Covenant-lite Deals, Non-Bank Deal Ownership and Financial Reporting Quality

ABSTRACT

We examine how covenant-lite ("covlite") deals – loan contracts that lack systematic financial covenant compliance requirements – and non-bank institutional syndicate participation affect issuer-level financial reporting quality. Examining publicly-traded U.S. issuers, we show that, given significantly reduced covenant compliance and information transfer mechanisms between lenders and borrowers, covlite issuers increasingly abandon financial reporting systems that prioritize timely loss recognition. Notably, we also show that covlite issuers prioritize the quality of non-GAAP-based voluntary earnings information that better aligns with their non-GAAP-based contractual provisions and non-bank creditors' investment screening criteria. Otherwise, we show that lack of financial covenant compliance does not, on its own, result in aggressive and problematic financial reporting and/or internal control issues during the post-issue-period. Importantly, however, we present robust evidence that financial reporting quality is strongly influenced by the creditor type participating in loan syndication and identify potential financial reporting issues when lack monitoring mechanism in covlite deals is accompanied with large non-bank institutional deal ownership.

Keywords: Covlite Deals, Financial Reporting Quality, Non-Bank Investors, Contract Design, Covenants, Non-GAAP

1. Introduction:

Covenant-lite ("covlite") deal structures have emerged as one of the most innovative and borrower-friendly contract design alternatives in the post global financial crisis (GFC) era, which now make up around 80% of all leveraged loans outstanding (see Figure 1, top graph). These deal structures have two important attributes that set them apart from the traditional compliance-rigid covheavy deal structures. First, covlite deals lack systematic financial/maintenance covenant compliance (e.g., quarterly) requirements which practically eliminates timely information exchange via covenant compliance channels (see Standards & Poor's, 2018, 2019; Moody's 2013, 2015). Second, these contract structures are the by-product of strong non-bank institutional investor (NBI) demand in private lending markets in the post GFC era – an investor group with the primary focus on yield maximization and not monitoring per se (e.g., Stein, 2013; Becker and Ivashina, 2015; Choi and Kronlund, 2018; Financial Times, 2018).

The topic have received strong interest among practitioners and regulators (e.g., Inter Agency Guidance (IAG), 2013; European Central Bank, 2018; Financial Times, 2018; Reuters, 2018; FED 2019) – citing potential systematic risks associated with these flexible lending structures. On the academic side of the discussion, the research so far has covered contract co-ordination incentives (e.g., Becker and Ivashina, 2016; Billet, Elkamhi, Popov and Pungaliya, 2016), monitoring control rights (e.g., Berlin, Nini and Yu, 2020) and risk-return trade-offs associated with covlite deals (Isin et al., 2020).

Yet, the evidence on covlite deals so far does not extend to cover how this new contract design structure affects financial reporting quality at issuer-level. This is an important research question given debt market contract design and creditor governance strongly influence financial reporting objectives/quality at issuer-level (e.g., Nikolaev, 2010; Ball, Bushman and Vasvari, 2009;

Bozanic, Loumioti and Vasvari, 2015) and that this new lending structure substantially disables traditional bank monitoring channels which facilitated timely information transfers through relationship-specific creditor governance and covenant compliance. The primary concern in our setting is that issuers may find it easier to pursue opportunistic financial reporting objectives under flexible covlite deal structures.

Examining syndicated loans from 2010 to 2018 for publicly traded U.S. borrowers, we first show that covlite issuers substantially reduce conservative financial reporting in the post-issue period when compared to covheavy issuers. These results indicate that the lack of systematic monitoring mechanisms within covlite deal structures has significantly curtailed borrower-level incentives to provide timely "negative" information regarding future company prospects. These results hold regardless if/when a given covlite deal is largely funded by NBIs relative to banking institutions or not.

Next, we show that lack of systematic financial maintenance compliance does not necessarily lead to subordinate financial reporting standards. Indeed, we find that covlite issuers have lower abnormal accruals, are no more likely to receive key-issue SEC comment letters and internal control weakness (ICW) statements when compared to covheavy issuers in the post-issue period. Notably, however, covlite issuers have larger discretionary accruals, are more likely to receive key-issue comment letters and ICW statements after the deal initiation when they have a substantial portion of NBI syndicate participation. We contend that as the amount of pre-funded non-bank portion of financing increases, covlite issuers with weaker bank monitoring systems in place seem to have stronger incentives and legroom for relatively aggressive and potentially opportunistic financial reporting policies.

Finally, we examine borrower-level voluntary non-GAAP earnings information quality that accounts for non-recurring (transitory) items that are unlikely to be relevant for investors' decision making (Black et al., 2018). This is an important analysis on a number of accounts. First, there is growing evidence that investors increasingly focus on non-GAAP financial information particularly in the post Regulation-G period (2003) after which filers are required to reconcile non-GAAP financial information with GAAP-based number (Black et al., 2018). Second, in debt markets context, Christensen, Pei, Pierce and Tan (2019) argues that non-GAAP reporting quality improves with the intensified creditor governance following covenant violations. Pertinent and unique to our setting, traditionally-prevalent creditor interventions are mostly minimized given the lack of systematic covenant compliance requirements. And third, it is not ex-ante obvious as to how the presence of large NBI funding in covlite deals, which are likely to have different financial reporting needs from issuers than otherwise traditional banking institutions, would shape non-GAAP financial reporting quality at issuer-level.

Examining quarterly observations we find no change in incentives to produce non-GAAP information production. Importantly, however, we find that non-GAAP earnings numbers provided in the post-issue-period are significantly more informative for covlite issuers when compared to covheavy issuers. Indeed, non-GAAP financial reporting quality particularly improves when covlite issuers have large portion of NBI investment in their deals. We argue that covlite issuers prioritize the quality of non-GAAP-based financial information for two fundamental reasons. First, we argue that non-GAAP-based earnings information set is likely to better align with highly-specialized contractual provisions that largely deviate from actual GAAP-based numbers (e.g., Dyreng et al., 2017).

Second, we further argue that non-GAAP-based earnings information has become market-standard and is prioritized over GAAP-based earnings measures (Black et al., 2018), and is a better fit for performance screening and investment decision making for CLOs and loan mutual funds. For example, these two investors that fund around 90% of the entire NBI funding (Figure 1, bottom graph), have substantial discretion in their investment choices and often utilise exit options during contract renegotiations (e.g., Demiroglu and James, 2010; Beyhagi et al., 2019). We contend that these investors' investment decisions may be more sensitive to the quality of non-GAAP-based earnings information when they screen hundreds of new issues coming to market every year. These results are robust to alternative sample and model construct aiming to address endogeneity problems within contract design and financial reporting research settings (e.g., Nikolaev, 2010; Larcker and Rusticus, 2010).

To summarize, our results advance our understanding as to how innovations in contract design and shifts in creditor profile shape financial reporting quality and objectives at issuer-level. First, we show that the need for conservative reporting – a financial reporting practice that has traditionally benefited banking institutions as creditors in compliance-rigid deals with maintenance financial covenants (e.g., Beatty, Weber and Yu, 2008; Zhang, 2008) – becomes increasingly less important, from both issuers' and lenders' point of view under the so called covlite deal structures. These results align with the evidence that conservative financial reporting systems are only fit-for-purpose when there are systematic covenant compliance mechanisms in place which enables efficient debt market monitoring incentives (e.g., Nikolaev, 2019).

Second, using both firm financial statements and third party indicators we find no red flags of inferior financial reporting quality in the post-covlite issue period. These results indicate that lack of financial maintenance compliance, or covenant/monitoring quality erosion as commonly

associated with covlite deals (see Standards & Poor's, 2007, 2018, 2019; Moody's 2013, 2015, 2017), does not necessarily result in subordinate financial reporting quality in the post-issue period on its own. Notably, however, we show that financial reporting quality is strongly influenced by the type of creditors participating in loan syndication and becomes particularly concerning for covlite issuers with large NBI commitments and weaker bank monitoring channels in place. We argue that the ability to secure cheaper financing with less onerous terms and the strong institutional interest in the asset class (see Isin et al., 2021) may enable issuers to find more legroom and incentives to pursue relatively aggressive financial reporting objectives. These results also demonstrate limitations as to bank monitoring effectiveness when the majority of the loan financing is provided by NBI who are primarily interested in return maximization rather than investor protection (e.g., Stein, 2013; Becker and Ivashina, 2016).

Finally, we argue that that covlite issuers prioritize dissemination of decision-useful voluntary non-GAAP-based earnings information that better aligns with their covenant provisions that increasingly deviate from actual GAAP-based numbers (e.g., Dyreng et al., 2017). We further argue that company-specific and standardized earnings information is more relevant for the two of the largest institutional investors in loan syndicates, CLOs and loan mutual funds, who target return maximization using active investment and portfolio rebalancing (including exit) strategies (see Demiroglu and James, 2010; Beyhagi et al., 2019; Guggenheim, 2019; Pinebridge, 2019; Morningstar, 2020). These results extends the analysis in Christensen et al. (2019) in showcasing the importance of non-GAAP-based performance information, primarily driven by equity markets financial reporting incentives (see Black et al., 2018 for literature review), into debt markets setting.

2. Institutional Background and Hypothesis Development

Understanding Covlite Deal Structures

Contracts are designed around the understanding that it is impossible to anticipate and incorporate all possible contingencies that may occur over the contract's tenure. This incomplete nature of *ex-ante* contract design then necessitates mechanisms that will strengthen timely information acquisition to enable necessary updates on the initial contract based on the new information (Rajan and Winton, 1995). Under the traditional bank-centred transactions, the primary mechanism that ensures timely information acquisition has been the maintenance-based covenant provisions that required systematic covenant compliance.

The post-GFC-period era witnessed these compliance-heavy deal structures with strong investor protection mechanisms in place being increasingly replaced by covlite deal structures with ultra-flexible covenant compliance structures and weak creditor protection provisions. There are two mutually existing factors behind this major switch in contract design in leveraged loan markets. First, as part of the post-crisis era regulatory requirements, traditional banks had to concentrate on risk-based capital adjustments which was particularly high for relatively riskier borrowers in the leveraged loan markets. As a result these banks abandoned serving some high-risk-end borrowers (e.g., Acharya et al., 2018) which are then replaced by NBIs (e.g., Becker and Ivashina, 2016). Second, ultra-low interest rate monetary policies in the post-GFC-era accelerated the interest of NBIs such as hedge funds, pension funds, mutual funds, collateralized loan obligations (CLOs), private equity firms, and insurance companies in private lending markets primarily in the pursuit of yield (e.g., Becker and Ivashina, 2016; Acharya et al., 2018).

There is no clear guideline as to what covlite deal structures are and how they differ from traditional debt contracts. In general, unlike the traditional debt contracts (covheavy), covlite

structures do not include maintenance covenant obligations that are enforceable by the Term B (or lower) tranche holders (Moody's 2015). [1] For example, under the traditional covheavy structure if a covenant provision states EBITDA-to-Interest expense ratio of 4.0, the company is expected to meet this provisional requirement usually per quarter. If not, lenders have the option to accelerate the payment proceedings and initiate lender control protocols if such technical default is not cure, waived and/or renegotiated. Instead, under covlite deal structures, this (EBITDA-to-Interest expense ratio of 4.0) covenant clause becomes binding on an incurrence-basis, rather than maintenance-basis, only if the issuer aims to undertake a pre-specified action such as issuing additional debt and/or undertaking a new investment opportunity.

