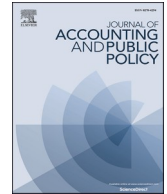




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Full length article

Earnings expectations and the quality of financial services<sup>☆</sup>Xiaomeng Shi<sup>a</sup>, Duc Duy Nguyen<sup>b,\*</sup>, Mingzhu Wang<sup>c</sup><sup>a</sup> Xi'an Jiaotong-Liverpool University, 111 Ren'ai Road, Suzhou Industrial Park, Suzhou, China<sup>b</sup> Durham University, Mill Hill Lane, Durham DH1 3LB, United Kingdom<sup>c</sup> King's College London, 30 Aldwych, London WC2B 4BG, United Kingdom

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## ABSTRACT

Using complaint data filed by consumers with the Consumer Financial Protection Bureau against financial institutions, we show that banks receive, on average, 13.3% more customer complaints in the quarter immediately after they narrowly beat analysts' earnings forecasts. The effect is mainly driven by banks' attempts to reduce their non-interest expenses to beat earnings benchmarks. The relationship is stronger when bank CEOs receive a greater proportion of incentive-based compensation. Overall, our paper demonstrates how capital market incentives exacerbate shareholder–customer conflicts.

## 1. Introduction

Every morning, we had a conference call with all the managers. You were supposed to tell them how you were going to make your sales goal for the day, and if you didn't, you'd have to call in the afternoon to explain why you didn't make it and how you were going to fix it. (McLean, 2017).

Bethany McLean, Vanity Fair, Summer 2017

Repeated incidents of mis-selling, fraud, and poor customer service destroy consumers' trust in retail financial services and the financial sector as a whole. A common narrative among the press, regulators, and practitioners is that exploitative and fraudulent financial services arise because of the growing pressure on bank managers to achieve sales targets and meet earnings expectations (Guthrie, 2016; Cowley and Flitter, 2018). This produces top-down pressure on bank employees, prompting them to engage in excessively risky behavior at the expense of customers.

Our paper empirically tests the veracity of this narrative. Using a dataset of complaints against financial institutions that customers filed with the U.S. Consumer Financial Protection Bureau (CFPB), we show that banks receive 13.3% more complaints from customers in quarters immediately after they narrowly beat analysts' earnings forecasts. The effect is identified within the same bank and is robust to various empirical specifications. Our paper demonstrates how capital market incentives exacerbate tensions between shareholders and customers.

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The prior literature has shown that managers face pressure to beat earnings benchmarks and that they react to this pressure by manipulating accruals and real activities (Dechow et al., 2010). Survey evidence indicates that managers prefer to manipulate real activities rather than accruals to beat benchmarks (Graham et al., 2005) because doing so makes it more difficult for auditors, regulators (McInnis and Collins, 2011), and investors (Kothari et al., 2016), to detect real manipulations. As a result, when the costs of managing earnings by means of manipulation of accruals increase, firms shift to real activities manipulation, i.e., management actions that deviate from normal business practices, to manage their earnings (Cohen et al., 2008; Cohen and Zarowin, 2010).<sup>1</sup> Consistent with these findings, various empirical studies have provided strong evidence that managers engage in real activities manipulation (Roychowdhury, 2006; McInnis and Collins, 2011; Mao and Renneboog, 2015). Real activities manipulation is not only detrimental to the firm's long-term performance (see Bhojraj et al., 2009; Cohen and Zarowin, 2010) but could also adversely affect its stakeholders. In this paper, using a dataset of customer complaints against financial institutions, we provide novel evidence of the consequences of real activities manipulation for an important group of external stakeholders—firm customers.

The banking sector is heavily regulated in comparison with other industries, so the costs of managing earnings by manipulation of accruals are relatively high for banks. The sector, therefore, provides an ideal setting to examine how real activities manipulation affects bank customers. Bank managers' attempts to temporarily boost earnings to beat benchmarks affect customers in several ways. For instance, banks may attempt to acquire additional customers using misleading/deceptive marketing practices or exploiting customers with complex or inadequate disclosures. When customers realize they were deceived, they may complain and demand compensation. Alternatively, bank managers may try to beat earnings benchmarks by cutting costs, such as by reducing staffing levels or employing cheaper, less qualified personnel. These practices could result in more complaints about poor customer service or the provision of incorrect information. To the extent that bank managers engage in such actions, the incidence of customer complaints is expected to increase when banks struggle to meet earnings expectations.

Our data on customer complaints come from the CFPB, which was created in 2010 as a watchdog for the financial services industry. Since July 1, 2011, dissatisfied customers can lodge complaints against financial institutions with the CFPB. Filed complaints typically range from allegations of significant failings in customer service to outright exploitative and fraudulent behavior by financial institutions (Begley and Purnanandam, 2021). Indeed, many customer complaint narratives contain explicit references to acts of misconduct, criminality, cheating, theft, and deception (Bertsch et al., 2020). To ensure that the complaints we analyze reflect serious issues and failings by banks, we focus on complaints closed following monetary or non-monetary relief offered by the banks to the complainants and complaints in which consumers disputed the bank's response. These complaints are likely to be the most severe ones because they cannot be dismissed by the bank or closed with explanations (Dou and Roh, 2023).

To investigate the relationship between managers' attempts to meet earnings expectations and the incidence of customer complaints, we follow the prior literature (e.g., Degeorge et al., 1999; Caskey and Ozel, 2017) and define the quarters in which banks narrowly beat analyst earnings forecasts by an amount within a range of two cents per share as *Suspect* quarters.<sup>2</sup> These are periods when banks face pressure to meet earnings benchmarks and tend to engage in earnings manipulation (Graham et al., 2005).

We find that, on average, banks receive 13.3% more serious complaints from customers in the quarter immediately after they narrowly beat analysts' earnings forecasts, compared to the quarters in which they either miss or comfortably meet earnings forecasts. All regression specifications include bank and year fixed effects, indicating that time-invariant, unobserved bank characteristics do not explain our findings. In other words, our estimates pick up the difference in the number of complaints received by the same bank between the *Suspect* and *Non-suspect* quarters. Our results also survive a battery of robustness checks. For instance, our results remain robust to an alternative estimation model: the negative binomial model. This test addresses the concern that using log transformation on the dependent variable could potentially distort the inferences (Cohn et al., 2022). Overall, our findings indicate that banks under pressure to beat earnings benchmarks receive more customer complaints in the following quarter.

In additional analyses, we find that the increase in customer complaints following *Suspect* quarters varies with the bank CEO's compensation incentives. Specifically, the effect is more salient when a large portion of the bank CEOs' compensation consists of equity-based incentives that encourage them to take greater risks, indicating that these CEOs are more likely to put pressure on bank employees to manipulate earnings to avoid failing to meet analysts' earnings forecasts. The results are consistent with the prior literature showing that pay culture in banks contributes to excessive risk-taking behavior (Fahlenbrach and Stulz, 2011; Hagendorff and Vallascas, 2011).

Moreover, we find that the increase in complaints after the *Suspect* quarters is concentrated in products related to (i) bank loans and (ii) bank accounts and other financial services but not (iii) credit card services. We also find benchmark beating to have a longer-term effect of up to three quarters on complaints related to bank loans. This finding is consistent with the idea that customers tend to take a longer time to detect issues related to loan products than to identify problems with their bank accounts or credit cards.

In the final part of the paper, we evaluate three non-mutually exclusive explanations for the increase in the number of customer complaints after the *Suspect* quarters: (1) deceptive marketing, (2) exploitation using complex disclosures, and (3) cost cutting. We find evidence supporting the deceptive marketing and the cost-cutting explanations but not exploitation using complex disclosures.

The first explanation postulates that banks may attempt to acquire additional customers using misleading or deceptive marketing. When customers realize they were deceived, they may complain and demand compensation. Because the existing data do not allow us to directly observe customers who have been lured by misleading or deceptive marketing, we test for this by focusing on instances

<sup>1</sup> Managers can also guide analysts' expectations downward to meet earnings forecasts (Bartov et al., 2002; Matsumoto, 2002).

<sup>2</sup> We focus on analysts' earnings forecasts because the prior literature shows that investors perceive analyst forecasts to be one of the most important earnings benchmarks (see Dechow et al., 2003; Brown and Caylor, 2005; Bhojraj et al., 2009; Caskey and Ozel, 2017).

when the bank offers compensation to customers. That is, if this explanation is true, we should observe an increase in the proportion of complaints resolved with monetary relief offered by the bank to customers relative to total complaints after the *Suspect* quarters. We find that the share of complaints resolved with monetary relief marginally increases up to two quarters after the *Suspect* quarters, providing suggestive evidence of this explanation. One caveat is that while this evidence supports the deceptive marketing story, it is also consistent with other explanations, for example, the cost-cutting explanation that posits that banks may compensate customers for wrongdoings resulting from cost cutting. Therefore, the evidence supporting the deceptive marketing explanation is indirect.

