Defunding Controversial Industries:
Can Targeted Credit Rationing Choke Firms?[†]

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This paper examines the effects of targeted credit rationing by banks on firms likely to generate negative externalities. We exploit an initiative of the U.S. Department of Justice, labeled Operation Choke Point, which compelled banks to limit relationships with firms in controversial industries. Using supervisory loan-level data, we find that, as intended, targeted banks reduced lending and terminated relationships with affected firms. However, most of these firms fully substituted credit through non-targeted banks under similar terms. Overall, the performance and investment of affected firms remained unchanged, suggesting that targeted credit rationing is widely ineffective in promoting change.

Stakeholders are increasingly seeking ways to hold companies accountable for their negative externalities on society. This shift reflects the evolving environmental and social preferences of stakeholders who increasingly prioritize sustainability by corporations. A common method has been the active divestment of equity, where investors sell off stocks in firms perceived as socially irresponsible to raise firms' cost of capital and exert pressure to encourage them to address these externalities. While this strategy has gained widespread popularity, recent research has shown its limited effectiveness. In particular, equity divestments are mostly restricted to listed firms and can result in the loss of investor influence within a company (Broccardo, Hart, and Zingales, 2022; Edmans, Levit, and Schneemeier, 2023), these firms may respond by offshoring or divesting parts of their controversial business (Ben-David, Jang, Kleimeier, and Viehs, 2021; Dai, Duan, Liang, and Ng, 2022; Duchin, Gao, and Xu, 2022), and equity divestments potentially stifle innovation (Cohen, Gurun, and Nguyen, 2023). Additionally, the limited capital behind these efforts restricts their impact (Berk and van Binsbergen, 2022) and can even be counterproductive (Hartzmark and Shue, 2023).

In response to these limitations, stakeholders have turned to alternative strategies, including targeting access to bank credit for firms believed to be socially controversial. This approach, known as targeted credit rationing, has gained appeal in recent years due to its ability to impact both publicly traded and privately held firms, capitalizing on the persistent nature of bank-firm relationships and the non-transferable nature of banks' private information. Unlike equity divestment, such policies have the potential to influence a broader set of firms by directly affecting their access to credit. However, given the potential countermeasures that affected firms may take, little is known about the overall effectiveness of these efforts.

In this paper, we study the dynamics of targeted credit rationing, showing that although the intended effects on lending relationships are realized, it does not impact the overall credit availability, performance, or investment of most firms, indicating potential limitations in using credit rationing as a tool for promoting change. Naturally, the main challenge of studying targeted credit rationing is that a bank's decision to extend credit is influenced not only by its expectations of a firm's future cash flows, but also by the bank's non-financial prefer-

ences, which may vary over time (e.g., ideological considerations). Our paper addresses this challenge by studying Operation Choke Point, which provides a near-ideal quasi-random experiment to study the causal effects of targeted credit rationing on firms' operations.

Operation Choke Point was a major initiative led by the U.S. Department of Justice (DOJ), which compelled a subset of banks to limit relationships with firms in certain industries that operated legally but that were deemed socially controversial—including ammunition, firearms, tobacco, dating and escort services, pornography, and online gambling. This setting provides several key advantages for studying targeted credit rationing. First, the operation was a large and credible shock to banks, as the DOJ—in concert with bank regulators— threatened significant sanctions for banks that failed to comply. Second, according to court documents, the targeting of banks was not based on lending volumes to firms in targeted industries, a claim we confirm in our analysis that additionally finds no relation between the targeting of banks and several bank and firm characteristics, mitigating concerns surrounding a potential selection bias. Third, given that the operation impacted a subset of banks at different times, we can identify the effect of this supply-side shock by exploiting its staggered implementation in a dynamic difference-in-differences setting. Finally, given that Operation Choke Point was not a blanket ban on lending to the industries in question, it allows us to examine whether the actions of a single or a subset of banks can effectively influence the operations of firms in particular industries.