Conservative Financial Reporting

The contractibility and the quality of firm-specific financial information are key elements for efficient debt contract design. The past research shows that the decision usefulness of accounting information helps alleviate *ex-ante* issues concerning information asymmetries between creditors and borrowers. For example, better financial reporting quality is associated with better primary and secondary market deal pricing (Beatty, Weber and Yu, 2008), more flexible covenant terms (e.g., Bharath, Sunder and Sunder, 2008; Minnis, 2011) larger interest (thus liquidity) of disperse group of lenders (e.g., Ball, Bushman and Vasvari, 2008). On the other hand, if one considers debt market contract as a continuum of contractual interaction - in line with the incomplete contract theory (e.g., Aghion and Bolton, 1992; Aghion, Dewatripont and Rey, 1994) - an important portion of the contract-design updates and information exchange takes part *ex-post* after the deal

[1] Note that a typical credit agreement may include multiple tranches. While revolver tranches ("bank-lines") are mostly funded by traditional banks, Term B or lower tranches, 80% of which are now issued as covlite deals, are predominantly funded by non-banks.

announcement takes place via monitoring mechanisms and contract renegotiations (e.g., Roberts and Sufi, 2009; Nikolaev, 2018).

Under the traditional bank-centred covheavy deal structures, this continuous information exchange was facilitated via stronger monitoring mechanisms in place which requires systematic (financial) covenant compliance and commitment for further contract renegotiation if/when necessary (e.g., Demerjian, 2012; Nikolaev, 2018). This systematic monitoring exercise necessitated conservative financial reporting systems that provide reliable and timely accounting information to help capture credit quality deterioration. For example, Nikolaev (2010) argues that effective monitoring can be achieved only if the accounting systems help capture negative earnings information in a timely fashion. The past evidence shows that under the traditional bank-centred lending systems, lenders put particular value on conservative financial reporting which puts stronger weight on timely loss recognition (e.g., Ball, Bushman and Vasvari, 2008; Beatty, Weber and Yu, 2008; Wittenberg-Moerman, 2008; Zhang, 2008) given that they face asymmetric pay-off structures with limited upside potential and significant downside exposure (e.g., Easton, Monahan and Vasvari, 2009).

Indeed, research shows that conservative financial reporting is desirable and effective only when there are systematic covenant compliance mechanisms that allow for efficient debt market monitoring (Nikolaev, 2010). Covlite deals, on the other hand, practically disables effective monitoring channels that are otherwise present in traditional compliance-rigid covheavy deals as we knew in the pre-2008 period. We conjecture that, the need for conservative reporting becomes increasingly less important, from both issuers' and lenders' point of view under the so called covlite deal structures. Moreover, leveraged loans also attract a significant investment demand from non-bank institutional investors with primary interest in yield generation and not monitoring

and/or investor protection per se. Indeed, given that NBIs finance large number of (200+) loans (Loumioti and Vasvari, 2018) per fund, they are more likely to rely on diversification and re-securitization benefits – in which case they are less likely to prioritize conservative financial reporting per deal funding. We argue that;

H1: Covlite issuers, in particular issuers with large levels of NBI financing, are less likely to maintain/adopt conservative financial reporting in the post-issue-period when compared to covheavy issuers.

Earnings Management and External Measures of Financial Reporting Quality

Past research documents earnings management incentives to avoid covenant non-compliance particularly when covenant provisions are tightly structured (little covenant slack) and/or firms are close to covenant violation (e.g., Graham, Harvey and Rajgopal, 2005; Franz et al., 2013; Kim, Lei and Pevzner, 2010). In line with this evidence, it is possible to observe that with the elimination of systematic covenant compliance, issuers will have smaller incentives to pursue earnings management targeting covenant compliance. To the contrary, however, elimination of systematic covenant compliance may also weaken lender governance and create opportunistic settings where issuers more aggressively target discretionary financial targets. The addition of large NBI funding to the setting may either exacerbate or mitigate two competing arguments laid out above depending on the issuer-specific incentives to take advantage of flexible funding flow and/or to form relationship-specific lending.

Next, extending our FRQ measures to cover external proxies that validates issuer-level financial reporting standards by third party stakeholders including auditors and regulators. In doing so, we examine post-issue-period key-issue SEC comment letters and auditors' ICW statements – raising financial reporting and internal governance concerns, respectively. Past research shows that ICWs

are associated with spread/(risk) premiums in both debt and equity markets, less reliance on accounting-based financial information at initial contract design and stricter borrower governance in the post creditor intervention period (e.g., Beneish, Billings and Hodder, 2008; Costello and Wittenberg-Moerman, 2010; Dhaliwal, Hogan, Trezevant and Wilkins, 2011; Kim, Song and Zhang, 2011). We argue that if issuers adopt inferior FRQ in the post covlite period we are more likely to observe some external party confirmation of deterioration in FRQ where we observe larger frequencies of ICW red flags and SEC issue letters on financial disclosure.

Knowing that monitoring incentives and systems (i.e. covenant compliance) are designed (ex-ante) to account for issuer-specific factors including financial reporting quality (see Armstrong, Guay and Weber, 2010; Shivakumar, 2013), one line of thinking expects covheavy issuers with stronger monitoring compliance mechanisms in place to preserve higher financial reporting standards in the post issue period compared to covlite issuers. On the other hand, we argue that issuers, regardless of their contract structure and investor profile, would face substantial debt and equity market costs associated with financial misreporting and potential weaknesses in internal control mechanisms. That is, another line of thinking argues that covlite issuers would benefit to maintain good quality financial reporting standards in the post-issue-period. Accordingly, we take a neutral stance in our hypotheses for both covlite issuers and covlite issuers.

H2: Covlite issuers, regardless of the level of NBI loan funding, are *no* more likely to adopt aggressive earnings management policies and/or receive external-validation of financial reporting and internal control issues in the post-issue period when compared to covheavy issuers.

Non-GAAP Earnings Information Quality

Finally, we explore non-GAAP-based voluntary earnings information dissemination to further explore as to how financial reporting quality is shaped in the post-covlite-issue period. There are

two plausibly competing arguments as to the frequency and the quality of forward-looking non-GAAP earnings information production in our setting. On one hand, Christensen et al. (2019) document that non-GAAP earnings quality substantially increase after creditor intervention as a result of covenant violations. Given that covlite deals have completely eliminated creditor intervention following covenant non-compliance, these deals do not benefit from the traditionally-anticipated creditor governance/monitoring as compliance-rigid traditional deals did in previous work in debt contract design. As a result and in line with the arguments made in Christensen et al. (2019), the elimination of monitoring mechanisms may result in excessive reliance on opportunistic non-GAAP earnings disclosure in the post covlite issue period.

On the other hand, covlite issuers may also strive to provide as most "decision-useful" voluntary financial information as possible for two important reasons. First, unlike the traditional banking institutions, NBIs in private lending markets are more likely to demand reliable, relevant and decision-useful information on company prospects. Pertinent to our research question, around 90% of this institutional funding in private loans have been from Loan Mutual Funds and CLOs, which, as an investor type in private lending markets, have actively-managed information-sensitive investment and trading decisions in both primary and secondary loan markets (see Guggenheim, 2019; Pinebridge, 2019; Morningstar, 2020). This active management of pool of loan investments necessitate substantially more standardized and high-quality earnings information that will help these investors make relatively easier assessment and comparison of different loan agreements in their lending decisions (see Bozanic et al., 2018).

Second, so long as the "originate-to-sell" business model in the post-GFC period preserved, where banks only commit to the revolving portion of the credits (and sell Term B portions), NBIs will continue to be the most important creditor in leveraged lending markets. As NBIs dominate

private lending markets, we conjecture that financial reporting objectives will be shaped to better reflect the needs of NBIs in the post-issue period, particularly for covlite issuers with larger NBIs ownership interests. In line with our discussion, our remaining hypotheses are as follows;

H3: Covlite issuers, in particular issuers with large levels of NBI financing, are more likely to provide voluntary non-GAAP earnings information in the post-issue period.

H4: Covlite issuers, in particular issuers with large levels of NBI financing, are more likely to provide high-quality non-GAAP earnings information in the post-issue-period when compared covlite and covheavy issuers with smaller portion of NBI investments.

3. Data Selection and Methodology

Sample Construction

We use a number of different databases in our analysis. The data for primary market syndicated loans are obtained from Refinitiv's LoanConnector (LC) and S&P's Leverage and Commentary Data (LCD) databases. We start with all syndicated deals made to publicly traded non-financial U.S. firms from 2010 to 2018. We eliminate data for the pre-2010 period in order to eliminate the impact of the GFC and capture the period during which covlite issuance has gained its current pace. Our data is limited to non-investment grade issuers given that this group of relatively risky issuers dominate leveraged lending markets. Otherwise, investment-grade issuers prefer to tap into public debt markets which provide similar covenant flexibilities for substantially larger issue amounts and longer maturities.

We then string match the data in Refinitiv's LC to Chava and Robert (2008) link tables based on deal name, date, size.[2] This forms our "Compustat-linked" loan data. Next, we match LCD database to this "Compustat-linked" loan data based on firm, date, size and price information.

[2] Even though both LoanConnector and Dealscan provided by Refinitiv, unfortunately the two dataset, and hence Chava and Robert (2008) link tables, cannot be matched using a common identifier.

Next, we manually check every single matched line of observations to ensure that the matching procedure is accurate and eliminate errors given that there are no common identifiers between LC and LCD databases. Finally, we match our loan sample to Compustat to obtain financial information, to IBES database to obtain Analyst's EPS forecast information, and to CRSP database to obtain stock price information. This matching procedure results in up to 4510 firm-deal-year data. For the non-GAAP earnings analysis, we obtain data for non-GAAP EPS estimates from Kurt Gee's website. This data is than matched to our main sample which results in up to 2860 firm-deal-year-quarter data. In the non-GAAP analysis we use quarterly firm-level information given that the non-GAAP EPS estimates are provided quarterly. The sample size differs in each analysis when we use alternative sample and model specifications for different settings.

Research Methodology

We adopt our baseline model from Nikolaev (2010) where we examine pre/post issue period financial reporting quality and incentives for both covlite and covheavy issues. We believe this model presents a number of advantages. First, the setting where we examine pre and post-issue periods allows us to capture "changes", if any, in firm-level financial reporting objectives for both covlite and covheavy issuers. We argue that this model present a cleaner setting to establish a directional link between the two contract alternatives and financial reporting incentives. Second, given that our dataset is mostly comprised of firms that issued both types of contracts, our analysis is less subject to investors' self-selection into certain types of firm and/or deal types. Altogether, our model is more robust to self-selection and simultaneity issues that are extremely challenging to disentangle within contract design and accounting literature. Specifically, we use this the pre/post-issue period analysis model in each of our models presented below.

$$FRQ_{i,t} = COV_{i,t} + POST_{i,t} + POST \times COV_{i,t} + CONTROLS_{i,t} + IND_i + YEAR_i + RATE_{i,t} \quad (1)$$

In the above model, FRQ accounts for different measures of financial reporting quality starting from time (t-3) to time (t+3) and cover 7 year period (3 years pre/post) around deal announcement year.[3] Specifically, we use *CSCORE* and *TLR* coefficient estimates in place of *FRQ* to control for firm-level accounting conservatism derived from Khan and Watts (2009) and Basu (1997) models, respectively. We use *ACCR1* and *ACCR2* measures in place of *FRQ* to control for *abnormal* accruals estimated using Dechow and Dichev (2002) and McNichols (2002) models, respectively. We use *REM* in place of FRQ to control for real earnings management. We estimate all three elements of *REM* (abnormal cash flows, abnormal production and abnormal discretionary expenses) as in Roychowdhury (2006) and form a combination variable that represent cumulative real-based earnings management as in (Badertscher, 2011). We use *SECCL* variable in place of FRQ to control for the probability of a given firm receiving key-issue *SEC* comment letter. *SECCL* is one if a given firm has received at least one comment letter from the SEC in the post-issue period and zero otherwise. We use *PICW*, a dummy variable that indicates at least one ICW statement, in place of *FRQ* to control for the probability of a given firm receiving auditors' ICW statements.