The second explanation posits that when banks face earning pressures, they may try to increase sales by targeting customers that are less financially savvy, offering them costly mortgages with abusive terms to exploit their lack of knowledge. When the customers realize that they do not need or are paying too much for these products, more complaints may result. This strategy will not be successful if the banks provide adequate mortgage disclosures to customers. Because it is difficult to directly observe each customer's financial literacy levels, we test for this explanation by exploiting the passage of the 2015 TILA-RESPA integrated disclosure (TRID) rule that simplify mortgage disclosures.<sup>3</sup> The rule has been shown to reduce the cost of processing mortgage disclosures and enhance borrowers' understanding of mortgage costs (Kielty et al., 2023). Therefore, if this explanation is true, we should expect the rule to weaken the relationship between earning pressure and the incidences of customer complaints related to bank loans. Our results indicate that the passage of the TRID rule does *not* moderate the relationship between earning pressure and complaints related to bank loans. Therefore, the statistical support is insufficient for the explanation that banks exploit borrowers' confusion and mislead them to accept costly mortgages when facing earning pressures.

The third possible mechanism contends that when banks face earning pressures, they may try to reduce non-interest expenses. For instance, banks may try to cut down on employee-related expenditures such as training or employee benefits, which could result in increased errors and delays and/or decreased service quality. Under this explanation, banks do not intend to hurt customers but to cut costs, which indirectly translates into more complaints. In support of the cost-cutting explanation, we find that banks' facing earnings pressures reduce non-interest expenses and in particular (i) salary and employee benefits and (ii) marketing and other professional expenses.

Our paper contributes to several active research areas. First, we contribute to the literature on the forms and consequences of real earnings management. Prior studies show that real activities manipulation to meet earnings benchmarks adversely affects long-term firm performance (Bhojraj et al., 2009; Cohen and Zarowin, 2010) and employee safety (Caskey and Ozel, 2017). We contribute to this literature by reporting novel evidence on a previously undocumented consequence of real activities manipulation to beat earnings benchmarks—compromises to customer welfare. Furthermore, we shed light on the potential drivers behind the effect. Our findings suggest that the increase in customer complaints following the *Suspect* quarters could be driven by the banks' attempts to acquire additional customers using misleading or deceptive marketing and to cut costs to beat the benchmarks.

Our paper also contributes to the empirical accounting literature that focuses on banking (e.g., Beatty and Liao, 2014). A central theme within this literature is the investigation of the use of loan loss provisioning to manipulate earnings and regulatory capital in banks (Beatty et al., 2002; Ertan, 2021). Our paper highlights that, in addition to manipulating accounting accruals, banks also engage in real activities manipulation, which has important implications for customer welfare. Our findings have potential implications for financial regulators who supervise banking activities.

We also contribute to the nascent literature that analyzes how capital market incentives affect firm stakeholders. The prior studies focus on firms' internal stakeholders (i.e., the employees) and show that employee safety is compromised when firms face an increased threat of short selling (Bai et al., 2020) or struggle to meet earnings expectations (Caskey and Ozel, 2017). Our paper advances this literature by providing new evidence of the adverse effects of capital market pressures on bank customers and makes a timely contribution given the corporate and regulatory priority given to the protection of customer welfare.

Finally, our paper contributes to the literature on corporate governance. While this literature often perceives incentive-based compensation as an effective mechanism of corporate governance that mitigates potential conflicts between managers and shareholders (Edmans et al., 2017), our findings imply that bank managers who receive a greater proportion of their pay in incentives (i.e., those whose interests are more in line with those of shareholders) exacerbate the conflict between shareholders and customers.

## 2. Literature review and hypothesis development

Firms' capital providers, such as equity investors and creditors, use earnings as a reference to evaluate firm performance (Burgstahler and Dichev, 1997; Degeorge et al., 1999). Consistent with this, prior research finds that the stock market rewards firms for meeting earnings benchmarks, which in turn provides an incentive for managers to achieve those benchmarks.

The literature identifies three main earnings benchmarks: (1) zero earnings (Burgstahler and Dichev, 1997), (2) prior-year earnings (Barth et al., 1999), and (3) analysts' earnings forecasts (Bartov et al., 2002; Kasznik and McNichols, 2002; Lopez and Rees, 2002; Brown and Caylor, 2005). Among these benchmarks, investors tend to regard analyst forecasts as the most important earnings benchmark (Dechow et al., 2003; Brown and Caylor, 2005). Failure to meet analysts' forecasts typically results in a large decrease in

<sup>3</sup> Prior to the TRID rule, lenders give borrowers two different sets of disclosure forms at loan origination, which were separately developed by two different federal agencies under the Truth in Lending Act (TILA) and the Real Estate Settlement Procedures Act (RESPA). The two forms contain overlapping information and use inconsistent language and, consequently, fail to convey key loan terms to many borrowers (Lacko and Pappalardo, 2010; Kielty et al., 2023). Passed in October 2015, the TRID rule combines the TILA and RESPA disclosures, effectively reducing the cost of processing mortgage disclosures and enhancing borrowers' understanding of mortgage costs (Kielty et al., 2023).

firm stock prices, causing managers to face significant pay cuts or resulting in their dismissal (Skinner and Sloan, 2002). As a result, managers tend to focus on analysts' forecasts as the primary earnings benchmark (Graham et al., 2005) and try to avoid failing to meet these forecasts (Dechow et al., 2003).

When firms are at risk of missing benchmarks, managers may manipulate either accruals or real earnings (Dechow et al., 2010). For accrual-based earnings management, managers can adjust discretionary accruals, change earnings distributions, report fewer earnings declines, or report longer sequences of consecutive earnings increases (Degeorge et al., 1999; Beatty et al., 2002; Cohen et al., 2008; Ippino and Parbonetti, 2017). In the banking sector, managers can manage their accrual accounts by manipulating provisions for loan losses (Beatty and Liao, 2014) and allowances for deferred tax assets (Schrand and Wong, 2003) as well as through external equity financing activities (Bishop and Lys, 2001).

Survey evidence, however, indicates that managers prefer to manipulate real activities rather than accruals to beat benchmarks (Graham et al., 2005). Cohen and Zarowin (2010) and Roychowdhury (2006) identify three types of real activities manipulation in which managers may engage: (1) accelerating sales; (2) cutting discretionary expenses on R&D (Baber et al., 1991; Bushee, 1998; Roychowdhury, 2006), advertising (e.g., Cohen and Zarowin, 2010) or selling, general and administrative expenses (e.g., Roychowdhury, 2006); and (3) reporting lower cost of good sold. Recent evidence pertaining to the banking industry indicates that lenders under pressure to meet earnings benchmarks tend to violate covenants at abnormally high rates (Bird et al., 2022). In addition, banks also manage earnings and regulatory capital by using realized available-for-sale securities gains and losses because doing so is less costly than managing accruals or engaging in other real earnings management activities (Barth et al., 2017). Although it may allow firms to avoid failing to meet short-term earnings benchmarks, real activities manipulation is detrimental to a firm's future performance (e.g., Bhojraj et al., 2009; Cohen and Zarowin, 2010) and adversely affects its stakeholders. For instance, Caskey and Ozel (2017) show that real activities manipulation affects workplace safety.

In this paper, we examine the relationship between the pressure to beat earnings benchmarks and the quality of financial services provided by banks. We hypothesize that the pressure to beat earnings benchmarks may motivate managers to manipulate earnings, which adversely affects the quality of the bank's financial services. Banks may attempt to acquire additional customers using misleading or deceptive marketing. When customers realize they were deceived, they complain and demand compensation. Bank managers could also attempt to beat benchmarks by cutting costs, such as by reducing staff levels or employing cheaper, under-qualified staff. This could result in more complaints about poor customer service or the provision of incorrect information by the bank. To the extent that bank managers engage in such actions, the quality of the bank's financial services will deteriorate and the incidence of customer complaints will increase when banks struggle to meet earnings expectations. Thus, we formulate the following hypothesis:

**Hypothesis:** When under pressure to beat earnings benchmarks, banks provide poor services to customers, causing an increase in customer complaints.

### 3. Data, summary statistics, and empirical specifications

#### 3.1. Complaint data and sample construction

The CFPB is an agency of the U.S. government responsible for consumer protection in the financial sector. The CFPB's creation was authorized by the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010. Its main aim was to regulate financial markets and protect consumers in the aftermath of the 2008 financial crisis.

Since July 2011, the CFPB has instituted an online system that allows dissatisfied customers to file complaints against financial institutions.<sup>4</sup> The purpose of this initiative is to allow regulators to identify inappropriate practices by financial institutions and stop such practices before they become major issues. The complaints filed typically range from allegations of significant failings in customer services to claims of outright exploitative and fraudulent behavior by financial institutions (Begley and Purnanandam, 2021). Indeed, many customer complaint narratives contain explicit references to acts of misconduct, criminality, cheating, theft, and deception (Bertsch et al., 2020).

To ensure that our analyzed complaints reflect serious issues and failings from banks, we focus on complaints closed following monetary or non-monetary relief offered by the banks to the complainants and complaints in which the consumers dispute the bank's response.<sup>5</sup> Dou and Roh (2023) show that consumer-disputed complaints or those closed with relief represent more severe issues than do other complaints. These complaints account for approximately 36% of our complaint sample and are likely to be the most severe ones because they cannot be dismissed by the bank or closed with explanations. These serious complaints are also less likely to arise from unintentional errors by bank employees, and even if they do, such occurrences should be randomly distributed across the sample and would be unrelated to real earnings manipulation.

Importantly, the CFPB dataset is distinct from the dataset provided by the U.S. Financial Industry Regulatory Authority (FINRA). Because FINRA's mission is to protect the integrity of the U.S. securities industry, the FINRA dataset covers complaints related only to the misuse of financial derivatives. In contrast, complaints submitted to the CFPB include conventional banking products such as mortgages, bank accounts, and credit cards. Moreover, while the FINRA dataset contains aggregated information self-reported by registered banks, complaints in the CFPB dataset are directly reported by customers.