To provide an in-depth understanding of a firm's borrowing behavior, we employ confidential, quarterly loan-level data for the U.S. from the Federal Reserve's Y-14Q corporate loan schedule. This matched firm-bank supervisory credit register data set covers the entirety of corporate loans with commitment amounts over $1 million for banks with at least $50 billion in total assets, along with firm-level characteristics. Further, we merge this information with bank-level financial data from publicly-accessible quarterly reports (FR Y-9C).

Our study of targeted credit rationing is organized into three parts. First, we show that, as intended, the operation affected targeted banks' lending behavior. At the intensive margin, we find that targeted banks reduced their committed credit to firms in affected industries. This

credit contraction was concentrated on small and medium-sized enterprises (SMEs), which experienced a 10 percent reduction in committed credit. We also find no changes in the share of drawn credit, implying a lower volume of credit utilized by SMEs. This effect is similar across SMEs with different levels of profitability, liquidity, and leverage prior to the shock. In contrast, we find that the level of committed credit and the share of drawn credit remained unchanged for large firms, also irrespective of their profitability, liquidity, or leverage. These findings suggest that firm size was the key driving factor in the decision by banks to cut lending.

These baseline results are robust to a battery of tests, including (i) adding firm–time fixed effects, and thus focusing on firms with relationships with multiple banks to better control for credit demand and the non-random matching between firms and banks (Khwaja and Mian, 2008); (ii) balancing the panel data in a Poisson specification to examine the intensive and extensive margins, combined, while accounting for the issues involving an outcome variable that is positive but can often equal zero (Chen and Roth, 2024; Cohn, Liu, and Wardlaw, 2022; Correia, Guimarães, and Zylkin, 2020), and (iii) using a stacked regression specification to address the potential biases in staggered difference-in-differences settings (Baker, Larcker, and Wang, 2022a; Gormley and Matsa, 2011, 2016). We also conduct several falsification tests, such as considering non-affected industries, non-affected cash-intensive industries, and random treatment dates. Overall, we show consistent evidence that targeted banks reduced lending to SMEs in industries affected by the operation.

Second, we examine how the initiative affected the termination of existing bank-firm lending relationships as well as the creation of relationships with other banks. We show that affected firms experience an increase in the frequency at which their accounts with targeted banks are terminated, reinforcing our evidence that banks responded to regulatory pressure. In contrast, the existing relationships with non-targeted banks were preserved. When considering relationship creation, we find that affected firms responded by initiating new relationships with non-targeted banks and—consistent with the intent of the policy—that these firms do not initiate new relationships with already targeted banks. These results suggest that firms

managed to mitigate or offset the effects of targeted credit rationing.

Finally, we focus on affected firms' aggregate access to credit, performance, and investment, providing a more comprehensive assessment of the initiative's overall impact. We find that there were no statistically significant changes in the aggregate level and terms of credit following the initiative for the average affected firm. However, when focusing on heterogeneous treatment effects, we show that large profitable firms manage to increase their level of committed credit, suggesting that they hedged against future potential terminations. In contrast, highly levered SMEs experience a modest reduction in total committed credit. These results indicate that targeted credit rationing driven by Operation Choke Point did not reduce overall credit for most firms, except for a small subset, yielding it broadly ineffective. Similarly, we find no impact of the operation on firms' leverage, profitability, or investment.

Altogether, our results indicate that targeted credit rationing does not meaningfully change affected firms' financial and operational performance, suggesting it can be largely ineffective at imposing costs on these firms. Thus, our findings provide a nuanced perspective on the effects of this type of initiatives. While prior research in different contexts has documented the pivotal role of bank-firm relationships in influencing a firm's access to credit, particularly of smaller firms (e.g., Beck, Degryse, De Haas, and Van Horen, 2018; Beck, Demirgüç-Kunt, and Maksimovic, 2005), we find that the substitution was relatively seamless during a benign non-crisis period. This result holds for the majority of firms with loan commitments above $1 million, with the exception of highly-levered SMEs, offering insights into the role of relationships when banks actively terminate accounts with firms in specific industries.