COV is a dummy indicator one if a given loan issue is covlite and zero otherwise. *POST* controls for pre/post issue period firm-year observations and is one/(zero) for the post-issue period/(pre-issue period) firm-year observations. In our baseline models we use three years before and after issue announcement firm-year observations.[4] *POST*×*COV* controls for firm-year observations for the post covlite issue period. *IND* controls for industry fixed effects using 2-digit SIC codes, *YEAR* controls for year fixed effects and *RATE* is rating fixed effects (per firm-year) controlling for credit quality. Note that we augment the above model to incorporate additional robustness tests. All the

[3] We report results using the deal announcement year excluded from the analysis. Our results are robust to including the deal announcement year in the analysis.
[4] In un-tabulated analysis we also use two years before and after issue announcement firm-year observations. Our results are robust to this alternative time frame examined.

control variables are presented in Appendix B. The model above examines pre/post issue period financial reporting quality using annual data. In the model below, we extend the analysis to quarterly data from 2010 to 2017 and examine pre/post issue period changes in likelihood of providing non-GAAP earnings information. Our data ends in Q4 - 2017 given that the non-GAAP financial information ends in 2017.

$$PNGAAP_{i,t} = COV_{i,t} + POST_{i,t} + POST \times COV_{i,t} + CONTROLS_{i,t} + IND_i + YEAR_i + RATE_{i,t} \quad (2)$$

In the above probit model, *P*NGAAP measures the probability of a given firm reporting non-GAAP earnings information. All the variables are as defined in Eq. (1) and in Appendix B. Given that the data is quarterly, we also control for firm-quarter fixed effects (Q_i). Next, in Eq. (3) below, we examine post issue period quality of non-GAAP earnings information.

$$\begin{aligned} FGAAP_{t+1} = {} & POST_{i,t} + NGEPS_{i,t} + NGEPS \times POST_{i,t} + NGDIFF_{i,t} + NGDIFF \times POST_{i,t} \\ & + COV_{i,t} + POST \times COV_{i,t} + COV \times NGEPS_{i,t} + COV \times NGDIFF_{i,t} \\ & + COV \times NGDIFF \times POST_{i,t} + CONTROLS_{i,t} + IND_i + YEAR_i + RATE_{i,t} + Q_i \quad (3) \end{aligned}$$

In the above model, *NGEPS* is the pre-issue-period non-GAAP EPS information and *NGEPS*×*POST* controls for post-issue-period non-GAAP EPS information. As in Eq. (1), the post period compares the observations in the three-year-period after the deal announcement year to the observations in the three-year-period before the deal announcement year. In this setting, we are particularly interested in measuring the quality of non-GAAP EPS exclusions which include items that are deemed as transitory/non-recurring in nature and hence do not entail decision-useful information for valuation purposes as in Christensen et al. (2019). In line with this setting, *NGDIFF* controls for the non-GAAP EPS exclusions and is the difference between non-GAAP-based voluntary EPS (NGEPS) and GAAP-based EPS (measure per firm-quarter. In our model, *NGDIFF* measures the quality of non-GAAP earnings exclusions in the pre-issue

period. *NGDIFF×POST* controls for the quality of non-GAAP earnings exclusions in the post-issue period. We discuss interpretation of these variables in Section 4.3.2 below.

4. Results

Summary Statistics

Table 1 provides summary statistics on our financial reporting quality measures (Panel A) and on our test and control variables (Panel B). Despite using a sample of firms limited to publicly traded firms with private debt market loans outstanding, our conservatism and earnings management measures are very similar to those observed in the literature (e.g., Khan and Watts, 2009; Badertscher, 2011; Black, Christensen, Joo and Schmardebeck, 2017). About 15% (COV) of firms in our sample have issued covlite deals from 2010 to 2018 period. The average financial leverage utilized (LVRG) is 27% of total assets. Firms tend to miss analysts EPS consensus (FDEV) around 65% of the time and an average firm is followed by two analyst (NAF) in a given year.

An average loan market institutional ownership, limited to the sample of Refinitiv data we were able to match LCD-only sub-sample, is 55%. Figure 2 shows average institutional investment in covlite vs. covheavy deals over time. The amount of institutional ownership is substantially larger for covlite issuers, in all years examined, than covheavy issuers. Moreover, the overall variation in institutional ownership in covlite deals (6%) is substantially smaller than what we observe for covheavy issuers (11%). On the other hand we observe no material differences in equity market institutional ownership and the average number of analysts following for covlite vs. covheavy firms.

Examining Post-Issue-Period Financial Reporting Quality

Table 2 starts our analysis examining conservative reporting incentives in the post-covlite issue period using our baseline model (Eq. 1). Each regression model controls for industry, year and rating fixed effects and cluster standard errors across firms. In column order, we use *CSCORE* and *TLR* as measures of conservatism obtained using coefficient estimates Khan and Watts (2009) and Basu (1997) models, respectively. *ACCR1* and *ACCR2* as measures of abnormal accruals estimated using Dechow and Dichev (2002) and McNichols (2002) models, respectively and *REM* to measure real-based EM as in Roychowdhury (2006). The final two columns, *SECCL* and *ICW*, examines the probability of receiving post-issue-period key-issue SEC comment letters and internal control weakness statements. The coefficients for *POST×COV* in the first two columns indicate that conservative reporting incentives significantly drop in the post covlite issue period. The coefficients for *POST×COV* in column 3 and 4 also indicate that accruals-based EM incentives significantly drop in the post issue period for covlite vs. covheavy issuers. On the other hand we observe no changes in real-based earnings management incentives neither for covlite nor for covheavy issuers. The final two columns show that covlite issuers are no more likely, than covheavy issuers, to receive either key-issue comment letters and/or internal control weakness reports indicating lower financial reporting quality in the post-issue-period.

First-time Covlite Issuers Analysis

In this section we limit the sample to firms with at most one covlite and covheavy issue outstanding and analyse FRQ in the post issue period for first time covlite issuers. This analysis is intuitive on a number of accounts. First, as covlite deal structures increasingly dominated leveraged lending markets over time, our analysis may be confounded by timer-variant unobservable factors that may shape firm-level financial reporting alongside the contract-driven

incentives. Therefore, if firms genuinely do alter their financial reporting objectives due to contractual differences between covlite vs. covheavy deals, and not due to other time-variant unobservable factors per se, we would expect to observe these changes to take place after a given firm initiates its' first covlite issue. Moreover, given that our sample is limited to the same group of firms that have issued both type of deals at most once, our data construct helps mitigate concerns over investor-level self-selection into different group of issuers.

Table 3 presents our results. The analysis is limited to firms with at most one covlite issue during our sample period examined. The coefficient of interest is *POST*×*FCOV*. The coefficients for *POST*×*FCOV* is negative and statistically significant in the first four columns indicating that after the initiation of first covlite deals, the need for conservative reporting and earnings management plausibly targeting covenant compliance significantly drops. As in Table 2, covlite issuers are no more likely to receive SEC comment letters regarding key reporting issues and/or internal control statements from their auditors.

Entropy Balanced Data and Firm Fixed Effects

Table 4 and 5 present results using Entropy Balanced sub-sample and analysis using firm FEs. Entropy balancing (Hainmueller, 2012) technique has received significant popularity as a superior alternative to propensity score matching techniques in identification of treatment and control samples for casual inference. Indeed, McMullin and Schonberger (2020) show that EB setting significantly improves accrual model specification by reducing coefficient bias relative to linear and propensity-score matched models. Essentially, EB is a procedure that allocates appropriate weights to observable covariates across treatment and control samples. The balancing proceeds from the EB procedure is provided in Appendix A. With the exception of variation observed in *ACCR1* measure, the results using these balanced/matched sample of observations confirm our

earlier observations. These results indicate that our analysis is robust to settings that control for self-selection that are likely to confound our interpretations. Similarly, except for the *REM* measure, our results and interpretations are robust to controlling for firm-specific unobservable variable omission.

Loan-level Institutional Ownership

In this section we examine how loan-level institutional ownership affects *FRQ* in the post-issue-period. Because NBI ownership is common in leveraged lending markets, regardless of whether a given deal is structured as covlite or covheavy, our analysis will also examine the implications of having large NBI in general and cross-sectionally at covlite vs. covheavy settings. Given that NBI ownership is only available for the LCD sub-sample, we limit the analysis to the sub-set of data that we were able to match using LoanConnector and LCD databases. For our particular setting, it is imperative to have the actual NBI syndicate ownership rather than merely counting the number of NBI in a given syndicate given that the amount of total NBI ownership may still be small despite the large number of different NBI partaking. Variable of interests are presented in bold for ease of following. *POST*×*COV* controls for covlite issues, *LIOWN*×*POST* controls for issues with high NBI ownership and *LIOWN*×*COV*×*POST* controls for covlite issues with high NBI ownership in the post-issue-period.

The coefficients for *POST*×*COV* are in line with our observations so far confirming reduced conservative financial reporting needs and accruals management targeting covenant non-compliance in the post-issue-period for covlite issuers. Again, these issuers are no more likely receive key-issue letters regarding financial reporting and/or internal control issues after contract initiation. On the contrary, however, we observe a significant deterioration in financial reporting standards in the three years following issue period for covlite issuers with large NBI syndicate

participation. Equally important, we find no such impact of non-bank investment on financial reporting standards for covheavy issuers with large NBI loan ownership (*LIOWN×POST*). This is an important and an interesting observation indicating that covlite issuers with large non-bank syndicate ownership structures seem to lean towards relatively more aggressive financial reporting in the years following deal initiation.

The Probability of Providing Non-GAAP EPS

In this section we examine issuers' propensity to provide voluntary non-GAAP earnings disclosure in the three years following deal initiation using Eq (2). The analysis includes all firms with or without non-GAAP earnings information disclosed. Table 7 presents our results. In column one, we use the baseline (BASELINE) model and examine the likelihood of providing non-GAAP earnings information in the post-issue-period for both covlite and covheavy issues. In column 2, examine non-GAAP EPS disclosure incentives after the initiation of first covlite deals (FCOV) as well as subsequent covlite issues (CCOV). The idea of this analysis is that it allows us to observe a change (if any) in incentives to provide non-GAAP earnings information just after the initiation of first covlite issue and as firms issue more such deals over time. In column 3 we control for firm FEs to mitigate variable omission concerns and in column 4 we control for loan-level non-bank syndicate ownership. The analysis in the final column is limited to the data matched using LoanConnector and LCD databases to use NBI deal ownership portions.

Excluding the analysis that controls for firm FE, the coefficients for POST variable shows that covheavy issuers reduce non-GAAP earnings information during the period after deal initiation. On the other hand, controlling for firm FE, which mitigates variable omission concerns show no relation between non-GAAP-based earnings information production and loan markets contract design. Given that there can be a number of mutually existing factors driving non-GAAP EPS

production – some are challenging to test in our pre-post design setting (and some outside the scope of our work) – we stick to the most stringent model using firm FE. Accordingly, we argue that firms are equally likely to issue non-GAAP earnings information regardless of whether they issue covlite or covheavy deals and that the propensity to provide voluntary non-GAAP information does not necessarily emanate from debt contracts.

Non-GAAP-based Earnings Information Quality

Next, in Table 8 we start testing non-GAAP earnings information quality using Eq. (3). The analysis is limited to firms that provide non-GAAP earnings information and exclude those that do not. All the important test variables are presented in bold for ease of following. Following the past research and in particular Christensen et al., (2019) as it most closely relates to our study, the general interpretation of these coefficients are as follows. If a given *NGDIFF* coefficient (including its extended interactions) has any (positive/negative) relation to the future (1-year ahead) GAAP-based earnings, this means that managers exclude repetitive and potentially informative items from non-GAAP earnings estimations. This, reflects poor quality non-GAAP-based earnings information production. Moreover, as in Christensen et al. (2019), if the sign of the *NGDIFF*×*POST* measure (including its extended interactions), which controls for post-issue-period observations, reverses the (statistically significant) sign of coefficients for the *NGDIFF* (including its extended interactions), which controls for pre-issue-period observations, we interpret these observations as improved non-GAAP earnings quality.