The process of filing a complaint through the CFPB begins with customers' identifying the problem and the financial institution

<sup>4</sup> Consumers were able to file complaints related to credit card services beginning December 1, 2011.

<sup>5</sup> Our results are robust to using the full sample of all complaints.

against which they have a grievance. Customers are also asked to specify the product or service causing the problem (e.g., mortgage, credit card, debt collection, student loan, or money transfer). Customers can also provide their home addresses so the financial institution can contact them to resolve the incident. Starting from June 2015, customers also have the option to include qualitative descriptions that give a detailed account of, for instance, events leading up to the purchase of a fraudulent product, and how the fraud was discovered. For example, a customer elaborated on their complaint against Wells Fargo as follows:

*Wells Fargo applied a personal loan for me without my knowing. I was forced to sign a document not knowing what I signed for and not knowing what the document is. Wells Fargo pulled my credit and lower my score without my consent. The unethical practice is unbelievable. The bankers and managers at XXXX, MD don't know what they are doing, practice unethical account openings, elderly abusive [...]”*

To deter frivolous complaints, the CFPB encourages customers to first reach out to their financial institutions to allow them to promptly respond to the matter without necessitating formal complaints. The CFPB also provides answers to frequently asked financial questions to help customers understand the issues they may encounter. If the issues remain unresolved after taking these steps, customers can file a formal complaint through the CFPB's online interface. Given such protocols, a time lag naturally exists between the occurrence of a problem and the filing of the corresponding complaint.

After a complaint is filed, it is sent to the financial institution for a response. The complaint is made available to the public on the CFPB website either after the CFPB receives a confirmation of the commercial relationship between the consumer and the financial institution or 15 business days after the original complaint's submission. Because financial institutions cannot hide unfavorable complaints from the public, the published information allows us to observe the entire population of customer complaints filed with the CFPB.

To further understand the timeline of the complaints, we perform a textual analysis on a sample of the complaints' narratives. Specifically, using an approach similar in spirit to [Dou and Roh \(2023\)](#), our textual analysis is based on a randomly drawn sample of 3,000 complaints with available narratives submitted in 2015. Our strategy is to search for phrases that contain words such as “day,” “week,” and “month” and used these phrases to infer the average time gap between product initiations and complaint submissions.<sup>6</sup> Because not all the complaint narratives provide cues on the product timing, our inferences were based on approximately 37% of the complaint narratives that contain hints about the product timing. Our textual analyses reveal that, on average, more than 70% of the complaints are submitted within six months after the service provision or the product initiation.

Our sample period is from Q1 2012 to Q4 2018. The vast majority of financial institutions in our initial sample are unlisted firms, such as mortgage companies, debt collection agencies, and credit unions. These firms were eventually dropped from the sample because the Institutional Brokers' Estimate System (IBES) database does not provide earnings forecast data on most unlisted firms.

In the second step of the sample selection process, we merged the complaint data with bank financial data from the Call Reports (FR Y-9C forms) provided by the Federal Reserve Bank of Chicago. This step is complicated by the fact that the financial institutions in the complaint dataset are identified by name (e.g., State Street Bank and Trust Company) rather than by a standard identifier such as RSSD ID or GVKEY. Therefore, we use fuzzy matching to merge banks in the complaint dataset with those in the Call Reports. To ensure we do not omit any suitable matches, we manually validate matches with low similarity scores using information published on the bank's website and other online resources. For instance, while “State Street Bank and Trust Company” and “State Street Corp” appear to have a low similarity score, the former is in fact a commercial subsidiary of the latter, so the two should be linked.

In the final step, we merge the complaint data with analysts' earnings forecasts and earnings per share (EPS) data from the IBES database. Following [Diether et al. \(2002\)](#), we use the raw forecast data unadjusted for stock splits. Our final sample consists of 110,459 serious complaints that are resolved with monetary and/or non-monetary relief offered by banks to dissatisfied customers. These complaints, for which we have matched financial and earnings data, were issued against 77 bank holding companies between Q1 2012 and Q4 2018.<sup>7</sup>

### 3.2. Descriptive statistics of the complaint data

[Table 1](#) reports various summary statistics for our sample of 110,459 serious customer complaints. Panel A displays the quarterly distribution of the complaints in the sample. The distribution of complaints is generally stable over time and does not cluster in any particular year or quarter. We include year fixed effects in all regression specifications to control for any time series fluctuations in the complaint data.

In Panels B and C of [Table 1](#), we provide a detailed breakdown of the complaints according to the products or services cited in the complaints. The complaint categories are mutually exclusive. As is shown, around 38% of customer complaints were related to bank loans, specifically, mortgage loans. This is consistent with mortgages being the most significant and complex transactions in which many households ever engage ([Begley and Purnanandam, 2021](#)), thereby leaving many customers exposed to potential fraud from financial institutions ([Carlin and Gervais, 2012](#); [Agarwal et al., 2014](#)). According to the CFPB's classification, the most common issues

<sup>6</sup> As an example, a customer mentioned, “When I received the first bill three weeks after the start of the mortgage, I discovered that the actual mortgage costs were higher than promised.”.

<sup>7</sup> Because the Dodd–Frank Act exempts community banks with less than \$10 billion in assets from supervision by the CFPB ([Kress and Turk, 2020](#)), many listed banks are not included in our sample. In Section 4.2, we show that our results are robust to a [Heckman's \(1979\)](#) two-step procedure, indicating that our findings are not driven by unobserved factors that make a bank more likely to be included in the sample.

**Table 1**

**Descriptive statistics on complaint data.** This table presents various descriptive statistics on our sample of complaints. Panel A presents a quarterly distribution of the complaint data. Panel B categorizes the complaints according to the product with which consumers have issue. Panel C lists the three most frequently reported issues for complaints related to bank loans, credit card services, and bank accounts and other financial services.

<b>Panel A: Time distribution of customer complaints</b>		
Year quarter	Number of complaints	
2012 Q1	6,142	
2012 Q2	4,256	
2012 Q3	2,679	
2012 Q4	5,596	
2013 Q1	4,400	
2013 Q2	5,121	
2013 Q3	3,250	
2013 Q4	3,025	
2014 Q1	3,811	
2014 Q2	4,153	
2014 Q3	2,898	
2014 Q4	3,285	
2015 Q1	4,661	
2015 Q2	4,689	
2015 Q3	3,475	
2015 Q4	4,588	
2016 Q1	5,659	
2016 Q2	6,183	
2016 Q3	4,422	
2016 Q4	4,688	
2017 Q1	2,781	
2017 Q2	3,069	
2017 Q3	3,089	
2017 Q4	3,337	
2018 Q1	3,074	
2018 Q2	3,129	
2018 Q3	3,457	
2018 Q4	1,542	

<b>Panel B: Complaints according to product classes</b>		
	Number of complaints	Percentage of total complaints
Bank loans	42,313	38.3%
Credit card services	33,813	30.6%
Bank accounts and other financial services	34,333	31.1%

<b>Panel C: Top issues reported by customers in each product class</b>		
Bank loans	Credit card services	Bank accounts and other financial services
<ul style="list-style-type: none"> <li>• Loan modification, collection, and foreclosure</li> <li>• Loan servicing, payments, escrow account</li> <li>• Trouble during payment process</li> </ul>	<ul style="list-style-type: none"> <li>• Problem with a purchase shown in your statement</li> <li>• Billing disputes</li> <li>• Fees or interests</li> </ul>	<ul style="list-style-type: none"> <li>• Managing an account</li> <li>• Account opening, closing, or management</li> <li>• Deposits and withdrawals</li> </ul>

involving bank loan complaints are related to “loan modification, collection, and foreclosure;” “loan servicing, payment, and escrow account;” and consumers having “trouble during [the] payment process.”

Complaints related to credit card services, including credit cards and prepaid cards, comprise another 31% of the total complaints. The most frequently reported issues involving credit cards are “problem[s] with a purchase shown in the statement,” “billing disputes,” and “fees or interests.” The remaining 31% of the complaints are associated with bank accounts and other financial services such as international money transfers and virtual currency. The main issues in these complaints relate to “managing an account;” “account opening, closing, or management;” and “deposits and withdrawals.”

#### 4. Research design and descriptive statistics

To investigate the relationship between the quality of financial services and managers' attempts to meet earnings expectations, we aggregate the complaint data at the bank year–quarter level and formulate the following model:

$$\text{Ln}(1 + \text{Complaint})_{i,t} = \alpha + \beta_1 \text{Suspect}_{i,t-1} + \sigma \text{ControlVariables}_{i,t-1} + \text{BankFE} + \text{YearFE} + \varepsilon_{i,t} \quad (1)$$

where  $i$  indexes bank and  $t$  indexes year–quarter. The dependent variable  $\text{Ln}(1 + \text{Complaint})_{i,t}$  is the natural logarithm of 1 plus the number of consumer complaints filed against bank  $i$  in year–quarter  $t$ . For bank year–quarter observations that do not receive any complaint, *Complaint* takes the value of 0. The independent and control variables are lagged by one quarter to reflect the lag between the time when customers identify a problem and when they finally file a complaint.