This paper contributes to several branches of literature. First, it contributes to the broader and flourishing literature on responsible investing, which focuses on affecting change through divestment and negative selection, and where investors try to discipline firms by raising their cost of capital.[1] While these actions are gaining popularity, several studies have identified potential shortcomings. For instance, Oehmke and Opp (2024) suggests that divestment only

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[1]Empirical evidence includes Becht, Franks, and Wagner (2023); Teoh, Welch, and Wazzan (1999). Theoretical studies of impact investing include those by Berk and van Binsbergen (2022); Chowdhry, Davies, and Waters (2019); Green and Vallee (2024); Hart and Zingales (2017); Heinkel, Kraus, and Zechner (2001).

works if responsible investors are affected by externalities and coordinate, while Broccardo, Hart, and Zingales (2022) suggests that divestment reduces the ability to voice preferences. Another restricting factor is that these actions are mostly limited to publicly listed firms, leaving private firms beyond the reach of many stakeholders. We contribute to this literature by examining the effectiveness of an alternative approach at the center of policymakers' current discussions.

Our paper also contributes to the growing literature on targeted credit rationing by focusing on an exogenous shock to study the causal effects of an *externally-driven* targeted credit rationing program. Focusing on this quasi-random intervention, we also answer the following question: can a subset of banks effectively influence the operations of firms that potentially generate negative externalities? Our results show that while the initiative had an early impact on bank lending to firms in affected industries, these firms substituted their relationships between targeted and non-targeted banks, with only the highly-levered smaller firms not managing to offset the effect on lending fully.[2] Overall, we find consistent evidence of no impact on the operations of firms.[3] Ultimately, our study contributes to the debate around the optimal ways finance can mitigate negative externalities and the potential role of targeting a firm's access to private credit.

Our paper complements a distinct but related literature centered on *internally-driven* credit rationing, where banks themselves are motivated by a keen interest in environmental concerns.[4] This literature has provided mixed evidence. On the one hand, Haushalter, Henry, and Iliev (2023) finds that banks occasionally fail to adhere to their own policies on exiting moun-

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[2]Unlike Aiyar, Calomiris, and Wieladek (2014) and Kim, Plosser, and Santos (2018), which examine macroprudential policies' effects on banks and spillovers, our study focuses on direct impacts on firm operations. We also differ from Agca, Slutzky, and Zeume (2023), which exploits changes to AML enforcement to study the effect of a shift in the banking sector composition on lending to small firms and households.

[3]In a counterfactual scenario in which all regulated banks were simultaneously targeted, it is unclear whether we would have a different overall result, given the increasing importance of non-bank lending in recent years (e.g., Gopal and Schnabl (2022); Chernenko, Erel, and Prilmeier (2022)) and potential substitute lending by foreign banks.

[4]For example, see Giannetti, Jasova, Loumioti, and Mendicino (2023). Bellon (2022) delves into the connection between lender liability and debtor behavior in environmental compliance, while Laeven and Popov (2023) explores how bank lending to foreign companies shifts with the introduction of carbon taxes. Alternative approaches are taken by Kleimeier and Viehs (2021) and Ivanov, Kruttli, and Watugala (2024), who investigate whether banks price credit risk linked to emissions and fossil fuel reserves, while Miguel, Pedraza, and Ruiz-Ortega (2024) study the impact of climate risk-related capital requirements on Brazilian banks.

taintop mining, leading to inconclusive effects on targeted companies. On the other hand, Green and Vallee (2024) finds an effect of banks' disinvestment from the coal sector, revealing that firms cannot fully substitute credit and experience significant operational consequences. Relatedly, Kacperczyk and Peydró (2022) shows that participation in the Science-Based Targets Initiative (SBTi) influences borrowers' ability to secure funds without significantly affecting environmental outcomes.

Our analysis of externally-driven initiatives complements these studies by providing a comprehensive understanding of the social and environmental impact of targeted bank credit rationing. Prior studies have found limited credit substitution, suggesting that targeted credit rationing can address climate risks. In contrast, we study the effects of credit rationing in response to an exogenous (externally-driven) shock that forces a subset of banks to terminate or limit relationships, thereby mitigating concerns of selection. Moreover, our firms do not operate in high-polluting industries, which limits their ability to adjust their businesses to address investor concerns. Our results suggest a substitution of credit for borrowing firms following this exogenous shock. Together, these papers expand the understanding of the ability of credit rationing to effect change.