First, we start with our baseline (BASELINE) and firm FE (FFE) analyses. *NGDIFF* and *NGDIFF*×*POST* pair controls for the quality of non-GAAP EPS exclusions for covheavy issuers before and after deal initiation. *COV*×*NGDIFF* and *COV*×*NGDIFF*×*POST* pair controls for the quality of non-GAAP EPS exclusions for covlite issuers before and after deal initiation. The

coefficient pair (*NGDIFF* and *NGDIFF×POST*) for covheavy issuers for both analysis indicate lower quality non-GAAP earnings information following deal initiation. The negative coefficients for *NGDIFF×POST* suggest that these issuers have the tendency to exclude "meaningful negatively-informative" earnings information from non-GAAP EPS numbers. On the other hand the coefficient pair (*COV×NGDIFF* and *COV×NGDIFF×POST*) for covlite issues have (statistically significant) opposite sign coefficients which cancels one another. The positive coefficients for the *COV×NGDIFF×POST* variable indicate that, firms eliminate the tendency to exclude "meaningful negatively-informative" earnings information (negative coefficients for COV×NGDIFF) from non-GAAP EPS numbers in the three years following covlite deal initiation.

In the next column we examine how non-GAAP earnings information quality changes after first covlite deal initiation (*FCOV×NGDIFF×POST*) and whether the informativeness of non-GAAP earnings information changes as firms tap into subsequent covlite issues (*CCOV×NGDIFF×POST*) over time. The coefficients for both *FCOV×NGDIFF×POST* and *CCOV×NGDIFF×POST* indicate that firms eliminate the tendency to exclude "meaningful negatively-informative" earnings information from non-GAAP EPS numbers in the post-issue-period. Indeed, we continue to observe increasingly more information non-GAAP earnings information as firms tap into subsequent covlite issues (*CCOV×NGDIFF×POST*) over time. The coefficient pair for covheavy issuers (*NGDIFF* and *NGDIFF×POST*) remain consistent with the observations in the previous two columns – indicating less-informative and potentially opportunistic non-GAAP earnings information for these group of issuers.

The final two columns examine a subset of firms who, previous to the start of our data period, had creditor intervention due to covenant non-compliance. The idea behind this analysis is to establish a sample setting that have improved non-GAAP earnings information quality due to

creditor intervention per argued in Christensen et al. (2019).[5] This creates a stricter setting allowing us to test if our results are limited to a sub-sample of firms that have recently been under intensified creditor intervention and governance. Accordingly, the column VIOL represents a group of issuers with previous creditor intervention due to covenant (technical) default and the column NOVIOL is the control group of firms that does not. The results show that both firms with previous covenant-violations and the non-violated group improve non-GAAP-based earnings information over the next three years following the covlite-issue-period.

Altogether, the analysis in Table 8 indicates that covheavy issuers lean towards more opportunistic non-GAAP-based earnings information where we observe frequent exclusion of negatively-informative earnings components from non-GAAP estimations. On the contrary, across different model and sample settings we find that covlite issuers significantly improve their non-GAAP earnings information in the post covlite issue period. In the next section we further test the robustness of these observations.

Non-GAAP-based Earnings Information Quality – Loan-level Institutional Ownership

In this section we control for loan-level institutional ownership to better understand whether and if so how non-bank institutional syndicate ownership affect non-GAAP-based earnings information quality. The model in this analysis runs up to include four-way interactions to control for post-issue-period non-GAAP reporting variables for both covlite and covheavy issuers with large (and small) NBI syndicate ownership. As a result, Table 9 displays only the variables of interest and avoid presenting all the other interaction and control variables to allow readers follow and interpret results with ease. Because the analysis in this section requires NBI syndicate ownership data, it is limited to a sub-sample that matches LoanConnector to LCD database. The

[5] We thank Ted Christensen for kindly making this data available to us.

setting is divided into three sections where we first examine baseline analysis (BASELINE), next we control first-time covlite issues (FIRST) and finally analysis where we control for firm FEs (FFE).

The first pair of variables we are interested in are *NGDIFF* and *NGDIFF×POST*, which examines pre and post-issue-period non-GAAP earnings information quality for covheavy issuers as in Table 8. The coefficient pair is in line with our observations in Table 8 – confirming opportunistic non-GAAP earnings information in the post-issue-period for covlite borrowers. The next pair of coefficients of interest are *LIOWN×NGDIFF* and *LIOWN×NGDIFF×POST*, which control for pre and post-issue-period non-GAAP earnings information quality for covheavy issuers with large NBI ownership. The results show that covheavy issuers with large NBI have higher non-GAAP earnings quality in both pre and post issue periods. These results indicate that both NBI syndicate ownership and credit monitoring via financial covenant compliance help align issuers non-GAAP earnings informativeness with creditors' financial reporting needs.

The third coefficient pair examines pre (*COV×NGDIFF*) and post-issue-period (*COV×NGDIFF×POST*) non-GAAP earnings information quality for covlite issuers. The results in column 1 (BASELINE) and column 3 (FFE) confirms our observations in Table 8 that the informativeness of non-GAAP-based earnings information significantly increases for covlite issuers following deal initiation. The coefficients *FCOV×NGDIFF* and *FCOV×NGDIFF×POST* in column 2 (FIRST) confirms our observations using pre/post first-time covlite issue analysis.

Finally, the fourth coefficient pair examines pre (*COV×LIOWN×NGDIFF*) and post-issue-period (*COV×LIOWN×NGDIFF×POST*) non-GAAP earnings information quality for covlite issuers with large non-bank institutional syndicate ownership. Our analysis indicates that, institutional deal ownership further improves the informativeness of non-GAAP-based earnings

information. Specifically, our results shows that covlite issuers have the tendency to abandon negatively-informative (and plausibly opportunistic) earnings exclusions from non-GAAP EPS estimates. The coefficients in column 2 (FIRST) using first-time-issue analysis confirms these observations. In the next section we run our final set of robustness analyses on non-GAAP earnings information quality.

Testing the Effects of Debt Market Pressures on Non-GAAP Earnings Information Quality

In this final section we further extend our analysis to test to see whether our observations on loan-level institutional ownership still hold when we control for other factors that may be simultaneously driving non-GAAP-based earnings information quality. Table 11 presents our results. As in Table 9, we only present the variables of particular focus and avoid presenting all the necessary interaction variables alongside the control variables in Eq. (3). In each regression model we control for industry, year and credit rating fixed effects. The first column incorporates issuers with simultaneous bonds outstanding (BOND), to control for having access to public bond market issuers including bond mutual funds, pension funds, insurance companies as alternative set of investor group that may be driving our observations. Column 2 (HDMP) and 3 (LDMP) control for high and low debt market pressures. We form the sub-sample of high debt market pressure (HDMP) firms as those with higher than sample-mean financial leverage (27%) and low-tier (below B+ rating) non-investment-grade (NIG) credit ratings. These firms are more likely to face creditor scrutiny, both for their ongoing contractual agreements and during contract renewals/extensions as the old debt is expected to be rolled over. The control group here is formed of firms that face lower debt market related pressures (LDMP) with lower financial leverage and higher credit rating profile.

Our results show that non-GAAP earnings numbers are more likely to reflect transitory rather than recurring items and thus are more informative to outside investors when covlite issuers have larger non-bank syndicate ownership and access to larger set of institutional public debt market investors via bond market participation. Moreover, we observe higher quality non-GAAP EPS numbers when issuer have significantly pressing debt market related financing constraints as reflected in HDMP. Collectively, both public market institutional investor presence and debt market financing pressures help shape non-GAAP-specific earnings adjustment quality alongside with non-bank institutional investor syndicate participation for covlite issuers following deal initiation.

Based on the analyses from Table 8 to Table 10, the important question is why do we observe a deterioration in non-GAAP information quality in the post deal period for covheavy issuers? First, for this group of bank-dependent firms with compliance-rigid contracts conservative financial reporting still remains as the primary financial reporting incentive. On the other hand, given that there is no direct empirical and/or theoretical evidence as to why forward-looking non-GAAP information is of lower quality for more conservative firms, we refrain from generalization and making references as to potential relation between conservative financial reporting and non-GAAP earnings quality that may be present outside of the debt markets setting.

Nonetheless, our results are also in line with Heflin, Hsu and Jin (2014) who argue that analysts adjust their own "street" earnings estimates to a larger extent when compared to GAAP earnings for conditionally conservative firms. That is, there is some evidence documenting a negative link between conservative financial reporting and "street" earnings relevance.[6] Second, our results are

[6] It is important to note that the "street" earnings measured in Heflin et al. (2015) use analysts' estimates of earnings as proxy for non-GAAP earnings. Such proxy analysis does come with shortcomings when compared to actual non-GAAP earnings information extracted from 8-K statements (see, Bradshaw et al. (2018)).

also in line with Christensen et al. (2019) which document deterioration in non-GAAP information quality in the pre-creditor-intervention period following covenant violations within covheavy deal setting. We conjecture that our results are likely to capture this pre-creditor intervention period deterioration in non-GAAP reporting quality.

5. Concluding Remarks

In this paper we examine how innovations in contract design and shifts in creditor profiles shape financial reporting quality and objectives at issuer level. First, we show that covlite issuers increasingly abandon financial reporting policies that prioritize cash flow verifiability and timely loss recognition. We argue that lack of systematic monitoring mechanisms, as in the case for covlite deal structures, has significantly reduced borrower-level incentives to provide timely "negative" information regarding future company prospects. This observations confirms the evidence that conservative reporting is only effective and thus necessary when contracts are designed to initiate systematic monitoring mechanisms via covenant compliance (Nikolaev, 2010).

Moreover, our analysis shows that the creditor type has a first degree order importance in shaping financial reporting quality at issuer-level. That is, issuer-level financial reporting standards become problematic only when weaker bank monitoring systems, as in covlite issues, are accompanied with substantial non-bank institutional funding. We contend that the ability to secure cheaper financing with less onerous terms from NBIs with strong interested in the asset class (see Isin et al., 2021) may enable covlite issuers to find more legroom and incentives to pursue relatively aggressive financial reporting objectives. We highlight these observations as potential red flag warnings and extend some of the concerns (e.g., financial market fragility) over the increasing dominance of shadow banking within lending markets (e.g., Chernenko and Sunderam, 2014; International Monetary Fund, 2018) into financial reporting setting. And finally, we argue

that issuers aim to better align non-GAAP-based performance information with their loan contractual provisions, which substantially deviate from GAAP-based definitions (Dyreng et al., 2017), and the performance screening criteria of their primary non-bank institutional investors. These results extend the increasing importance of non-GAAP earnings numbers (Black et al., 2018) in performance evaluation in to the debt market setting. We conjecture that issuers to adopt financial reporting objectives better tailored towards the needs of non-bank institutional investors just as the "bank-centred" lending shaped borrowers' financial reporting in the pre-GFC-period (e.g., Ball et al., 2008).