Based on the findings in [Caskey and Ozel \(2017\)](#), we define *Suspect* $_{i,t-1}$  as a dummy variable that equals 1 if bank  $i$  narrowly exceeds analysts' earnings forecasts within a range of two cents per share in quarter  $t-1$  and 0 otherwise.<sup>8</sup> That is, *Suspect* is measured one quarter before the complaint is filed and represents the periods when banks face significant pressure to meet earnings benchmarks and are thus likely to engage in earnings manipulation.<sup>9</sup>

We follow the literature (e.g., [Bartov et al., 2002](#)) and focus on the most recent analysts' earnings forecasts that are reported immediately before the actual earnings announcements.<sup>10</sup> [Richardson et al. \(2004\)](#) show that analysts initially issue optimistic forecasts and then lower their estimates to a level that firms can beat as the official earnings announcement dates approach. This finding implies that managers are more likely to focus on the most recent forecasts and implement strategies to meet earnings benchmarks. Similar to [Bartov et al. \(2002\)](#), we require the release date of the latest forecast to precede the earnings release by at least three days. This is to ensure that the latest forecast is not “contaminated” by knowledge of the actual earnings number.

Moreover, large-beat and large-miss banks are not comparable to just-meet-or-beat banks, despite controlling for bank characteristics in a linear function. To compare banks that narrowly exceed analysts' forecasts with banks that narrowly miss analysts' forecasts, we exclude observations in which banks beat or miss analysts' earnings forecasts by a very large margin, i.e., observations in the bottom and top 10% of analysts' forecast errors. The bottom 10% corresponds to banks that miss analysts' forecasts by more than seven cents and the top 10% corresponds to banks that beat forecasts by more than 16 cents. We obtain similar results using alternative cut-off points for very large-beat and very large-miss, such as the top and bottom 5% or 20% of analysts' forecasts errors.

In addition, all our regression specifications further control for *Largebeat* $_{i,t-1}$ , a dummy variable that equals 1 if bank  $i$  beats analysts' earnings forecasts by more than two cents in quarter  $t-1$  and 0 otherwise, and *Largemiss* $_{i,t-1}$ , a dummy variable that equals 1 if bank  $i$  misses analysts' earnings forecasts by more than three cents in quarter  $t-1$  and 0 otherwise. Definitions of large-beat and large-miss are based on [Caskey and Ozel \(2017\)](#).

In [Fig. 1](#), we confirm that banks try to avoid failing to meet earnings' benchmarks. Specifically, [Fig. 1](#) displays the distribution of analysts' forecast errors—the difference between an analyst's earnings forecast and the actual EPS—for banks in our sample. The width of each interval in the histogram is two cents, and the vertical axis shows the frequency of each forecasting error interval. [Fig. 1](#) indicates that banks avoid failing to meet earnings benchmarks, as evidenced by a discontinuous increase in the number of observations to the right of the zero-forecasting threshold.<sup>11</sup> Therefore, it is important to examine the potential effects of banks' earnings manipulation activities on the quality of customer services.

All regression specifications include bank and year fixed effects, indicating that corporate culture and other time-invariant unobservable factors do not explain our findings. Therefore, the coefficient on *Suspect* picks up the difference in the number of customer complaints received by the same bank between *Suspect* and *Non-suspect* quarters. The inclusion of year fixed effects controls for time series fluctuations in the data.

We include several control variables for factors that may affect the number of complaints a bank receives. First, because larger (vs. smaller) banks would naturally be expected to receive more customer complaints, we control for bank size using the natural logarithm of the book value of total assets. We further control bank stock return and bank profitability (measured as return on assets (ROA)) to account for the fact that bank managers may face more pressure to meet earnings expectations during periods of bad performance.

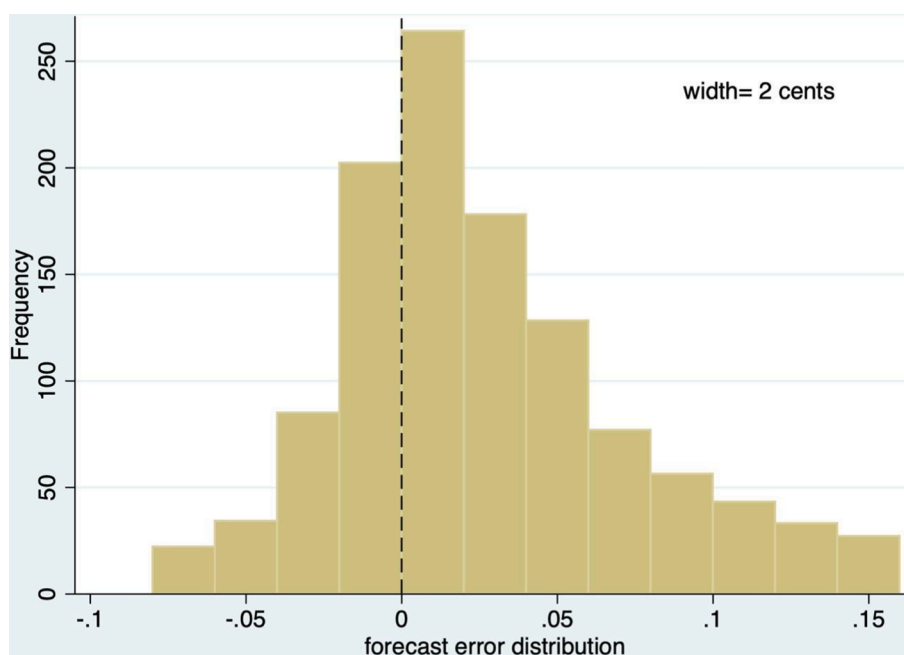
Furthermore, a bank's business model could influence its incentives and, therefore, the likelihood of mistreating customers. We therefore control for heterogeneity in banks' balance sheets using the ratios equity/assets, deposits/assets, and loans/assets. Moreover, because different financial institutions offer different products, we include three variables to control for banks' product variety, i.e., the percentage of credit card loans, commercial and industrial loans, and residential mortgage loans. In addition, banks at risk of missing earnings expectations could become more aggressive in attracting borrowers and depositors, resulting in more customer

<sup>8</sup> We focus on analysts' earnings forecasts because the accounting literature has shown that investors regard analyst forecasts as a more important benchmark for earnings than they do prior-year earnings or zero-earnings (e.g., [Bhojraj et al., 2009](#); [Brown and Caylor, 2005](#); [Caskey and Ozel, 2017](#)).

<sup>9</sup> Consistent with managers' managing their firms' earnings to respond to analysts' forecasts, [Ertan \(2021\)](#) shows that banks originate more loans in the last month of the fiscal quarter to narrowly beat earnings benchmarks.

<sup>10</sup> If more than one forecast is released on the earnings announcement day, the average value of the forecasts is used.

<sup>11</sup> Excluding the quarters in which banks narrowly miss earnings benchmarks does not alter our main estimations. In addition, one may argue that the quarters when banks narrowly beat earnings benchmarks reflect downward earnings management as managers try to reduce the pressure to meet future earnings expectations ([Roychowdhury, 2006](#)). If anything, downward earnings management works against our favor in finding that real activities manipulation results in more consumer complaints.



**Fig. 1. Distribution of Forecasting Errors.** This figure displays the distribution of analysts' forecast errors of banks in our sample. Forecast errors are the differences between analysts' earnings forecasts and the actual EPS. The width of each interval in the histogram is two cents and the vertical axis shows the frequency of each forecasting error interval.

complaints. To control for this possibility, all regression specifications control for employee, lending, and deposit growth—i.e., the percentage change in total employees, loans, and deposits, respectively—relative to the prior year. Finally, we control for the bank's growth opportunities using Tobin's Q, which compares the market value of the bank's assets to the replacement cost of assets (Chung et al., 2002). Appendix 1 defines all these variables.

Table 2 reports the summary statistics for all variables used in our regression analysis. Our sample banks receive, on average, 106 serious complaints per quarter. Approximately 16% of bank-quarter observations in our regression have no complaints. Banks narrowly beat analysts' forecasts within a range of two cents per share in 22.5% of the sample observations, which is comparable to the statistics reported in prior studies (e.g., Koh et al., 2010; Huang et al., 2017).

On average, banks in our sample have total assets of approximately \$272 billion, an ROA of 1.1%, a loans/assets ratio of 0.588, a deposits/assets ratio of 0.706, and a Tobin's Q of 1.044. These banks experience a 0.5% annual growth in total employees and a 1.8% annual lending and deposit growth. These statistics are comparable with those reported in prior studies (e.g., Ellul and Yerramilli, 2013; Adams and Ragnathan, 2018).

## 5. The relationship between beating expectations and real activity manipulation

### 5.1. Baseline results

In Panel A of Table 3, we report the baseline ordinary least squares (OLS) regression results for the impact of banks' attempts to beat analysts' earnings forecasts on the number of complaints the bank receives from customers. The model specifications vary across columns in terms of the set of fixed effects and control variables included. We add control variables in Column (2) and further control for year fixed effects in Column (3).

As shown in Panel A, the coefficients on  $Suspect_{t,t-1}$  are positive and statistically significant ( $p$ -value  $< 0.01$ ). In the model that includes the full set of fixed effects and control variables (Column (3)), the magnitude of the coefficient indicates that banks receive, on average, 13.3% ( $=e^{0.125} - 1$ ) more complaints from customers in quarters immediately after they narrowly beat analysts' earnings forecasts than in quarters when they either miss or comfortably beat earnings forecasts.<sup>12</sup> Moreover, the coefficients on  $Large\ Beat_{t,t-1}$  and  $Large\ Miss_{t,t-1}$  are both statistically insignificant, indicating that banks do not receive more customer complaints in quarters immediately after they comfortably beat or comfortably miss earnings forecasts.

