H. (1993). Alternative information sources and the information content of bank loans. *The Journal of Finance*, 48(4), 1507–1522.
- Bhagat, S., Moyer, N., & Suh, I. (2005). Investment and internal funds of distressed firms. *Journal of Corporate Finance*, 11(3), 449–472.
- Bharath, S. T., Dahiya, S., Saunders, A., & Srinivasan, A. (2011). Lending relationships and loan contract terms. *The Review of Financial Studies*, 24(4), 1141–1203.
- Blaylock, B. S. (2016). Is tax avoidance associated with economically significant rent extraction among US firms? *Contemporary Accounting Research*, 33(3), 1013–1043.
- Blouin, J. L., & Robinson, L. A. (2014). Insights from academic participation in the FAF's initial PIR: The PIR of FIN 48. *Accounting Horizons*, 28(3), 479–500.
- Boot, A. W. (2000). Relationship banking: What do we know? *Journal of Financial Intermediation*, 9(1), 7–25.
- Booth, J. R., & Smith, R. L., II (1986). Capital raising, underwriting and the certification hypothesis. *Journal of Financial Economics*, 15(1–2), 261–281.
- Boyd, J. H., & Prescott, E. C. (1986). Financial intermediary-coalitions. *Journal of Economic Theory*, 38(2), 211–232.
- Brushwood, J. D., Johnston, D. M., & Lusch, S. J. (2018). The effect of tax audit outcomes on the reporting and valuation of unrecognized tax benefits. *Advances in Accounting*, 42, 1–11.
- Byers, S. S., Fields, L. P., & Fraser, D. R. (2008). Are corporate governance and bank monitoring substitutes: Evidence from the perceived value of bank loans. *Journal of Corporate Finance*, 14(4), 475–483.
- Carey, M., Post, M., & Sharpe, S. A. (1998). Does corporate lending by banks and finance companies differ? Evidence on specialization in private debt contracting. *The Journal of Finance*, 53(3), 845–878.
- Cen, L., Maydew, E. L., Zhang, L., & Zuo, L. (2017). Customer–supplier relationships and corporate tax avoidance. *Journal of Financial Economics*, 123(2), 377–394.
- Chava, S., & Roberts, M. R. (2008). How does financing impact investment? The role of debt covenants. *The Journal of Finance*, 63(5), 2085–2121.
- Chemmanur, T. J., & Fulghieri, P. (1994a). Investment bank reputation, information production, and financial intermediation. *The Journal of Finance*, 49(1), 57–79.
- Chemmanur, T. J., & Fulghieri, P. (1994b). Reputation, renegotiation, and the choice between bank loans and publicly traded debt. *Review of Financial Studies*, 7(3), 475–506.
- Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics*, 95(1), 41–61.
- Chu, Y. (2017). Shareholder-creditor conflict and payout policy: Evidence from mergers between lenders and shareholders. *The Review of Financial Studies*, 31(8), 3098–3121.
- Chyz, J. A., Leung, W. S. C., Li, O. Z., & Rui, O. M. (2013). Labor unions and tax aggressiveness. *Journal of Financial Economics*, 108(3), 675–698.
- Cook, K. A., Ma, T., & Zhao, Y. E. (2020). Do creditors influence corporate tax planning? Evidence from loan covenants. *Advances in Taxation*, 27, 1–42.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *The Accounting Review*, 70(2), 193–225.
- Deng, S., Li, Y., Lobo, G. J., & Shao, P. (2018). Loan sales and borrowers' accounting conservatism. *Contemporary Accounting Research*, 35(2), 1166–1194.
- Denis, D. J., & Sibilkov, V. (2010). Financial constraints, investment, and the value of cash holdings. *The Review of Financial Studies*, 23(1), 247–269.
- Denis, D. J., & Wang, J. (2014). Debt covenant renegotiations and creditor control rights. *Journal of Financial Economics*, 113(3), 348–367.
- Desai, M. A., & Dharmapala, D. (2009a). Corporate tax avoidance and firm value. *The Review of Economics and Statistics*, 91(3), 537–546.
- Desai, M. A., & Dharmapala, D. (2009b). Earnings management, corporate tax shelters, and book-tax alignment. *National Tax Journal*, 62(1), 169–186.
- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies*, 51(3), 393–414.
- Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-run corporate tax avoidance. *The Accounting Review*, 83(1), 61–82.
- Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2010). The effects of executives on corporate tax avoidance. *The Accounting Review*, 85(4), 1163–1189.
- Edwards, A., Schwab, C., & Shevlin, T. (2016). Financial constraints and cash tax savings. *The Accounting Review*, 91(3), 859–881.
- Fama, E. F. (1985). What's different about banks? *Journal of Monetary Economics*, 15(1), 29–39.
- Finley, A. R. (2019). The impact of large tax settlement favorability on firms' subsequent tax avoidance. *Review of Accounting Studies*, 24(1), 156–187.
- Fok, R. C., Chang, Y. C., & Lee, W. T. (2004). Bank relationships and their effects on firm performance around the Asian financial crisis: Evidence from Taiwan. *Financial Management*, 89–112.
- Gale, D., & Hellwig, M. (1985). Incentive-compatible debt contracts: The one-period problem. *The Review of Economic Studies*, 52(4), 647–663.
- Gallemore, J., Gipper, B., & Maydew, E. (2019). Banks as tax planning intermediaries. *Journal of Accounting Research*, 57(1), 169–209.
- Gande, A., & Saunders, A. (2012). Are banks still special when there is a secondary market for loans? *The Journal of Finance*, 67(5), 1649–1684.
- Goh, B. W., Lee, J., Lim, C. Y., & Shevlin, T. (2016). The effect of corporate tax avoidance on the cost of equity. *The Accounting Review*, 91(6), 1647–1670.
- Graham, J. R., Hanlon, M., Shevlin, T., & Shroff, N. (2014). Incentives for tax planning and avoidance: Evidence from the field. *The Accounting Review*, 89(3), 991–1023.
- Graham, J. R., & Tucker, A. L. (2006). Tax shelters and corporate debt policy. *Journal of Financial Economics*, 81(3), 563–594.
- Guenther, D. A., Wilson, R. J., & Wu, K. (2019). Tax uncertainty and incremental tax avoidance. *The Accounting Review*, 94(2), 229–247.
- Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of Accounting and Economics*, 50(2–3), 127–178.

- Hanlon, M., & Slemrod, J. (2009). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. *Journal of Public Economics*, 93(1–2), 126–141.
- Hart, O., & Moore, J. (1998). Default and renegotiation: A dynamic model of debt. *The Quarterly Journal of Economics*, 113(1), 1–41.
- Hasan, I., Hoi, C. K. S., Wu, Q., & Zhang, H. (2014). Beauty is in the eye of the beholder: The effect of corporate tax avoidance on the cost of bank loans. *Journal of Financial Economics*, 113(1), 109–130.
- Hoi, C. K., Wu, Q., & Zhang, H. (2013). Is corporate social responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. *The Accounting Review*, 88(6), 2025–2059.
- Hong, H. A., Lobo, G. J., & Ryou, J. W. (2019). Financial market development and firm investment in tax avoidance: Evidence from credit default swap market. *Journal of Banking & Finance*, 107, Article 105608.
- Hoopes, J. L., Mescall, D., & Pittman, J. A. (2012). Do IRS audits deter corporate tax avoidance? *The Accounting Review*, 87(5), 1603–1639.
- Huang, W., & Mazouz, K. (2018). Excess cash, trading continuity, and liquidity risk. *Journal of Corporate Finance*, 48, 275–291.
- Inis, A. A. (2018). Tax avoidance and cost of debt: The case for loan-specific risk mitigation and public debt financing. *Journal of Corporate Finance*, 49, 344–378.
- James, C. (1987). Some evidence on the uniqueness of bank loans. *Journal of Financial Economics*, 19(2), 217–235.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193–228.
- Kamstra, M. J., Roberts, G. S., & Shao, P. (2014). Does the secondary loan market reduce borrowing costs? *Review of Finance*, 18(3), 1139–1181.
- Kim, J. B., Li, Y., & Zhang, L. (2011). Corporate tax avoidance and stock price crash risk: Firm-level analysis. *Journal of Financial Economics*, 100(3), 639–662.
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163–197.
- Kubick, T. R., & Lockhart, G. B. (2017). Corporate tax aggressiveness and the maturity structure of debt. *Advances in Accounting*, 36, 50–57.