TABLE 1: Summary Statistics

Variables	P25	Med	Mean	P75	Sdev
Panel A: Financial Reporting Quality Variables					
CSCORE	0.0320	0.0996	0.1138	0.1843	0.1128
TLR	0.0995	0.1511	0.1717	0.2434	0.1136
ACCR1	0.0082	0.0275	0.0690	0.0924	0.2960
ACCR2	0.0077	0.0267	0.0649	0.0749	0.1766
REM	-0.0927	-0.0179	-0.0517	0.0243	0.4784
SECCL	0	1	0.0694	1	0.4608
ICW	0	0	0.2596	0	0.4385
Panel B: Test and Control Variables					
COV	0	0	0.1439	0	0.3511
LVRG	0.1554	0.2755	0.2766	0.4016	0.2109
DACCRQ	1	2	2.2417	3	1.0908
CASH	0.0206	0.0576	0.0829	0.1055	0.0923
CFO	0.0451	0.0761	0.0775	0.1107	0.0907
ROA	-0.0007	0.02989	0.0153	0.0564	0.1578
CSIZE	7.304	7.9199	7.9918	8.7036	1.0252
MTB	1.3095	1.9913	4.0965	3.3156	32.069
BETA	1.1179	1.5000	1.6044	2.0132	0.7416
IVOL	0.0780	0.1044	0.1133	0.1343	0.0519
FDEV	1	2	2.3204	3	1.1043
EPS_MISS	0	1	0.6546	1	0.4756
EIOWN	0.4779	0.7539	0.6448	0.9118	0.3383
LIOWN	0	0.5672	0.5443	1	0.4225
SECDUM	0	0	0.3472	1	0.4882
LEVD	0	0	0.3954	1	0.4762
NAF	1.3863	2.079	1.9333	2.5650	0.9167
GOV	0	0	0.2054	1	0.4041

Table 1 provides summary statistics. Panel A provides information on low quartile (P25), median (Med), mean (Mean), top quartile (P75) and standard deviation (Sdev) information on our financial reporting quality measures. Panel B provides information on low quartile (P25), median (Med), mean (Mean), top quartile (P75) and standard deviation (Sdev) information on our test and control variables.

TABLE 2 – BASELINE REGRESSIONS

	CSCORE	TLR	ACCR1	ACCR2	REM	SECCL	ICW
POST	0.0015	0.0028*	0.0038	0.0038	-0.0338*	0.0161	0.1610***
	(1.046)	(1.770)	(0.738)	(0.543)	(-1.859)	(0.718)	(5.939)
COV	-0.0003	0.0036	0.0290	0.0049	-0.0186	0.0202	0.0440
	(-0.050)	(0.640)	(1.133)	(0.459)	(-0.518)	(0.334)	(0.634)
POST×COV	**-0.0187****	**-0.0137****	**-0.0533****	**-0.0511*****	**0.0729**	**-0.0846**	**-0.0576**
	(-2.450)	**(-1.991)**	**(-2.044)**	**(-2.854)**	**(1.068)**	**(-0.791)**	**(-0.492)**
SECDUM	-0.0006	-0.0024	-0.0073	-0.0024	0.0522***	-0.0258	0.0968***
	(-0.199)	(-0.945)	(-0.916)	(-0.458)	(3.778)	(-0.851)	(2.851)
LEVD	0.0165***	0.0144***	0.0202**	0.0141**	-0.0374***	0.0407	-0.0033
	(6.198)	(6.399)	(2.093)	(2.479)	(-2.912)	(1.277)	(-0.094)
LVRG	0.0662***	0.0445***	0.0218	-0.0175	0.0069	0.0118	0.1502
	(5.884)	(4.684)	(0.778)	(-1.022)	(0.155)	(0.142)	(1.576)
DACCRQ	0.0011	0.0018*	0.0443***	0.0330***	-0.0156**	-0.0126**	-0.0123**
	(1.185)	(1.777)	(9.817)	(6.774)	(-2.019)	(-2.045)	(-2.564)
CASH	-0.0151	-0.0255**	0.0136	-0.0489*	0.0606	0.0684	-0.0451
	(-1.048)	(-2.008)	(0.326)	(-1.760)	(0.879)	(0.500)	(-0.276)
CFO	-0.1529***	-0.1338***	-0.0211	0.0114	-0.1331	0.2534	-1.7123***
	(-8.049)	(-7.925)	(-0.438)	(0.267)	(-1.152)	(1.236)	(-7.559)
ROA	-0.0146	-0.0052	0.0145	0.0082	-0.0966**	0.1596	-0.1613
	(-1.464)	(-0.614)	(0.733)	(0.525)	(-2.467)	(1.348)	(-1.114)
CSIZE	-0.0362***	-0.0298***	-0.0139***	-0.0142***	0.0128	-0.1365***	-0.1487***
	(-20.279)	(-20.107)	(-2.650)	(-3.789)	(0.924)	(-10.166)	(-9.382)
MTB	-0.0000**	-0.0001***	-0.0000	-0.0000	-0.0000	0.0004	0.0014**
	(-2.020)	(-3.060)	(-0.415)	(-0.052)	(-0.116)	(0.891)	(2.266)
BETA	0.0074***	0.0058**	0.0077	0.0121	-0.0226	0.0358	-0.0368
	(2.636)	(2.339)	(0.866)	(1.642)	(-1.331)	(1.516)	(-1.418)
IVOL	0.1657***	0.1458***	-0.1969	-0.2653**	0.7007**	-0.7528**	0.1600
	(3.889)	(3.298)	(-1.559)	(-2.202)	(2.552)	(-2.056)	(0.405)
FDEV	0.0007	-0.0013	-0.0072*	-0.0070	0.0055	-0.0031	0.0003
	(0.737)	(-1.200)	(-1.764)	(-1.429)	(0.433)	(-0.318)	(0.025)
EPS_MISS	0.0134***	0.0134***	0.0039	0.0096	-0.0360	-0.0098	0.1433***
	(6.151)	(5.406)	(0.456)	(0.968)	(-1.245)	(-0.426)	(5.204)
NAF	-0.0253***	-0.0192***	0.0053	0.0103*	0.0181	0.0025	0.0168
	(-12.062)	(-9.709)	(0.988)	(1.870)	(1.483)	(0.136)	(0.782)
EIOWN	-0.0044	-0.0026	-0.0329	-0.0400***	-0.0232	0.0903*	-0.0023
	(-0.641)	(-0.419)	(-1.411)	(-2.910)	(-0.885)	(1.700)	(-0.038)
GOV	0.0067**	0.0034	-0.0219**	-0.0007	0.0344*	0.0115	0.1936***
	(2.225)	(1.197)	(-2.451)	(-0.088)	(1.714)	(0.427)	(6.090)
Observations	17101	17101	17101	17101	17101	17101	17101

Table 2 examines measures of FRQ in the post-deal period for covlite vs. covheavy issuers using Eq. (1). For each regression, we control for industry, year rating fixed effects and cluster standard errors at firm level. For ease of following, the variables of interests are presented in bold. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 3 – FIRST TIME COVLITE ISSUERS ANALYSIS

	CSCORE	TLR	ACCR1	ACCR2	REM	SECCL	ICW
POST	0.0014	0.0028	0.0036	0.0036	-0.0340	0.0173	0.1601***
	(0.998)	(1.678)	(0.964)	(0.489)	(-1.358)	(0.772)	(5.911)
FCOV	0.0022	0.0068	0.0497	0.0117	-0.0470	0.0949	0.1479*
	(0.329)	(1.074)	(1.033)	(1.006)	(-1.617)	(1.294)	(1.848)
POST×FCOV	**-0.0239****	**-0.0187***	**-0.0676***	**-0.0566****	**0.1222**	**-0.1201**	**-0.0832**
	(-2.253)	**(-1.867)**	**(-1.957)**	**(-2.561)**	**(1.320)**	**(-0.905)**	**(-0.588)**
SECDUM	-0.0003	-0.0022	-0.0069	-0.0021	0.0489**	-0.0298	0.0968***
	(-0.122)	(-0.885)	(-0.880)	(-0.328)	(2.272)	(-0.981)	(2.845)
LEVD	0.0171***	0.0148***	0.0203***	0.0139**	-0.0371*	0.0386	0.0046
	(5.913)	(6.173)	(3.128)	(2.477)	(-1.735)	(1.207)	(0.130)
LVRG	0.0659***	0.0442***	0.0237	-0.0177	-0.0112	0.0038	0.1287
	(5.863)	(4.917)	(0.651)	(-1.206)	(-0.217)	(0.045)	(1.324)
DACCRQ	0.0009	0.0017	0.0443***	0.0333***	-0.0148	-0.0114**	-0.0105**
	(1.049)	(1.609)	(3.820)	(2.742)	(-0.739)	(-2.445)	(-2.464)
CASH	-0.0146	-0.0251*	0.0125	-0.0503*	0.0465	0.0442	-0.0668
	(-0.796)	(-1.687)	(0.195)	(-1.803)	(0.788)	(0.320)	(-0.404)
CFO	-0.1509***	-0.1314***	-0.0203	0.0097	-0.1260	0.2569	-1.6711***
	(-7.439)	(-6.919)	(-0.390)	(0.250)	(-1.200)	(1.246)	(-7.337)
ROA	-0.0136	-0.0046	0.0201	0.0118	-0.0945*	0.1549	-0.1500
	(-0.728)	(-0.347)	(1.123)	(0.815)	(-1.719)	(1.306)	(-1.040)
CSIZE	-0.0363***	-0.0299***	-0.0147**	-0.0148***	0.0142	-0.1341***	-0.1433***
	(-17.228)	(-21.490)	(-2.196)	(-3.130)	(0.717)	(-9.896)	(-8.988)
MTB	-0.0001***	-0.0001***	-0.0000	-0.0000	-0.0002	0.0004	0.0010*
	(-3.435)	(-4.115)	(-0.327)	(-0.240)	(-0.511)	(0.990)	(1.674)
BETA	0.0072**	0.0057**	0.0096	0.0133	-0.0287	0.0309	-0.0321
	(2.141)	(2.341)	(1.144)	(1.186)	(-1.460)	(1.289)	(-1.222)
IVOL	0.1663***	0.1470***	-0.2180	-0.2781*	0.7600**	-0.7504**	0.1519
	(3.562)	(2.952)	(-1.633)	(-1.898)	(2.652)	(-2.022)	(0.378)
FDEV	0.0005	-0.0014	-0.0074	-0.0071	0.0043	-0.0044	-0.0011
	(0.653)	(-1.524)	(-0.844)	(-0.842)	(0.277)	(-0.449)	(-0.093)
EPS_MISS	0.0133***	0.0134***	0.0043	0.0098	-0.0353	-0.0022	0.1443***
	(5.566)	(4.881)	(0.493)	(0.685)	(-0.938)	(-0.094)	(5.202)
NAF	-0.0251***	-0.0188***	0.0050	0.0101***	0.0187**	-0.0028	0.0148
	(-12.078)	(-11.067)	(0.937)	(2.910)	(2.186)	(-0.150)	(0.688)
EIOWN	-0.0045	-0.0033	-0.0330**	-0.0403***	-0.0242	0.0933*	-0.0185
	(-0.739)	(-0.520)	(-2.118)	(-2.811)	(-1.245)	(1.744)	(-0.300)
GOV	0.0066*	0.0033	-0.0227	-0.0011	0.0341**	0.0102	0.1861***
	(1.817)	(1.036)	(-1.684)	(-0.202)	(2.138)	(0.373)	(5.780)
Observations	16826	16826	16826	16826	16826	19824	18803

Table 2 examines measures of FRQ in the post-deal period for covlite vs. covheavy issuers using Eq. (1) for first time covlite deal issuers. The sample is limited to firms that have issued at most one covlite issue. For each regression, we control for industry, year rating fixed effects and cluster standard errors at firm level. For ease of following, the variables of interests are presented in bold. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 4 – ENTROPY BALANCED SAMPLE