All regression specifications include bank and year fixed effects to ensure that the coefficient on  $Suspect$  picks up the difference in the number of customer complaints received by the same bank between  $Suspect$  and  $Non-suspect$  quarters. This within-bank analysis implies that our results do not pick up time-invariant, unobservable bank characteristics such as its corporate culture. Overall, the

<sup>12</sup> This corresponds to a 95% confidence interval [3.1%, 24.5%] of the increase in customer complaints.



**Table 2****Descriptive statistics.** This table displays other summary statistics. All variables are as defined in [Appendix 1](#).

	N	mean	Std.	p1	p50	p99
Complaints	1,046	105.600	268.000	0.000	5.000	1,146.000
Ln(Complaints + 1)	1,046	2.431	2.080	0.000	1.792	7.045
Suspect	1,046	0.225	0.418	0.000	0.000	1.000
Large beat	1,046	0.476	0.500	0.000	0.000	1.000
Large miss	1,046	0.077	0.267	0.000	0.000	1.000
Ln(Assets)	1,046	17.990	1.548	15.050	17.660	21.630
ROA	1,046	0.011	0.006	-0.007	0.010	0.034
TobinQ	1,046	1.044	0.074	0.956	1.030	1.370
Lending	1,046	0.588	0.196	0.082	0.657	0.860
Lending growth	1,046	0.018	0.052	-0.051	0.013	0.181
Deposit	1,046	0.706	0.137	0.164	0.737	0.869
Deposit growth	1,046	0.018	0.058	-0.063	0.011	0.180
Employment growth	1,046	0.005	0.097	-0.094	0.000	0.221
Credit card loans	1,046	0.039	0.130	0.000	0.001	0.671
Residential mortgage loans	1,046	0.156	0.113	0.000	0.150	0.513
Commercial and industrial loans	1,046	0.116	0.088	0.000	0.105	0.387
Stock return	1,046	0.114	0.258	-0.355	0.102	0.811
CEO vega/delta	936	0.215	0.291	0.000	0.085	1.322
Non-interest expenses ratio	1,046	9.422	7.604	1.083	7.493	38.610

findings in Panel A support our hypothesis that, under pressure to beat earnings benchmarks, banks provide exploitative and fraudulent services to customers, resulting in an increased number of customer complaints in the following quarter.

In Panel B of [Table 3](#), we evaluate the potential long-term effects of benchmark beating on customer complaints by further including  $Suspect_{t-2}$ ,  $Suspect_{t-3}$ , and  $Suspect_{t-4}$ , representing two, three, and four quarters, respectively, before quarter  $t$  when the complaint is filed. The regressions similarly include four dummies for large-beat ( $Large\ Beat_{i,t-1}$ ,  $Large\ Beat_{i,t-2}$ ,  $Large\ Beat_{i,t-3}$ , and  $Large\ Beat_{i,t-4}$ ) and four dummies for large-miss ( $Large\ Miss_{i,t-1}$ ,  $Large\ Miss_{i,t-2}$ ,  $Large\ Miss_{i,t-3}$ , and  $Large\ Miss_{i,t-4}$ ). All variables are measured relative to  $Ln(Complaints + 1)_t$  in quarter  $t$ . Hence, a positive significant coefficient on, for instance,  $Suspect_{t-2}$  would indicate that the incidence of customer complaints increases two quarters after the *Suspect* quarter.

In the model that includes the full set of fixed effects and control variables (Column (3) of Panel B), we observe a significantly positive coefficient on  $Suspect_{t-1}$  and a marginally positive coefficient on  $Suspect_{t-2}$ , while the coefficients on  $Suspect_{t-3}$  and  $Suspect_{t-4}$  are statistically insignificant. We also find in Panel B that none of the time indicators for large-beat and large-miss are statistically significant below conventional levels.

Overall, the results indicate that complaints increase up to two quarters after the banks narrowly beat earnings benchmarks.<sup>13</sup> In Section 4.3.2, we show that the complaint timing depends on the product that gave rise to the complaint. Specifically, while customers may identify problems with their bank accounts immediately, it takes longer for customers to discover issues related to their loans.

## 5.2. Robustness tests on the baseline results

We perform various robustness tests on our baseline findings. The results are shown in Internet Appendix IA1. Panel A demonstrates that our results are robust to using a count model. Given that complaints are count data and 16% of the observations in our sample have zero complaints, using a log transformation on the dependent variable could potentially distort the inferences ([Cohn et al., 2022](#)). To address this concern, we re-estimate the regressions using a count model. Given that the complaint data in our sample are overly dispersed,<sup>14</sup> we use the a negative binomial regression, which has the same mean structure as a Poisson regression with an extra parameter to model the overly dispersed data. The dependent variable is the number of complaints a bank receives in a given year-quarter.

Across all specifications in Panel A, the coefficient estimates for *Suspect* are positively significant. Moreover, in Column (3) of Panel A which includes the full set of control variables and fixed effects, the magnitude of the *Suspect* coefficient is 0.097. This coefficient captures the expected difference in the logs complaints between *Suspect* and *Non-suspect* quarters. It therefore indicates that banks receive, on average, 10.2% ( $=e^{0.097} - 1$ ) more complaints from customers in quarters immediately after they narrowly beat analysts' earnings forecasts than in quarters when they either miss or comfortably beat earnings forecasts. This magnitude is comparable to our baseline estimate of 13.3% in Column (3) of [Table 3](#).

In Panel B, we use alternative definitions of earnings benchmarks. In Column (1), instead of using a threshold of two cents, we define *Suspect* as the bank quarters in which banks beat analysts' forecasts within a range of one cent. We continue to find a significantly positive relation between benchmark beating and customer complaints using this alternative threshold. In Column (2), we use an alternative earnings benchmark, zero-earnings, i.e., the bank quarters in which the value of net income scaled by the beginning

<sup>13</sup> The observed effect up to two quarters is also consistent with the result of our textual analysis that most complaints are submitted within six months following the provision of the poor financial services.

<sup>14</sup> The standard deviation of the number of complaints is 268 while the mean value is 106.

**Table 3**

**Benchmark beating and customer complaints.** Panel A examines the relation between benchmark beating and the incidence of customer complaints. The data are aggregated at the bank-year-quarter level. The dependent variable is  $\ln(\text{Complaints} + 1)_t$ , the natural logarithm of one plus the number of complaints a bank receives in year-quarter  $t$ . The main explanatory variable of interest is  $\text{Suspect}_{t-1}$ , a dummy variable that equals one if the bank beats analysts' earnings forecasts within a range of two cents in quarter  $t-1$ . Panel B evaluates the potential long-term effects of benchmark beating on customer complaints.  $\text{Suspect}_{t-1}$ ,  $\text{Suspect}_{t-2}$ ,  $\text{Suspect}_{t-3}$ , and  $\text{Suspect}_{t-4}$  indicate the first, second, third, and fourth quarter before the complaint quarter  $t$ , respectively. The regressions similarly include  $\text{Large Beat}_{t-1}$ ,  $\text{Large Beat}_{t-2}$ ,  $\text{Large Beat}_{t-3}$ ,  $\text{Large Beat}_{t-4}$ ,  $\text{Large Miss}_{t-1}$ ,  $\text{Large Miss}_{t-2}$ ,  $\text{Large Miss}_{t-3}$ , and  $\text{Large Miss}_{t-4}$ . Robust standard errors are reported in parentheses. All variables are as defined in Appendix 1. \*\*\*, \*\* and \* indicate significance at a two-sided 1%, 5% and 10% level, respectively.

Panel A: Benchmark beating and customer complaints			
Dependent variable: $\ln(\text{Complaints} + 1)_t$	(1)	(2)	(3)
Suspect <sub>t-1</sub>	0.126*** [0.043]	0.134*** [0.052]	0.125*** [0.048]
Large beat <sub>t-1</sub>		0.061 [0.049]	0.072 [0.046]
Large miss <sub>t-1</sub>		0.046 [0.076]	0.026 [0.074]
Stock return <sub>t-1</sub>		0.436*** [0.092]	0.122 [0.128]
ROA <sub>t-1</sub>		-14.045* [7.411]	-6.348 [7.284]
Leverage <sub>t-1</sub>		-10.570*** [2.200]	-10.519*** [1.995]
Ln(Assets) <sub>t-1</sub>		0.107 [0.169]	0.766*** [0.206]
TobinQ <sub>t-1</sub>		-1.440* [0.778]	0.865 [1.024]
Lending <sub>t-1</sub>		-2.525*** [0.704]	-2.112*** [0.655]
Lending growth <sub>t-1</sub>		0.58 [0.614]	0.409 [0.595]
Credit card loans <sub>t-1</sub>		1.676 [11.242]	9.512 [10.170]
Residential mortgage loans <sub>t-1</sub>		3.166*** [0.991]	2.950*** [0.952]
Commercial and industrial loans <sub>t-1</sub>		-0.185 [1.164]	2.119* [1.126]
Deposits <sub>t-1</sub>		1.337 [1.005]	1.32 [0.976]
Deposit growth <sub>t-1</sub>		0.541 [0.545]	0.177 [0.528]
Employment growth <sub>t-1</sub>		-1.255*** [0.446]	-1.034** [0.405]
Year fixed effects	No	No	Yes
Bank fixed effects	Yes	Yes	Yes
No. of Observations	1,046	1,046	1,046
R <sup>2</sup>	0.933	0.941	0.948
Panel B: Potential long-term impact of benchmark beating			
Dependent variable: $\ln(\text{Complaints}+1)_t$	(1)	(2)	(3)
Suspect <sub>t-1</sub>	0.147*** [0.053]	0.132** [0.053]	0.127** [0.050]
Suspect <sub>t-2</sub>	0.142*** [0.053]	0.090* [0.054]	0.095* [0.050]
Suspect <sub>t-3</sub>	0.046 [0.054]	0.015 [0.055]	0.016 [0.050]
Suspect <sub>t-4</sub>	0.077 [0.056]	0.026 [0.057]	0.018 [0.052]
Large beat <sub>t-1</sub>	0.036 [0.051]	0.058 [0.049]	0.071 [0.046]
Large beat <sub>t-2</sub>	0.038 [0.048]	0.044 [0.046]	0.074 [0.045]
Large beat <sub>t-3</sub>	0.026 [0.048]	0.025 [0.047]	0.046 [0.044]
Large beat <sub>t-4</sub>	0.048 [0.047]	0.028 [0.046]	0.036 [0.045]
Large miss <sub>t-1</sub>	0.044 [0.083]	0.046 [0.077]	0.030 [0.075]
Large miss <sub>t-2</sub>	0.023	0.007	0.008