- Leland, H. E., & Pyle, D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. *The Journal of Finance*, 32(2), 371–387.
- Li, Y., Saunders, A., & Shao, P. (2015). The monitoring incentive of transactional and relationship lenders: Evidence from the syndicated loan market. *Journal of Money, Credit and Banking*, 47(4), 701–735.
- Lisowsky, P., Robinson, L., & Schmidt, A. (2013). Do publicly disclosed tax reserves tell us about privately disclosed tax shelter activity? *Journal of Accounting Research*, 51(3), 583–629.
- Mills, L. F., & Sansing, R. C. (2000). Strategic tax and financial reporting decisions: Theory and evidence. *Contemporary Accounting Research*, 17(1), 85–106.
- Moore, J. A. (2012). Empirical evidence on the impact of external monitoring on book-tax differences. *Advances in Accounting*, 28(2), 254–269.
- Moore, J. A., & Xu, L. (2018). Book-tax differences and costs of private debt. *Advances in Accounting*, 42, 70–82.
- Nini, G., Smith, D. C., & Sufi, A. (2012). Creditor control rights, corporate governance, and firm value. *The Review of Financial Studies*, 25(6), 1713–1761.
- Ohlson, J. A. (1980). Financial ratios and the probabilistic prediction of bankruptcy. *Journal of Accounting Research*, 109–131.
- Olsen, K. J., & Stekelberg, J. (2016). CEO narcissism and corporate tax sheltering. *The Journal of the American Taxation Association*, 38(1), 1–22.
- Omer, T. C., Bedard, J. C., & Falsetta, D. (2006). Auditor-provided tax services: The effects of a changing regulatory environment. *The Accounting Review*, 81(5), 1095–1117.
- Overesch, M., & Wamser, G. (2014). Bilateral internal debt financing and tax planning of multinational firms. *Review of Quantitative Finance and Accounting*, 42, 191–209.
- Park, C. (2000). Monitoring and structure of debt contracts. *The Journal of Finance*, 55(5), 2157–2195.
- Platikanova, P. (2017). Debt maturity and tax avoidance. *The European Accounting Review*, 26(1), 97–124.
- Rajan, R., & Winton, A. (1995). Covenants and collateral as incentives to monitor. *The Journal of Finance*, 50(4), 1113–1146.
- Ramakrishnan, R. T., & Thakor, A. V. (1984). Information reliability and a theory of financial intermediation. *The Review of Economic Studies*, 51(3), 415–432.
- Rego, S. O., & Wilson, R. (2012). Equity risk incentives and corporate tax aggressiveness. *Journal of Accounting Research*, 50(3), 775–810.
- Roberts, M. R., & Sufi, A. (2009). Renegotiation of financial contracts: Evidence from private credit agreements. *Journal of Financial Economics*, 93(2), 159–184.
- Robinson, J. R., Sikes, S. A., & Weaver, C. D. (2010). Performance measurement of corporate tax departments. *The Accounting Review*, 85(3), 1035–1064.
- Ross, D. G. (2010). The “dominant bank effect”: how high lender reputation affects the information content and terms of bank loans. *The Review of Financial Studies*, 23(7), 2730–2756.
- Shevlin, T., Urcan, O., & Vasvari, F. P. (2020). Corporate tax avoidance and debt costs. *The Journal of the American Taxation Association*, 42(2), 117–143.
- Staiger, D., Stock, J. H., & Watson, M. W. (1997). The NAIRU, unemployment and monetary policy. *Journal of Economic Perspectives*, 11(1), 33–49.
- Sufi, A. (2007). Information asymmetry and financing arrangements: Evidence from syndicated loans. *The Journal of Finance*, 62(2), 629–668.
- Triantis, G. G., & Daniels, R. J. (1995). The role of debt in interactive corporate governance. *California Law Review*, 83, 1073–1113.
- US Department of Justice. (2015, March 30). BSI SA of Lugano, Switzerland, is first Bank to reach resolution under Justice Department’s Swiss Bank program. *Justice News*. <https://www.justice.gov/opa/pr/bsi-sa-lugano-switzerland-first-bank-reach-resolution-under-justice-department-s-swiss-bank>.
- Wilson, R. J. (2009). An examination of corporate tax shelter participants. *The Accounting Review*, 84(3), 969–999.