This paper also contributes to the broader literature examining the role of financial markets and intermediaries in driving environmental and social change. While the research in this area has grown, much of the existing work has focused predominantly on climate finance, examining how financial markets incorporate changes in preferences for climate change risks (Bolton and Kacperczyk, 2021), beliefs (Baldauf, Garlappi, and Yannelis, 2020; Stroebel and Wurgler, 2021), and is likely reflected in asset prices.[5] Equity divestment has been a widely studied strategy within this domain, often emphasizing the actions of equity investors. In the context of credit markets, the literature has primarily concentrated on green bonds (Baker, Bergstresser, Serafeim, and Wurgler, 2022b; Flammer, 2021; Zerbib, 2019), and loans Kim,

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[5]Theoretical papers include Pástor, Stambaugh, and Taylor (2021); Pedersen, Fitzgibbons, and Pomorski (2021). Empirical evidence includes Ardia, Bluteau, Boudt, and Inghelbrecht (2023); Bolton and Kacperczyk (2023); D'Amico, Klausmann, and Pancost (2023); Engle, Giglio, Kelly, Lee, and Stroebel (2020); Pástor, Stambaugh, and Taylor (2022).

Kumar, Lee, and Oh (2022).[6]

In contrast, this paper provides some of the first evidence on targeted credit rationing by exploring the implications of negative selection in credit markets driven by ideological beliefs. Previous research addressing socially controversial issues and the impact of financial intermediaries has examined different aspects. For instance, one line of research studies state-level government bans that exclude pro-social financial institutions from underwriting municipal bonds (Garrett and Ivanov, 2024). Separately, Berger and Seegert (2024) studies how limitations on access to cash management services from financial intermediaries affect the profitability of firms in the marijuana industry. However, unlike these and other studies, our research centers on the effects of credit rationing directed at legal but socially controversial industries. While not posing systemic financial risks, these firms often face social stigma unrelated to traditional risk factors considered in pricing models. As financial institutions increasingly engage in lending practices influenced by social preferences amid ongoing public debates, this paper offers timely empirical evidence on the effectiveness and implications of credit rationing based on ideological beliefs.

1 Institutional Background: Operation Choke Point

1.1 Timeline

Operation Choke Point was a highly debated initiative led by the DOJ, in collaboration with the Federal Deposit Insurance Corporation (FDIC), aimed at discouraging banks from providing financial services to firms in legal industries that were deemed socially controversial.[7] In this section, we outline the timeline of OCP, discuss the set of affected firms and banks, and provide key institutional details, as summarized in Table IA1.

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[6]For related theoretical works, see Barbalau and Zeni (2022); Chowdhry, Davies, and Waters (2019)

[7]For example, see Letter from the Office of the Assistant Attorney General to Honorable Bob Goodlatte, Chairman of U.S. House Committee on the Judiciary (August 16, 2017); and Office of Inspector General, The FDICs Role in Operation Choke Point and Supervisory Approach to Institutions that Conducted Business with Merchants Associated with High-Risk Activities (Office of Audits and Evaluations Report No. AUD-15-008, September 2015).

In November 2012, attorneys within the DOJs Civil Division proposed an internal initiative called *Operation Choke Point*, recognizing that the DOJ could influence bank behavior through the threat of subpoenas and regulatory actions.[8] For instance, an internal memo between DOJ employees, dated November 5, 2012, noted that *"banks [were] sensitive to the risk of civil and/or criminal liability and regulatory actions."*[9] The DOJ and bank regulators seemingly employed various methods, including regulatory threats and legal intimidation, to influence bank behavior (Figure IA1).