(continued on next page)

Table 3 (continued)

Panel B: Potential long-term impact of benchmark beating			
Dependent variable: $\ln(\text{Complaints}+1)_t$	(1)	(2)	(3)
Large miss <sub>t-3</sub>	[0.075] 0.050	[0.073] 0.037	[0.069] 0.032
Large miss <sub>t-4</sub>	[0.070] 0.040	[0.068] 0.005	[0.065] -0.012
Control variables	[0.077] No	[0.072] Yes	[0.071] Yes
Year fixed effects	No	No	Yes
Bank fixed effects	Yes	Yes	Yes
No. of Observations	1,013	1,013	1,013
R <sup>2</sup>	0.934	0.942	0.949

market value is between 0 and 0.02 and 0 otherwise (Dechow et al., 2003). We do not identify a statistically significant relationship between the zero-earnings benchmark and the incidence of customer complaints. This result could be because the importance of zero-earnings has decreased since the 2002 passage of the Sarbanes-Oxley Act (Gilliam et al., 2015; Caskey and Ozel, 2017).

In Panel C, we use Heckman's (1979) two-step model to address the sample self-selection concern that our sample may include banks eligible for CFPB supervision (i.e., banks with more than \$10 billion in total assets) that receive at least one customer complaint over the sample period. The first step of the Heckman procedure estimates the probability that a CFPB-eligible bank is included in our sample.<sup>15</sup> The second step includes  $\lambda$ , which contains information from the first step to control for the unobservable factors that make sample inclusion more likely. As shown in Panel C, the coefficient on  $Suspect_{t-1}$  remains significantly positive.

### 5.3. Additional analyses

In this section, we present various analyses that explore the heterogeneity in the relationship between benchmark beating and the incidence of customer complaints.

#### 5.3.1. Executive incentive compensation

We begin by examining whether the use of incentive-based compensation aggravates the effect of benchmark beating on the incidence of customer complaints. We hypothesize that CEOs whose compensation is more sensitive to the bank's stock performance will have a greater incentive to manipulate earnings to avoid failing to meet analysts' earnings forecasts than will other managers.<sup>16</sup>

Following Cassell et al. (2012), we measure bank CEO equity incentives using  $CEO\ vega/\delta$ .  $Vega$  measures the sensitivity of CEO equity and option compensation relative to stock return volatility, while  $\delta$  measures the sensitivity of CEO equity and option compensation relative to stock price. Scaling  $vega$  by  $\delta$  results in a measure of the CEO's incentive to take risks to maximize the value of their equity and option compensation. To test this hypothesis, we interact  $Suspect_{t-1}$  with  $CEO\ vega/\delta_{t-1}$  and report the results in Table 4.

As shown in Column (2) Table 4, the coefficients on the interaction term between  $Suspect_{t-1}$  and  $CEO\ vega/\delta_{t-1}$  are significantly positive ( $p$ -value < 0.05). Our results indicate that the effect of benchmark beating on customer complaints is stronger among banks led by CEOs whose compensation consists of a large portion of equity-based incentives that encourage them to take greater risks. These CEOs could be more likely to put pressure on their employees to manipulate earnings to avoid failing to meet analysts' earnings forecasts. This finding is consistent with the literature showing that pay cultures in banks contribute to excessive risk-taking behavior (e.g., Fahlenbrach and Stulz, 2011; Hagendorff and Vallascas, 2011). More broadly, while prior research often perceives equity incentive-based compensation as an effective corporate governance mechanism that mitigates potential conflicts between managers and shareholders (Edmans et al., 2017), our evidence indicates that rewarding bank CEOs with a large portion of equity-based compensation exacerbates the conflict between shareholders and customers.

**5.3.1.1. Heterogeneity in customer complaints.** We next exploit the heterogeneity in customer complaints and examine the relationships between benchmark beating and different types of customer complaints. Specifically, we distinguish customer complaints according to the products that gave rise to the complaints: (1) bank loans, (2) credit card services, and (3) bank accounts and other financial services. Table 5 displays the results.

We find that the number of complaints related to bank accounts and other financial services significantly increases, by 16.1% ( $p$ -

<sup>15</sup> The sample in the first step includes (1) banks included in our main sample as well as (2) banks that we could not include in the sample either because they are exempt from CFPB supervision or they did not receive any complaints over the sample period. The dependent variable in the first step is a dummy that equals 1 if a bank is included in the sample and 0 otherwise. The first-step regression includes similar fixed effects and control variables as in Equation (1).

<sup>16</sup> We obtain similar results when focusing on CFOs instead of CEOs.

**Table 4**

**The moderating effect of CEO incentive compensation.** This table examines the moderating effect of bank CEOs' incentive-based compensation on the relation between benchmark beating and the incidence of customer complaints. The data are aggregated at the bank-year-quarter level. *CEO vega/delta* is CEO's vega (which measures the sensitivity of CEO equity and option compensation relative to stock return volatility) divided by CEO's delta (which measures the sensitivity of CEO equity and option compensation relative to stock price). The dependent variable is  $\ln(\text{Complaints} + 1)_t$ , the natural logarithm of one plus the number of complaints a bank receives in quarter  $t$ .  $\text{Suspect}_{t-1}$  is a dummy variable that equals one if the bank beats analysts' earnings forecasts within a range of two cents in quarter  $t-1$ . Control variables are collapsed for brevity and are identical to those in Panel A of Table 3. Robust standard errors are reported in parentheses. All variables are as defined in Appendix 1. \*\*\*, \*\* and \* indicate significance at a two-sided 1%, 5% and 10% level, respectively.

Dependent variable: $\ln(\text{Complaints} + 1)_t$	(1)	(2)
$\text{Suspect}_{t-1}$	0.123** [0.054]	0.125** [0.052]
$\text{Suspect}_{t-1} * \text{CEO vega/delta}_{t-1}$	0.350* [0.179]	0.362** [0.171]
CEO vega/delta <sub>t-1</sub>	-0.086 [0.193]	-0.126 [0.195]
Control variables	Yes	Yes
Year fixed effects	No	Yes
Bank fixed effects	Yes	Yes
No. of Observations	934	934
R <sup>2</sup>	0.944	0.949

**Table 5**

**Benchmark beating and customer complaints: Split by complaint types.** This table reports the relation between benchmark beating and different types of customer complaints. The data are aggregated at the bank-year-quarter level. The dependent variables are the natural logarithm of one plus the number of complaints a bank receives in quarter  $t$  that are related to bank loans (Column (1)), credit card services (Column (2)), and bank accounts and other financial services (Column (3)).  $\text{Suspect}_{t-1}$ ,  $\text{Suspect}_{t-2}$ ,  $\text{Suspect}_{t-3}$ , and  $\text{Suspect}_{t-4}$  indicate the first, second, third, and fourth quarter before the complaint quarter  $t$ . Control variables are collapsed for brevity and are identical to those in Panel B of Table 3. Robust standard errors are reported in parentheses. All variables are as defined in Appendix 1. \*\*\*, \*\* and \* indicate significance at a two-sided 1%, 5% and 10% level, respectively.

Dependent variables: $\ln(\text{Complaints} + 1)_t$	(1)	(2)	(3)
	Bank loans	Credit card services	Bank accounts and other financial services
$\text{Suspect}_{t-1}$	0.102* [0.053]	-0.021 [0.038]	0.149*** [0.052]
$\text{Suspect}_{t-2}$	0.102* [0.055]	-0.006 [0.039]	0.020 [0.056]
$\text{Suspect}_{t-3}$	0.086* [0.052]	-0.022 [0.038]	0.075 [0.056]
$\text{Suspect}_{t-4}$	0.013 [0.048]	-0.025 [0.037]	0.002 [0.054]
Control variables	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes
No. of Observations	1,009	1,009	1,009
R <sup>2</sup>	0.920	0.959	0.923

value < 0.01), in the quarter immediately after banks narrowly beat earnings benchmarks.<sup>17</sup> We do not detect any significant effect beyond the one-quarter mark for complaints related to bank accounts and other financial services. In contrast, we find that the number of complaints related to bank loan products marginally increase for up to three quarters after the *Suspect* quarters. This result is consistent with the idea that while customers tend to quickly recognize problems in their bank accounts, it takes longer for customers to discover issues related to their bank loans.