	CSCORE	TLR	ACCR1	ACCR2	REM	SECCL	ICW
POST	0.0072	0.0123**	0.0453*	0.0149	-0.0113	0.1231*	0.3068***
	(1.643)	(2.546)	(1.846)	(1.459)	(-0.378)	(1.650)	(3.363)
COV	0.0051	0.0071**	0.0032	-0.0030	-0.0050	-0.0130	0.3319***
	(1.562)	(2.044)	(0.259)	(-0.354)	(-0.267)	(-0.233)	(5.360)
POST×COV	**-0.0116***	**-0.0108***	**-0.0468**	**-0.0439*****	**0.0320**	**-0.1132**	**-0.1934**
	(-1.910)	**(-1.806)**	**(-1.308)**	**(-3.235)**	**(0.537)**	**(-0.921)**	**(-1.427)**
SECDUM	-0.0061	-0.0073	-0.0387*	-0.0284***	0.0975***	-0.0772	0.0314
	(-1.503)	(-1.579)	(-1.916)	(-2.978)	(4.175)	(-1.138)	(0.399)
LEVD	0.0079**	0.0084**	-0.0189	-0.0059	-0.0574*	-0.0011	-0.2109***
	(2.317)	(2.213)	(-0.640)	(-0.581)	(-1.649)	(-0.017)	(-2.888)
LVRG	0.0792***	0.0505***	0.0473	-0.0040	0.2528***	-0.2024	0.0463
	(7.419)	(4.623)	(1.310)	(-0.181)	(3.460)	(-1.090)	(0.247)
DACCRQ	0.0033**	0.0037**	0.0573***	0.0325***	-0.0348***	-0.0185	0.0451
	(2.430)	(2.495)	(10.152)	(11.524)	(-3.655)	(-0.757)	(1.634)
CASH	-0.0318*	-0.0439**	0.1609**	0.0128	0.0515	0.1021	0.3190
	(-1.850)	(-2.165)	(2.065)	(0.425)	(0.467)	(0.334)	(0.737)
CFO	-0.1377***	-0.1326***	0.0184	0.0057	-0.4480*	1.1456**	-2.0389***
	(-5.213)	(-5.047)	(0.225)	(0.122)	(-1.882)	(2.060)	(-3.670)
ROA	-0.0017	-0.0014	-0.1049	-0.0199	0.0295	-0.4786**	-1.2497***
	(-0.257)	(-0.195)	(-1.484)	(-0.976)	(0.573)	(-2.171)	(-4.818)
CSIZE	-0.0306***	-0.0240***	0.0197	-0.0018	-0.0082	-0.1019***	-0.1485***
	(-15.963)	(-11.864)	(1.454)	(-0.363)	(-0.496)	(-2.735)	(-3.608)
MTB	-0.0000	-0.0001	-0.0001	-0.0000	-0.0000	0.0006	0.0025***
	(-0.872)	(-1.561)	(-1.610)	(-0.987)	(-0.018)	(0.972)	(4.421)
BETA	0.0145***	0.0083***	-0.0234	0.0012	0.0773***	0.0146	-0.2907***
	(5.980)	(3.368)	(-1.483)	(0.151)	(2.598)	(0.285)	(-5.110)
IVOL	0.1321***	0.1788***	0.0930	0.0696	-0.7328*	0.1014	0.2182
	(3.230)	(3.970)	(0.300)	(0.463)	(-1.948)	(0.119)	(0.273)
FDEV	0.0008	-0.0034**	-0.0027	0.0038	0.0170*	0.0612**	0.0705**
	(0.623)	(-2.422)	(-0.542)	(1.300)	(1.677)	(2.475)	(2.439)
EPS_MISS	0.0144***	0.0158***	0.0151	0.0116	-0.0103	-0.1919***	0.1838**
	(4.931)	(5.195)	(0.786)	(1.404)	(-0.389)	(-3.102)	(2.543)
NAF	-0.0309***	-0.0233***	-0.0081	0.0000	0.0295	-0.1127**	-0.1162**
	(-12.543)	(-8.538)	(-1.101)	(0.000)	(1.642)	(-2.489)	(-2.090)
EIOWN	-0.0097	-0.0070	0.1005*	0.0022	-0.1104	0.1756	0.5559***
	(-1.440)	(-0.973)	(1.936)	(0.139)	(-1.589)	(1.472)	(3.624)
GOV	0.0121***	0.0118***	-0.0153	0.0080	-0.0297	-0.0345	0.2803***
	(3.427)	(3.321)	(-1.442)	(1.141)	(-0.862)	(-0.544)	(3.845)
Observations	17101	17101	17101	17101	17101	17101	16224

Table 4 examines measures of FRQ in the post-deal period for covlite vs. covheavy issuers using Eq. (1) for EB-balanced sub-sample of observations. For each regression, we control for industry, year rating fixed effects and cluster standard errors at firm level. For ease of following, the variables of interests are presented in bold. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 5 – FIRM FIXED EFFECTS

	CSCORE	TLR	ACCR1	ACCR2	REM	SECCL	ICW
POST	0.0031***	0.0042***	0.0042	0.0047	-0.0304***	0.0079	0.1796**
	(3.182)	(3.920)	(0.874)	(1.018)	(-3.567)	(0.297)	(1.971)
COV	0.0043	0.0039	0.0091	0.0234**	0.0021	0.0335	0.2473
	(1.160)	(0.979)	(0.359)	(2.212)	(0.056)	(0.369)	(0.914)
POST×COV	**-0.0112****	**-0.0088***	**-0.1052****	**-0.0620*****	**0.1414****	**-0.2469***	**0.1338**
	(-2.158)	**(-1.813)**	**(-2.488)**	**(-4.023)**	**(2.321)**	**(-1.926)**	**(0.405)**
SECDUM	-0.0017	-0.0015	0.0069	-0.0033	0.0199	-0.0300	0.0326
	(-0.831)	(-0.733)	(0.926)	(-0.505)	(1.288)	(-0.557)	(0.214)
LEVD	0.0076***	0.0079***	0.0002	0.0014	-0.0179	0.0041	-0.0920
	(4.305)	(4.280)	(0.023)	(0.236)	(-1.315)	(0.088)	(-0.672)
LVRG	0.0099	-0.0024	0.0305	-0.0088	0.0538	-0.1555	0.2945
	(1.323)	(-0.296)	(0.863)	(-0.397)	(1.112)	(-0.949)	(0.556)
DACCRQ	0.0013***	0.0023***	0.0480***	0.0352***	-0.0233***	-0.0352**	-0.0525
	(3.169)	(4.974)	(21.596)	(18.770)	(-7.444)	(2.370)	(-1.423)
CASH	-0.0613***	-0.0647***	-0.0274	-0.0495*	0.1611**	0.1301	-2.2529***
	(-5.855)	(-5.791)	(-0.663)	(-1.711)	(1.989)	(0.507)	(-2.631)
CFO	-0.0478***	-0.0373***	-0.0405	-0.0097	-0.0627	0.4755	0.1088
	(-3.775)	(-2.590)	(-0.684)	(-0.241)	(-0.467)	(1.547)	(0.106)
ROA	-0.0042	-0.0033	-0.0060	-0.0061	0.0140	-0.1760	-0.9545
	(-1.026)	(-0.559)	(-0.462)	(-0.547)	(0.685)	(-1.422)	(-1.255)
CSIZE	-0.0204***	-0.0159***	-0.0125	-0.0181***	0.0236	-0.0095	-0.1975
	(-8.875)	(-6.515)	(-1.546)	(-2.991)	(1.255)	(-0.183)	(-1.209)
MTB	-0.0001*	-0.0001*	0.0000	0.0000	-0.0001	0.0007	-0.0004
	(-1.781)	(-1.841)	(1.340)	(1.190)	(-0.302)	(1.195)	(-0.332)
BETA	0.0066***	0.0038*	-0.0089	0.0153**	0.0416**	0.0083	0.0538
	(3.024)	(1.648)	(-0.863)	(2.248)	(2.284)	(0.166)	(0.379)
IVOL	-0.0615*	-0.0151	-0.1452	-0.4955***	-0.0217	1.1520	9.5887***
	(-1.890)	(-0.437)	(-0.860)	(-3.940)	(-0.080)	(1.560)	(4.077)
FDEV	-0.0010**	-0.0025***	-0.0045*	-0.0067***	0.0034	0.0076	-0.0695*
	(-2.164)	(-5.160)	(-1.940)	(-3.008)	(0.781)	(0.661)	(-1.853)
EPS_MISS	0.0080***	0.0103***	0.0188***	0.0201***	-0.0448***	0.0841***	0.2190**
	(7.206)	(8.381)	(2.855)	(3.642)	(-3.929)	(2.818)	(2.226)
NAF	-0.0120***	-0.0086***	-0.0101	0.0111	0.0034	-0.0611	-0.0176
	(-7.191)	(-4.772)	(-1.544)	(1.291)	(0.284)	(-1.542)	(-0.145)
EIOWN	0.0198***	0.0182***	-0.0312	-0.0296	0.0768**	-0.1894	-1.1746***
	(3.904)	(3.467)	(-0.950)	(-1.286)	(2.386)	(-1.633)	(-3.181)
GOV	0.0009	0.0011	-0.0000	0.0210***	-0.0152	0.0189	0.5485***
	(0.536)	(0.653)	(-0.003)	(3.424)	(-1.106)	(0.447)	(3.798)
Observations	17101	17101	17101	17101	17101	17101	16224

Table 5 examines measures of FRQ in the post-deal period for covlite vs. covheavy issuers using Eq. (1) controlling for firm fixed effects. For ease of following, the variables of interests are presented in bold. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 6 – LOAN LEVEL INSTITUTIONAL OWNERSHIP

	CSCORE	TLR	ACCR1	ACCR2	REM	SECCL	ICW
POST	0.0070	0.0056	0.0464*	0.0097	-0.0324	0.0460	0.2508
	(1.433)	(1.241)	(1.738)	(0.823)	(-0.854)	(0.390)	(1.597)
COV	-0.0009	0.0032	0.0567	0.0304**	0.0102	0.2765	0.1316
	(-0.108)	(0.428)	(1.597)	(2.001)	(0.145)	(1.618)	(0.524)
POST×COV	**-0.0199***	**-0.0159**	**-0.1438****	**-0.0682****	**0.0326**	**-0.4318***	**-0.4932**
	(-1.890)	**(-1.645)**	**(-2.197)**	**(-2.563)**	**(0.325)**	**(-1.783)**	**(-1.435)**
LIOWN	-0.0013	-0.0019	0.0037	0.0022	-0.0073	0.0880	0.0439
	(-0.750)	(-0.919)	(0.583)	(0.561)	(-0.628)	(0.850)	(0.402)
LIOWN×POST	**0.0007**	**0.0033**	**-0.0261**	**-0.0172**	**0.0086**	**-0.0857**	**0.0055**
	(0.122)	**(0.630)**	**(-0.749)**	**(-1.218)**	**(0.196)**	**(-0.549)**	**(0.033)**
LIOWN×COV	0.0006	-0.0001	-0.0282	-0.0233	-0.0641	-0.3331*	-0.2330
	(0.092)	(-0.018)	(-0.424)	(-1.068)	(-0.697)	(-1.692)	(-1.125)
LIOWN×COV×POST	**0.0073**	**-0.0008**	**0.1112***	**0.0432***	**0.0682**	**0.5656***	**0.6172***
	(0.527)	**(-0.063)**	**(1.730)**	**(1.891)**	**(0.553)**	**(1.822)**	**(1.888)**
Observations	4799	4799	4799	4799	4799	4796	4658

Table 6 examines measures of FRQ in the post-deal period for covlite vs. covheavy issuers using Eq. (1) augmented to control for loan-level institutional ownership. We control for industry, year rating fixed effects and cluster standard errors at firm level. All other control variables are included in actual regressions but excluded from display for space consideration and to increase focus on actual test variables. For ease of following, the variables of interests are presented in bold. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** for 10%, 5% and 1% levels, respectively.