We find no statistically significant increase in complaints related to credit card services following the *Suspect* quarter. This could be because many of the credit/debit card-related wrongdoings are driven by unauthorized activities by third parties, and are less likely to be driven by banks' incentives. For example, an enforcement action issued against Citibank<sup>18</sup> highlighted the key role of the bank's third-party service providers in intentionally misrepresenting product terms and conditions to cardholders. Overall, the results in Table 5 indicate that the increase in customer complaints following the *Suspect* quarters is concentrated in products related to bank

<sup>17</sup> This corresponds to a 95% confidence interval [4.9%, 28.5%] of the increase in complaints related to bank accounts and other financial services following the *Suspect* quarter.

<sup>18</sup> <https://www.consumerfinance.gov/enforcement/actions/citi-credit-card-add-ons/>.

loans and bank accounts as well as other financial services.

## 6. Potential explanations

In this section, we evaluate three non-mutually exclusive explanations for the increase in the number of customer complaints after the Suspect quarters: (1) deceptive marketing, (2) exploitation using complex disclosures, and (3) cost cutting.

### 6.1. Deceptive marketing

The first explanation postulates that banks may attempt to acquire additional customers using misleading or deceptive marketing. When customers realize they were deceived, they complain and demand compensation. Because existing data do not allow us to directly observe customers who have been lured by misleading or deceptive marketing, we test for this by focusing on instances when the bank offers compensation to customers. That is, if this explanation is true, we should observe an increase in the proportion of complaints resolved with monetary relief offered by the bank to customers relative to total complaints after the *Suspect* quarters. Therefore, to test for this channel, we regress *Suspect* on the *%Complaints with Monetary Relief*, the number of complaints resolved with monetary relief offered by the bank to customers divided by the total number of complaints the bank received in a given quarter-year.<sup>19</sup>

Table 6 displays the results. In Column (3), which includes the full set of fixed effects and control variables, the coefficient estimates indicate that the fraction of complaints resolved with monetary relief increases up to two quarters after banks narrowly beat earnings benchmarks. Because the effect is marginally significant at the 10% level and is detected only two quarters after the *Suspect* quarters, we interpret the results in Table 6 as providing suggestive evidence of this channel. One caveat is that while this evidence supports the deceptive marketing story, it is also consistent with other explanations, for example, the cost-cutting explanation that banks may compensate customers for wrongdoings results from cost-cutting. Therefore, the evidence supporting the deceptive marketing explanation is indirect.

### 6.2. Exploitation using complex disclosures

The second explanation posits that when banks face earnings pressures, they may try to increase sales by targeting customers that are less financially savvy and offer them complex and costly products to exploit their lack of knowledge. When the abused customers realize that they do not need or are paying too much for these products, it may lead to more complaints. This strategy will not be successful if the bank provides adequate mortgage disclosures to customers.

To test for this explanation, we exploit the passage of the 2015 TRID rule that simplify mortgage disclosures and examine its effect on the relationship between benchmark beating and the quality of customer services. Prior to the TRID rule, lenders give borrowers two different sets of disclosure forms at loan origination, which were separately developed by two different federal agencies under the TILA and the RESPA. The two forms contain overlapping information and use inconsistent language; thus, they fail to convey key loan terms to many borrowers (Kielty et al., 2023; Lacko and Pappalardo, 2010).

As a result, in October 2015, the CFPB passed the TRID rule to integrate the TILA and RESPA disclosures. Specifically, the two estimate forms are combined into a single Loan Estimate form, and the two disclosure forms are integrated into a single Closing Disclosure form. The TRID rules therefore reduces the cost of processing mortgage disclosures for applicants, helps them gain a better understanding of the loan terms, and has been shown to curb predatory lending (Kielty et al., 2023).

If banks manipulate their earnings by exploiting borrowers' confusion and misleading them to accept costly mortgages, we should expect banks to refrain from pursuing this strategy after TRID's enactment. That is, if this explanation holds, we should observe that TRID weaken the relationship between earning pressure and the incidences of customer complaints. To test for this idea, we interact  $Suspect_{t-1}$  with *Post-TRID*, a dummy that equals 1 on or after 2016 and 0 otherwise. Importantly, because the TRID rule affects only mortgage/loan disclosures, the analyses in Table 7 focus only on complaints related to bank loans. The dependent variable is accordingly defined as the natural logarithm of the number of customer complaints related to bank loans.

Table 7 displays the results. We find that while the passage of TRID is, on average, associated with fewer incidences of customer complaints related to bank loans (Column (1)),<sup>20</sup> the interaction coefficient on  $Suspect_{t-1} * Post-TRID$  is statistically insignificant at conventional levels (Column (2)). The results therefore suggest that increased mortgage disclosures following TRID do not moderate the relationship between earning pressure and customer complaints related to bank loans. Collectively, we find no statistical support for the explanation that banks exploit borrowers' confusion and mislead them to accept costly mortgages when banks face earnings pressures.

### 6.3. Cost cutting

The third possible mechanism contends that when banks face earnings pressures, they may try to reduce non-interest expenses. For instance, banks may try to cut employee-related expenditures such as training or employee benefits, which could result in an increase

<sup>19</sup> We find similar results if the numerator also includes complaints closed with non-monetary relief offered to customers.

<sup>20</sup> We do not include year fixed effects in Column (1) to avoid a perfect multicollinearity with the *Post-TRID* dummy.

**Table 6**

**Benchmark beating and the share of complaints resolved with relief offered to customers.** This table reports the relation between benchmark beating and the fraction of complaints closed with monetary relief offered by the bank to customers. The data are aggregated at the bank-year-quarter level. The dependent variable is %Complaints with Monetary Relief<sub>*t*</sub>, the number of complaints resolved with monetary relief offered by the bank to customers divided by the total number of complaints the bank received in year-quarter *t*. *Suspect*<sub>*t-1*</sub>, *Suspect*<sub>*t-2*</sub>, *Suspect*<sub>*t-3*</sub>, and *Suspect*<sub>*t-4*</sub> indicate the first, second, third, and fourth quarter before the complaint quarter *t*, respectively. The control variables in Columns (1) and (2) are identical to those in Panel A of Table 3. The control variables in Column (3) are identical to those in Panel B of Table 3. Robust standard errors are reported in parentheses. All variables are as defined in Appendix 1. \*\*\*, \*\* and \* indicate significance at a two-sided 1%, 5% and 10% level, respectively.

Dependent variables: %Complaints with Monetary Relief <sub><i>t</i></sub>	(1)	(2)	(3)
Suspect <sub><i>t-1</i></sub>	0.025** [0.012]	0.023* [0.014]	0.026* [0.014]
Suspect <sub><i>t-2</i></sub>			0.028** [0.014]
Suspect <sub><i>t-3</i></sub>			0.001 [0.015]
Suspect <sub><i>t-4</i></sub>			-0.013 [0.014]
Control variables	No	Yes	Yes
Year fixed effects	No	Yes	Yes
Bank fixed effects	Yes	Yes	Yes
No. of Observations	1,046	1,046	1,013
R <sup>2</sup>	0.327	0.346	0.359

**Table 7**

**The moderating effect of the TRID rule.** This table examines the moderating effect of the passage of TRID rule on the relationship between benchmark beating and the quality of customer services. *Post TRID* is a dummy variable that equals one after Q1 2016 and zero otherwise. The data are aggregated at the bank-year-quarter level. The dependent variable is  $\ln(\text{Loan Complaints} + 1)_t$ , the natural logarithm of one plus the number of complaints about loan products a bank receives in quarter *t*. *Suspect*<sub>*t-1*</sub> is a dummy variable that equals one if the bank beats analysts' earnings forecasts within a range of two cents in quarter *t-1*. Control variables are collapsed for brevity and are identical to those in Panel A of Table 3. Robust standard errors are reported in parentheses. All variables are as defined in Appendix 1. \*\*\*, \*\* and \* indicate significance at a two-sided 1%, 5% and 10% level, respectively.

Dependent variable: $\ln(\text{Loan Complaints} + 1)_t$	(1)	(2)
Suspect <sub><i>t-1</i></sub>	-	0.090 [0.063]
Suspect <sub><i>t-1</i></sub> *Post TRID	-	-0.038 [0.104]
Post TRID	-0.353*** [0.055]	-
Control variables	Yes	Yes
Year fixed effects	No	Yes
Bank fixed effects	Yes	Yes
No. of Observations	1,046	1,046
R <sup>2</sup>	0.907	0.918

in errors and delays and a decrease in service quality. The following example illustrates how cost cutting in relation to staff training may induce customer complaints: "I have experienced alarmingly poor follow up, lost documentation, non-answers to my questions over the phone, no response to emails I sent, no assurances that someone will call back, and the reassignment of now four dedicated loan specialists." This complaint is likely to be driven by high staff turnover and/or staff's lacking the experience and motivation to perform the job, which could result from the bank's attempts to cut costs. Under this explanation, banks do not directly aim to hurt the customers, but they aim to cut costs, which indirectly translates into more complaints induced by poorer services.

If this explanation is true, we should observe banks' incurring lower non-interest expenses in the quarters when they narrowly beat analysts' forecasts. To test for this channel, we regress *Suspect* on the *Non-interest expense ratio*, non-interest expenses scaled by interest expenses.<sup>21</sup> Panel A of Table 8 displays the results.