TABLE 7 – PROPENSITY TO PROVIDE NON-GAAP EPS INFORMATION

	BASELINE	**FIRST-CONS**	**FFE**	**LIOWN**
POST	-0.2725***	-0.2280***	-0.0589	-0.4923***
	(-6.960)	(-5.256)	(-1.070)	(-2.828)
COV	0.0646		-0.1453	-0.0307
	(0.667)		(-0.830)	(-0.134)
POST×COV	**-0.0455**		**-0.0752**	**0.2437**
	(-0.263)		**(-0.244)**	**(0.618)**
FCOV		-0.1046		
		(-0.788)		
POST×FCOV		**-0.1373**		
		(-0.528)		
CCOV		0.1508		
		(1.104)		
CCOV×POST		**-0.2021**		
		(-0.805)		
LIOWN				-0.0916
				(-0.614)
LIOWN×POST				**0.0569**
				(0.236)
LIOWN×COV				0.0524
				(0.173)
LIOWN×COV×POST				**-0.3778**
				(-0.676)
Observations	17101	17101	17101	4499

Table 7 examines post-issue period propensity to provide non-GAAP EPS information for covlite vs. covheavy issuers using Eq. (2). Each regression controls for industry, year rating fixed effects and cluster standard errors at firm level. All other control variables are included in actual regressions but excluded from display for space consideration and to increase focus on actual test variables. The data in the last column is limited to matched LoanConnector and LCD databases. For ease of following, the variables of interests are presented in bold. The z statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 8 – NON-GAAP EPS QUALITY

	BASELINE	FFE	FIRST-CONS	VIOL	NOVIOL
POST	-0.1034	-0.1083	-0.1027	0.0849	-0.1754
	(-1.081)	(-1.107)	(-1.075)	(1.365)	(-1.498)
NGEPS	0.6402***	0.3861***	0.6412***	0.6723***	0.6385***
	(11.403)	(6.938)	(11.413)	(4.650)	(10.840)
NGEPS×POST	0.1274*	0.1522**	0.1264*	-0.2300**	0.1667**
	(1.669)	(2.243)	(1.657)	(-1.982)	(1.972)
NGDIFF	**-0.0509**	**-0.0474**	**-0.0511**	**-0.0716**	**-0.1993*** **
	(-1.204)	**(-1.423)**	**(-1.206)**	**(-0.747)**	**(-5.604)**
NGDIFF×POST	**-0.1069****	**-0.0899**	**-0.1069****	**-0.1181**	**0.0478**
	(-2.280)	**(-1.606)**	**(-2.277)**	**(-1.021)**	**(0.719)**
COV	0.0405	0.0728			
	(0.771)	(0.932)			
POST×COV	0.0611	0.0890			
	(0.661)	(0.951)			
COV×NGEPS	-0.0001	0.0799			
	(-0.002)	(1.061)			
COV×NGDIFF	**-0.2066*** **	**-0.1762****		**-0.2756***	**-0.1987****
	(-4.405)	**(-2.157)**		**(-1.745)**	**(-3.982)**
COV×GDIFF×POST	**0.3563*** **	**0.3276*** **		**0.4877****	**0.3656*** **
	(5.824)	**(3.138)**		**(1.984)**	**(4.992)**
FCOV			0.0973	0.2995**	-0.0337
			(1.346)	(2.067)	(-0.470)
FCOV×POST			0.1251	0.1850	0.1676**
			(1.035)	(0.501)	(2.299)
FCOV×EPS			-0.0996	-0.2158	-0.1253*
			(-1.210)	(-0.752)	(-1.749)
FCOV×NGDIFF			**-0.2894***		
			(-1.738)		
FCOV×NGDIFF×POST			**0.4478****		
			(2.572)		
CCOV			-0.0225		
			(-0.301)		
CCOV×POST			-0.0047		
			(-0.044)		
CCOV×NGEPS			0.1554		
			(1.266)		
CCOV×NGDIFF			**-0.1987*****		
			(-4.209)		
CCOV×NGDIFF×POST			**0.3350*****		
			(4.659)		
Observations	8139	8139	8139	1078	7058

Table 8 examines post-issue period non-GAAP EPS information quality for covlite vs. covheavy issuers using Eq. (3). Each regression controls for industry, year, rating fixed effects and cluster standard errors at firm level. All other control variables are included in actual regressions but excluded from display for space consideration and to increase focus on actual test variables. VIOL/(NOVIOL) is subset firms with/(no) previous covenant violations in the pre-2012 period – data from Christensen et al. (2019). For ease of following, the variables of interests are presented in bold. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 9 - NON-GAAP EPS QUALITY CONTROLLING FOR LOAN-LEVEL INSTITUTIONAL OWNERSHIP

	BASELINE	FIRST	FFE
NGDIFF	-0.1442	-0.1420	-0.1256
	(-1.424)	(-1.413)	(-1.278)
NGDIFF×POST	-0.1888*	-0.1934*	-0.1371*
	(-1.715)	(-1.770)	(-1.751)
COV×NGDIFF	-0.3251**		-0.2936**
	(-2.498)		(-2.475)
COV×NGDIFF×POST	0.6972***		0.5829**
	(3.180)		(2.639)
LIOWN×NGDIFF	0.0681	0.0653	0.0559
	(0.162)	(0.542)	(0.472)
LIOWN×NGDIFF×POST	0.1112	0.1152	0.0658
	(0.610)	(0.644)	(0.342)
COV×LIOWN×NGDIFF	-0.4104***		-0.3952***
	(-2.781)		(-2.950)
COV×LIOWN×NGDIFF×POST	0.6101***		0.4286**
	(2.815)		(2.245)
FCOV×NGDIFF		-0.4035***	
		(-3.123)	
FCOV×POST×NGDIFF		0.7293***	
		(3.601)	
FCOV×LIOWN×NGDIFF		-0.4499***	
		(-3.039)	
FCOV×LIOWN×NGDIFF×POST		-0.5204**	
		(2.508)	
Observations	2975	2504	2975

Table 9 examines post-issue period non-GAAP EPS information quality for covlite vs. covheavy issuers using Eq. (3) controlling for loan-level institutional ownership. The dataset is limited to LoanConnector and LCD matched samples with loan-level institutional ownership data available. Each regression controls for industry, year, rating fixed effects and cluster standard errors at firm level. BASELINE is the Eq.(3) augmented to control for loan-level institutional ownership. FIRST is the model that controls for firms time covlite issues and is limited to firms with a single covlite issue at most. FFE controls for firm fixed effects. For ease of following, we only present the variables of interests where each regression does contain all the rest of the interaction variables and control variables as necessary. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

TABLE 10- ROBUSTNESS TESTS for NON-GAAP EPS QUALITY CONTROLLING FOR LOAN-LEVEL INSTITUTIONAL OWNERSHIP

	FACTORS	HDMP	LDMP
NGDIFF	-0.0443	-0.1725	-0.1158
	(-0.171)	(-1.527)	(-0.854)
NGDIFF×POST	-0.1382	0.0522	-0.2620
	(-0.976)	(0.436)	(-1.294)
COV×NGDIFF	0.0904	-0.5023***	0.1614
	(0.299)	(-5.991)	(1.087)
COV×NGDIFF×POST	-0.2754	0.6262***	0.1996
	(-1.504)	(5.753)	(1.138)
LIOWN×NGDIFF	0.0561	0.1668	0.0019
	(0.700)	(1.370)	(0.013)
LIOWN×NGDIFF×POST	0.1730	-0.1581	0.2181
	(1.378)	(-1.092)	(0.920)
COV×LIOWN×NGDIFF	-0.2534***	-0.5743***	-0.1761
	(-3.561)	(-6.114)	(-0.963)
COV×LIOWN×NGDIFF×POST	0.3733***	0.4671***	-0.1828
	(4.098)	(2.795)	(-1.127)
BOND×NGDIFF	-0.0544		
	(-0.444)		
BOND×NGDIFF×POST	-0.5180***		
	(-2.808)		
COV×BOND×NGDIFF	-0.3003*		
	(-1.746)		
COV× BOND ×NGDIFF×POST	0.6245***		
	(5.370)		
Observations	2975	604	2369

Table 10 conducts robustness tests on post-issue period non-GAAP EPS information quality for covlite vs. covheavy issuers using Eq. (3) controlling for loan-level institutional ownership. The dataset is limited to LoanConnector and LCD matched samples with loan-level institutional ownership data available. Each regression controls for industry, year, rating fixed effects and cluster standard errors at firm level. FACTORS examines how loan-level institutional ownership, bond issuance and the number of analysts following affect non-GAAP EPS information quality in the post-issue-period. HDMP is a subset of firms with high leverage and low-tier non-investment grade rating – termed as firms with high debt market pressures. LDMP is a subset of firms with low leverage and better-rated firms – termed as firms with low debt market pressures. The final two columns controls for the availability of hedging and exit strategies via CDS availability. For ease of following, we only present the variables of interests where each regression does contain all the rest of the interaction variables and control variables as necessary. The t statistics are given and in parentheses. Asterisks above the coefficients represent significance levels where *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.

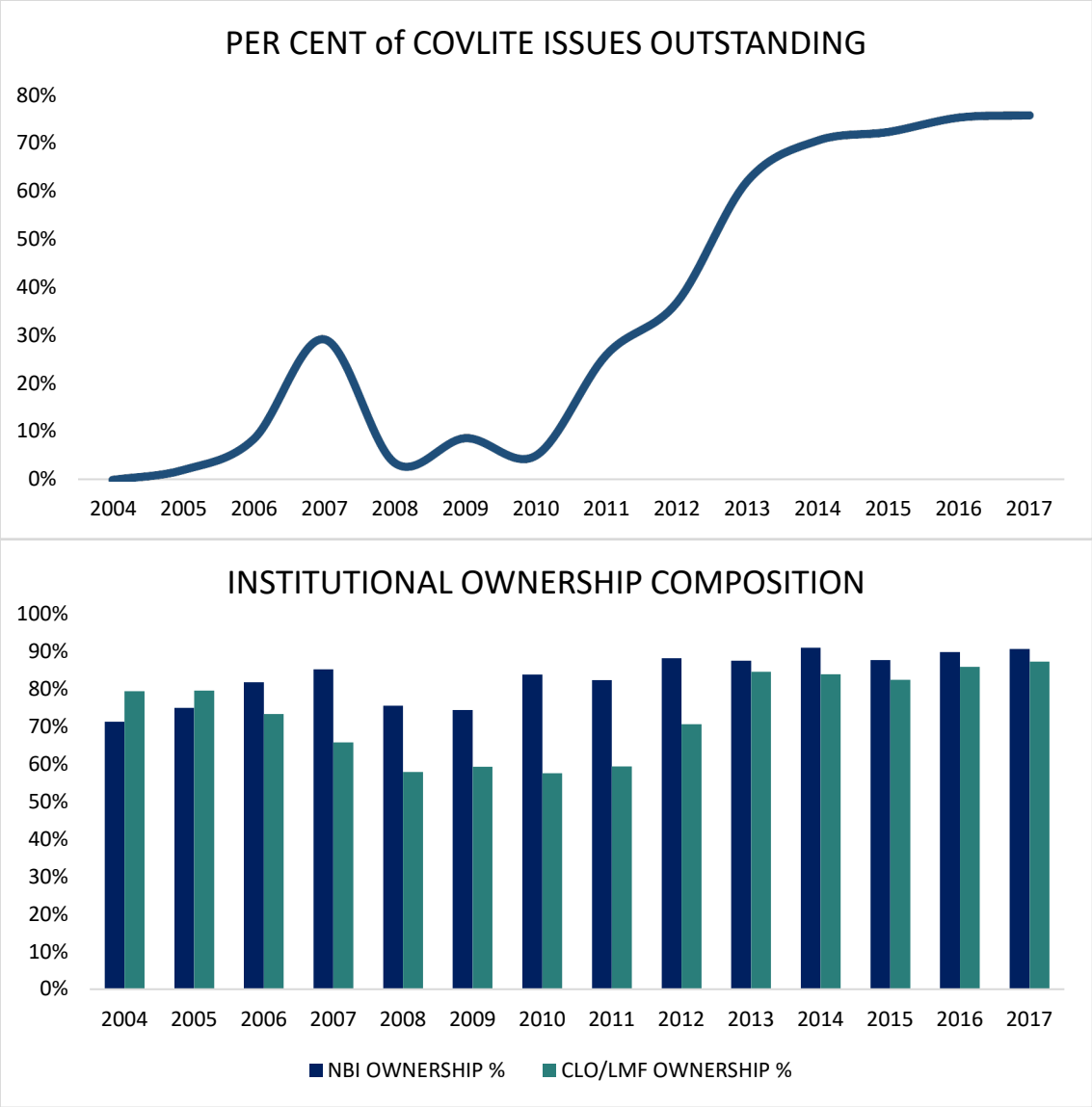

Figure 1: Covlite Issue Proportion and Institutional Investor Ownership – Data from Loan Commentary Data an S&P Offering