Across all specifications in Panel A, the coefficients on *Suspect* are negative and statistically significant (p-value < 0.05). In the model that includes the full set of fixed effects and control variables (Column (3)), the estimate indicates that, relative to the median non-interest expense ratio of 7.5, the non-interest expense ratio is 8.9% lower during the quarters when banks narrowly beat analysts' earnings forecasts. Holding all else constant, given that the median non-interest expenses is \$104 million and the number of share outstanding is 220 million, the magnitude implies that the reduction in non-interest expenses could allow banks to boost their EPS by

<sup>21</sup> Interest expenses are incurred when banks perform their core business activities. Hence, this ratio allows us to hold a bank's business activities constant and examines whether banks reduce their non-interest expenses when facing earnings pressures.

**Table 8**

**Benchmark beating and non-interest expenses.** Panel A reports the relation between benchmark beating and a bank's non-interest expense ratio. The dependent variable is *Non-interest expense ratio*, non-interest expenses divided by interest expenses. Panel B decomposes non-interest expenses into: Salary and employee benefits (Column (1)), Expenses of premises and other fixed assets (Column (2)), Impairment and amortization expenses (Column (3)), and Marketing and other professional expenses (Column (4)). All dependent variables in Panel B are scaled by non-interest expenses. The main explanatory variable of interest in both panels is *Suspect<sub>t</sub>*, a dummy variable that equals one if the bank beats analysts' earnings forecasts within a range of two cents in quarter *t*. Control variables are collapsed for brevity and are identical to those in Panel A of Table 3. Robust standard errors are reported in parentheses. All variables are as defined in Appendix 1. \*\*\*, \*\* and \* indicate significance at a two-sided 1%, 5% and 10% level, respectively.

Panel A: Benchmark beating and non-interest expense ratio				
Dependent variable: Non-interest expense ratio <sub>t</sub>	(1)	(2)	(3)	
Suspect <sub>t</sub>	-0.523**	-0.832**	-0.666**	
	[0.256]	[0.324]	[0.283]	
Control variables	No	Yes	Yes	
Year fixed effects	No	No	Yes	
Bank fixed effects	Yes	Yes	Yes	
No. of Observations	1,046	1,046	1,046	
R-squared	0.933	0.941	0.948	
Panel B: Benchmark beating and non-interest expense categories				
Dependent variables:	(1) Salary & employee benefits	(2) Expenses of premises & other fixed assets	(3) Impairment amortization	(4) Marketing expenses
Suspect <sub>t</sub>	-0.032**	-0.002	-0.0005	-0.002**
	[0.014]	[0.001]	[0.001]	[0.001]
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes
No. of Observations	1,046	1,046	1,046	1,046
R-squared	0.160	0.896	0.572	0.719

approximately four cents ( $= (8.9\% \times \$104 \text{ m}) / 220 \text{ m}$ ). In our sample, there are 733 observations in which banks beat earnings expectations. Among these occurrences, 401 of them (or 55%) are instances when banks beat earnings expectations within a range of four cents. Had there been no cut in the non-interest expense, these banks would have missed the benchmark. This suggests that cost-cutting can allow many banks to avoid missing earnings benchmark. Overall, our results support the cost-cutting channel that when banks face earnings pressures, they try to reduce non-interest expenses, which could result in poorer customer services, resulting in customer complaints.<sup>22</sup>

In Panel B, we explore the specific components of non-interest expenses that banks attempt to reduce when they face earnings pressures. Following the classification from the Federal Reserve System's bank holding company performance report, we categorize non-interest expenses into four components: salary and employee benefits (Column (1)), premises and other fixed assets (Column (2)), impairment and amortization (Column (3)), and marketing and other professional expenses (Column (4)).<sup>23</sup> All of these expenses are scaled by total non-interest expenses. Ex ante, we do not expect banks to reduce expenses of premises and amortization expenses because these expenses are difficult to change overnight. However, for completeness, we include these expenses in the analyses.

As shown in Panel B of Table 8, we observe a statistically significant reduction in salary and employee benefits and marketing and other professional expenses during the *Suspect* quarters. Given that salary is usually fixed, banks are likely to reduce employee benefits, such as bonus payments, when facing earnings pressures. In contrast, we do not find that banks cut the expenses of premises and other fixed assets or impairment and amortization expenses. This finding is expected given the difficulty to reduce these expenses overnight.

Collectively, we find evidence supporting the cost-cutting explanation that when banks face earnings pressures, they try to decrease discretionary employee and marketing expenses, which could cause an increase in errors, delays, and poor customer service, resulting in more customer complaints. Conclusively, we find evidence supporting the deceptive marketing and the cost-cutting explanations but not the exploitation using complex disclosures explanation in this section.

## 7. Conclusions

Using more than 100,000 serious complaints filed with the CFPB by bank customers, we show that banks receive, on average, 13.3% more customer complaints in the quarter immediately after they narrowly beat analysts' earnings forecasts compared to the quarters when they either miss or comfortably meet earnings forecasts. The effect is both statistically significant and economically meaningful. The increases in customer complaints are concentrated in products related to bank loans and bank accounts. We also explore the potential explanations driving the effects. We find that the results could be due to banks' attempting to acquire additional

<sup>22</sup> The EPS will increase by seven cents if the calculation is based on the average value of both the interest expense and the number of outstanding shares.

<sup>23</sup> Marketing and other professional expenses belong to and are typically the most important component of "Other operating expenses."

customers using deceptive marketing and banks' attempts to cut costs when they face earnings pressures.

Moreover, we find that the increase in customer complaints varies systematically across bank CEOs. Specifically, the relationship is stronger when bank CEOs receive compensation consisting of a large portion of equity-based incentives that encourage the CEOs to take greater risks, consistent with the literature showing that pay cultures in banks contribute to excessive risk-taking behavior.

Overall, our research contributes significantly to the literature on real activities manipulation. We provide novel evidence of a previously undocumented consequence of real activities manipulation to beat earnings benchmarks, namely, compromises in customer welfare. Thus, whereas the corporate governance literature emphasizes incentives for shareholders to mitigate shareholder–manager conflicts, our paper demonstrates that such incentives exacerbate the conflicts between shareholders and customers. Our results resonate with the regulator view that customer welfare should be a priority for corporations.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

Data will be made available on request.

### Appendix 1. . Variable definitions

Variables	Definition	Source
<b>CFPB Complaints</b>		
Ln(Complaints + 1)	The natural logarithm of one plus the number of complaints a bank receives in a given quarter.	CFPB Complaint Database
<b>Bank Characteristics</b>		
Suspect	A dummy variable that equals one if the bank meets or just beats analysts' earnings expectation within the range of 2 cents, and zero otherwise.	I/B/E/S
Large beat	A dummy variable that equals one if the bank beats analysts' earnings expectation by more than 2 cents, and zero otherwise.	I/B/E/S
Large miss	A dummy variable that equals one if the bank misses analysts' earnings expectation by more than 3 cents, and zero otherwise.	I/B/E/S
Ln(Assets)	The natural logarithm of the book value of bank's total asset (BHCK2170)	Bank Regulatory
ROA	Net income (BHCK4340) divided by total assets	Bank Regulatory
Book value of equity	Compustat item CEQ	Compustat
Market value of equity	The number of shares outstanding at the end of each fiscal quarter (CSHO) multiply by stock price at the end of the fiscal quarter (PRCC.Q)	Compustat
TobinQ	(Book value of assets minus book value of equity plus market value of equity)/Book value of assets	Compustat
Lending	Loans (BHCK2122) divided by total assets	Bank Regulatory
Lending growth	The percentage change in total loans relative to the prior year	Bank Regulatory
Deposit	The sum of (BHDm6631, BHDm6636, BHFN6631 and BHFN6636) divided by total assets	Bank Regulatory
Deposit growth	The percentage change in total deposits relative to the prior year	Bank Regulatory
Employment growth	The percentage change in total employees (Compustat item EMP) relative to the prior year	Compustat
Credit card loans	Credit card loans (BHCKB538) divided by total assets	Bank Regulatory
Residential mortgage loans	Residential mortgage loans (BHDm1797 + BHDm5367 + BHDm5368) divided by total assets	Bank Regulatory
Commercial and industrial loans	Commercial and industrial loans (BHDm1766) divided by total assets	Bank Regulatory
Non-interest expense ratio	Non-interest expense (BHCK4093) divided by interest expense (BHCK4073)	Bank Regulatory
Salary and employee benefits	Salary and employee benefits (BHCK4135) divided by non-interest expense (BHCK4093)	Bank Regulatory
Impairment and amortization expenses	Impairment and amortization expenses (BHCKC216 + BHCKC232) divided by non-interest expense (BHCK4093)	Bank Regulatory
Expenses of premise and fixed assets	Expenses of premise and fixed assets (BHCK4217) divided by non-interest expense (BHCK4093)	Bank Regulatory
Marketing expenses	Marketing expenses (BHCK0497) divided by non-interest expense (BHCK4093)	Bank Regulatory
Stock return	The monthly stock return	CRSP
CEO vega/delta	CEO's vega (the sensitivity of CEO equity and option compensation relative to stock return volatility) divided by CEO's delta (the sensitivity of CEO equity and option compensation relative to stock price).	Execucomp

### Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jaccpubpol.2023.107115>.



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