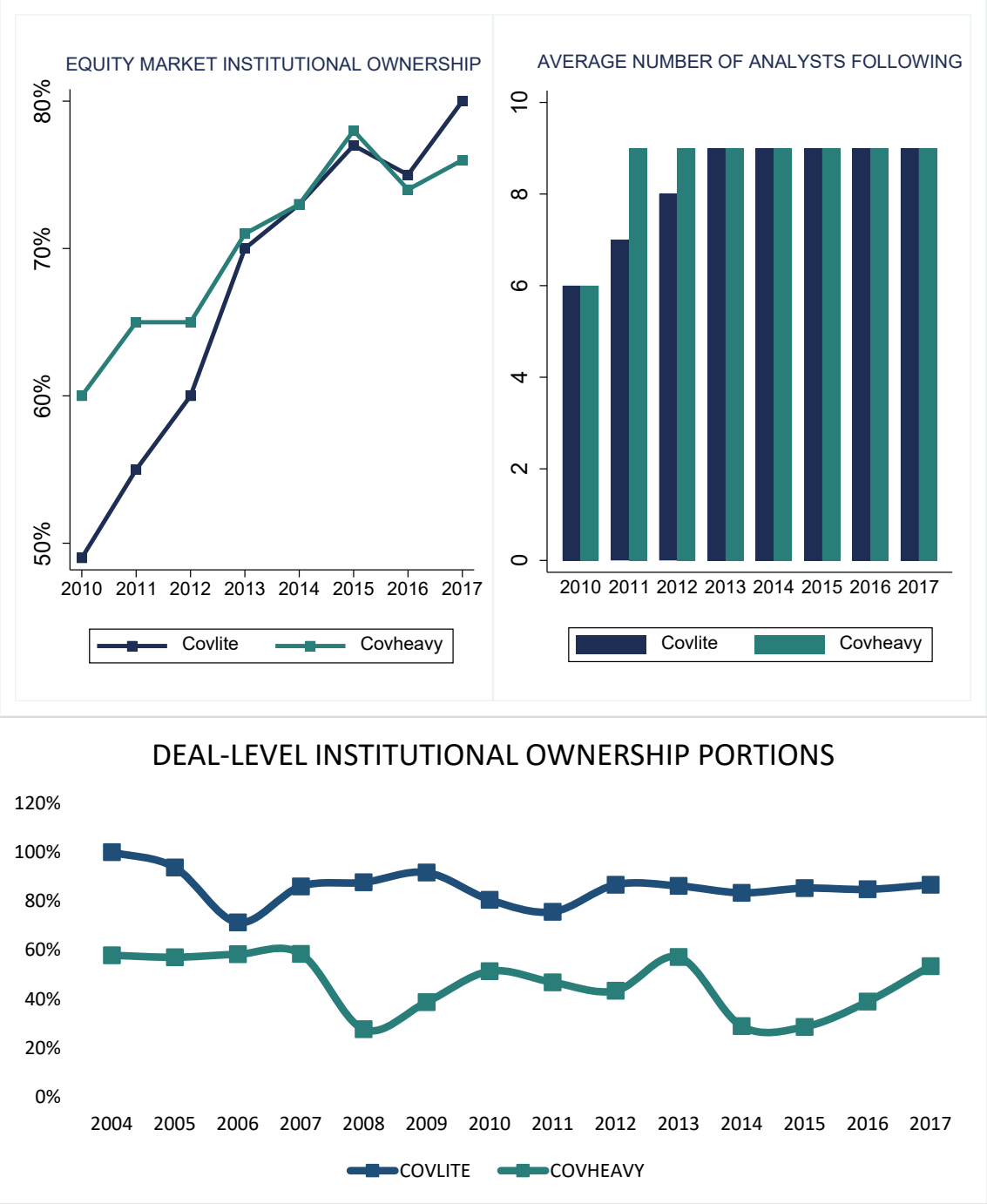

Figure 2: Equity Market Intuitional Ownership and the Number of Analysts Following (top graph)
Deal Level Institutional Ownership (bottom graph) – Data from Loan Commentary Data an S&P Offering

APPENDIX A: Pre-post Entropy Balancing Covariates

Panel A: Prior to Entropy Balancing Covariates						
	TREATMENT SAMPLE			**CONTROL SAMPLE**		
	MEAN	**VARIANCE**	**SKEWNESS**	**MEAN**	**VARIANCE**	**SKEWNESS**
LVRG	0.3239	0.0600	1.0964	0.1211	0.0543	-0.5702
NIG	0.8533	0.1253	-1.9973	0.2421	0.1835	1.2042
DACCRQ	2.3052	1.1653	0.1812	2.2623	1.1972	0.2387
CASH	0.0917	0.00643	2.0122	0.1172	0.0179	2.9675
CFO	0.0752	0.0037	0.1592	0.1035	0.0044	0.2333
ROA	0.0228	0.0057	0.2574	0.0443	0.0135	-11.492
CSIZE	8.2031	1.3972	0.4798	8.2052	3.2243	0.4171
MTB	9.3215	2768	10.222	3.8062	477.12	0.1687
BETA	1.5724	0.6147	0.5262	1.2673	0.4055	0.7964
IVOL	0.1085	0.0031	2.0674	0.0916	0.0024	2.2264
FDEV	2.3664	1.1914	0.0860	2.2962	1.2332	0.2288
EPS_MISS	0.7562	0.1846	-1.1933	0.6140	0.2370	-0.4684
NAF	2.0492	0.6645	-0.5592	2.0812	1.064	-0.6825
GOV	0.2546	0.1912	1.1273	0.2726	0.1983	1.0212
Panel B: Post Entropy Balancing Covariates						
	TREATMENT SAMPLE			**CONTROL SAMPLE**		
	MEAN	**VARIANCE**	**SKEWNESS**	**MEAN**	**VARIANCE**	**SKEWNESS**
LVRG	0.3239	0.0600	1.0964	0.3239	0.0580	-0.7543
NIG	0.8533	0.1253	-1.9973	0.8532	0.1252	-1.9972
DACCRQ	2.3052	1.1653	0.1812	2.3051	1.2232	0.1762
CASH	0.0917	0.00643	2.012	0.0917	0.0206	6.8310
CFO	0.0752	0.0037	0.1592	0.0752	0.0039	-0.6903
ROA	0.0228	0.0057	0.2574	0.0228	0.0504	8.7090
CSIZE	8.2031	1.3972	0.4798	8.2032	1.6144	0.5554
MTB	9.3215	2768	10.22	9.3243	2484	9.3452
BETA	1.5724	0.6147	0.5262	1.5734	0.5591	0.6251
IVOL	0.1085	0.0031	2.0674	0.1085	0.0029	2.2345
FDEV	2.3664	1.1914	0.0860	2.3665	1.1952	0.1323
EPS_MISS	0.7562	0.1846	-1.1933	0.7562	0.1844	-1.1932
NAF	2.0492	0.6645	-0.5592	2.0492	0.8112	-0.7198
GOV	0.2546	0.1912	1.1273	0.2546	0.1898	1.1275

In the above table, Panel A presents pre-balancing covariate statistics. Panel B present post Entropy-Balancing covariate (balancing) properties. TREATMENT SAMPLE is the sample to which CONTROL SAMPLE covariates are balanced into. The analysis shows very close mean, variance and skewness numbers for “treatment” vs. “control” variables.

APPENDIX B: Variable Measurements

Dependent Variables

CSCORE: Estimated C-score measure using Khan and Watts (2008) conservatism model.
TLR: The sum of C-score (timeliness of earnings to good news) and G-score (incremental timeliness of earnings to bad news) estimations from Khan and Watts (2008) to measure the total timeliness of bad news recognition.
ACCR1: Discretionary abnormal accruals estimated using Dechow and Dichev (2002).
ACCR2: Modified discretionary abnormal measure estimated using McNichols (2002).
ICW: A quarterly dummy indicator one if a given issuer has received an internal control weakness statement from its auditor and zero otherwise. Data from Audit Analytics
REM: Real earnings management measure estimated using Roychodhury (2006) model. Following Badertscher (2011), we sum *abnormal cash from operations*, *abnormal discretionary expenditures* and *abnormal inventory production*, as estimated in Roychowdhury (2006), to arrive at our wider measure of real-based earnings management proxy.
SECCL: A dummy indicator one if a given issuer has received SEC comment letter raising concerns over financial reporting issues and zero otherwise. Data from Audit Analytics
FGAAP: The sum of the quarterly GAAP diluted EPS from operations (COMPUSTAT: oepsxq) as in Christensen et al. (2019).
PNGAAP: A quarterly indicator variable equal to one if a given issuer reports non-GAAP-based earnings information and zero otherwise.

Control Variables

LVRG: Net long term debt scaled by total asset where the net long term debt is the total long term debt (COMPUSTAT: dltt) minus cash and cash equivalents (COMPUSTAT: che).
CSIZE: Log of total assets (COMPUSTAT: at)
CASH: Cash and cash equivalents (COMPUSTAT: che) scaled by total assets.
DACCRQ: Quartile of discretionary abnormal accruals estimated using Dechow and Dichev (2002).
CFO: Cash flows from operations (COMPUSTAT: oancf) scaled by total assets.
ROA: Return on assets estimated by scaling net income (COMPUSTAT: ni) by total assets.
MTB: Market-to-book value estimated as market value of equity (COMPUSTAT: prcc_c * csho) scaled by book value of equity (COMPUSTAT: ceq)
BETA: Our measure of market risk and is estimated using stock and market return data over the previous 60-month period as of time t.
IVOL: Idiosyncratic volatility is our measure of firm-specific risk estimated using stock and market return data over the previous 60-month period as of time t.
FDEV: The standard deviation of analysts' mean EPS forecasts (IBES: stdev)

EPS_MISS: A dummy indicator one for firm quarters where the actual earnings are less than the median analyst estimate (IBES: meanest – COMPUSTAT: oepsxq)
NAF: The total number of analysts following a firm in a given year (IBES: numest).
LIOWN: Is the loan-level non-bank institutional investor ownership percentage. The data is from S&P's Loan and Commentary Data.
EIOWN: Is the firm-level equity market institutional ownership percentage. The data is from Thomson Reuters's 13F files.
GOV: Is our composite rank measure that controls for the quality of firm-level governance. Specifically, we control for the total number of independent directors, time spent in the role, number of other board positions held, director networks, gender diversity and the number of directors with accounting/finance qualifications. GOV is one for firms with the total composite score greater than the sample median and zero otherwise. The data is from Boardex.

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