Early in 2013, the DOJ began issuing subpoenas to banks and payment processors. More specifically, between February 2013 and August 2013, the DOJ issued 60 administrative subpoenas, effectively compelling banks to restrict certain merchants' access to finance.[10] These subpoenas were guided by a list of "high-risk" merchants, a list originally included in the FDIC's publication of a Supervisory Insights article, "Managing Risks in Third-Party Payment Processor Relationships". This article warned of heightened risks for financial institutions engaged in services with certain industries but was originally intended to serve as informal and educational guidance and had no direct policy implications.[11]

Facing pressure from regulators, as well as the threat of reputational risk and legal repercussions, targeted banks began terminating services and reducing lending to firms in certain industries in early 2013 (Calomiris, 2017).[12] Documentary and testimonial evidence produced during government investigations and lawsuits suggests that the initiative was driven by significant ideological and political motivations, seemingly unrelated to the underlying credit risk of the targeted industries (for example, see Figure IA1 and Figure IA2).

Despite the initiative's apparent success, it was ultimately terminated in August 2017 due

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[8]For example, see "Memorandum: Operation Choke Point", sent from Joel M. Sweet, Assistant U.S. Attorney, to Stuart F. Delery, Acting Assistant Attorney General, U.S. Department of Justice Civil Division, dated November 5, 2012 (HOGR-3PPP000017-21).

[9]Operation Choke Point: Hearing before the Subcommittee on Oversight and Investigations, dated July 15, 2014.

[10]In the Internet Appendix, we include a letter by Jelena McWilliams, former FDIC Chairman, acknowledging that *"certain FDIC employees acted in a manner inconsistent with FDIC policies in what has been generically described as Operation Choke Point."*

[11]Committee on Oversight and Government Reform Staff Report, dated December 8, 2014, "Federal Deposit Insurance Corporation's Involvement in 'Operation Choke Point'."

[12]See also Figure IA3.

to its controversial nature. The program first came to public attention through an article in *The Wall Street Journal* in August 2013. Following public dissent, members of Congress submitted a letter to the FDIC Chairman and the U.S. Attorney General, expressing their concerns about the pressure the DOJ was exerting to terminate lawful lending relationships. In December 2014, the U.S. House Committee on Oversight and Government Reform issued a report titled *Operation Choke Point* (Calomiris, 2017). Growing negative public sentiment and government hearings led to the operation's termination in 2017.

Regarding the timeline, it is important to highlight that the FDIC's "high-risk" list was created in 2011, well before OCP was operationalized in 2013. The original list of industries was intended solely for informal and educational purposes, without any direct policy implications or enforcement of previous regulations. Although it was later utilized as a tool in OCP, its creation was entirely unrelated to the operation itself. While OCP was not an official law or regulation, banks perceived the initiative as a credible threat. According to the 2015 OIG Report, bank executives felt that *"references to specific merchant types in the summer 2011 Supervisory Insights Journal article and in supervisory guidance created a perception among some ... that the FDIC discouraged institutions from conducting business with those merchants."* Further, the FDIC's role and involvement in OCP raised concerns of "regulatory threats, undue pressure, coercion, and intimidation" (Figure IA1).

1.2   Ideology, Firms, and Banks

The intent behind OCP has been subject to ongoing debate in lawsuits and Congressional hearings.[13] While the official reason for OCP is linked to regulatory concerns regarding increased risk of fraudulent activity among certain merchants, documentary evidence suggests that OCP may have been motivated for personal, moral reasons "entirely outside of FDICs

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[13]See, for example, Second Declaration of Dennis Shaul in the matter of Community Financial Services Association of America, Ltd., et al. v. Federal Deposit Insurance Corporation, et al. (Civil Action No. 14-953-GK); Committee on Oversight and Government Reform Staff Report, dated December 8, 2014, "Federal Deposit Insurance Corporation's Involvement in 'Operation Choke Point"'; Hearing Before the Subcommittee on Oversight and Investigations of the U.S. House Committee of Financial Services, dated July 15, 2014, "The Department of Justice's 'Operation Choke Point"'; and Hearing Before the Subcommittee on Oversight and Investigations of the U.S. House Committee of Financial Services, dated March 24, 2015, "The Federal Deposit Insurance Corporation's Role in Operation Choke Point."

mandate" ([Calomiris](#) ([2017](#)) and [Figure IA1](#)). For instance, a 2014 House Committee Staff Report noted the following:

> *In a particularly egregious example, a senior official in the Division of Depositor and Consumer Protection insisted that FDIC Chairman Martin Gruenbergs letters to Congress and talking points always mention pornography when discussing payday lenders and other industries, in an effort to convey a "good picture regarding the unsavory nature of the businesses at issue."*[14]

The firms affected by OCP were those on a list of "high-risk" merchants, which included industries such as sales of ammunition, firearms, tobacco, dating and escort services, pornography, and online gambling—see [Table IA2](#) for a complete list of targeted industries. The article listing merchant types warned of heightened risks for financial institutions engaging with certain industries, which arguably posed increased reputational risk for financial institutions due to their potentially "questionable or fraudulent" nature.

Notably, OCP appeared to affect a random subset of banks, with no discernible evidence that the initiative had a systematic method for targeting financial institutions. Anecdotally, the indiscriminate nature of the targeted banks is highlighted in a report by the Office of Inspector General, which found *"no evidence that the FDIC used the high-risk list to target financial institutions."*[15] This lack of clear criteria introduced a degree of arbitrariness into the initiative's implementation, which this paper exploits in a staggered difference-in-differences setup to establish causality.

The scope of the initiative had broad implications for many legal and legitimate businesses. Although payday lenders were one of the main targets of OCP ([Stevenson, 2022](#); [Zywicki, 2015](#)), the effects of the initiative on other high risk merchants were also a subject of concern for Congress.[16] Indeed, an expert report indicates that firms such as firearms and am-

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[14]Committee on Oversight and Government Reform Staff Report, dated December 8, 2014, "Federal Deposit Insurance Corporation's Involvement in 'Operation Choke Point'."

[15]Office of Inspector General Report, dated September 2015, "The FDIC's Role in Operation Choke Point and Supervisory Approach to Institutions that Conducted Business with Merchants Associated with High-Risk Activities."

[16]For example, see U.S. House Committee on Oversight and Government Reform, Federal Deposit Insurance Corporation's Involvement in Operation Choke Point (Staff Report 113th Congress, December 2014). [Baugh](#) ([2016](#)) exploited this initiative to explore the effect of limiting credit to online payday lenders on households' consumption and borrowing patterns, using data from an aggregator of financial transactions. In addition to the different research questions explored in this paper, we focus exclusively on non-financial firms since, as observed in our data, there are relatively few payday lenders borrowing from regulated banks with at least $50 billion in total assets.

munition dealers were also affected by the initiative (Figure IA4).[17]. For instance, as discussed in Calomiris (2017):

> *The experience of one entry on the list - firearms and ammunitions merchants - effectively traces the downstream influence of the high-risk merchants list. MOUs between supervised banks and FDIC Regional Offices, as well as bank policies submitted pursuant to FDIC Consent Orders, variously "prohibit" payment processing for firearms merchants, characterize loans to firearms dealers as "undesirable," and generally subject firearms and ammunitions merchants to significantly higher due diligence standards.[18]*

While OCP was a controversial initiative, it provides a near-ideal setting to study the effects of targeted credit rationing. In the next section, we discuss the data and target selection model.

2 Data and Target Selection

2.1 Federal Reserve Y-14Q Data

Our main data source is confidential quarterly loan-level data for the U.S. obtained from the corporate loan schedule H.1 of the Federal Reserve's Y-14Q.[19] These data have been collected to support the Dodd-Frank Act's stress tests and assess bank capital adequacy for large banks. The credit register provides information on all credit exposures with commitment amounts exceeding $1 million for banks with at least $50 billion in total assets.[20] These loans account for around 75% of all commercial and industrial lending volume during the period we analyze.[21]

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[17]See, for example, Committee on Oversight and Government Reform Staff Report, dated December 8, 2014, "Federal Deposit Insurance Corporation's Involvement in 'Operation Choke Point'"; and Hearing Before the Subcommittee on Oversight and Investigations of the U.S. House Committee of Financial Services, dated March 24, 2015, "The Federal Deposit Insurance Corporation's Role in Operation Choke Point."

[18]See Expert Report of Charles Calomiris, dated January 11, 2017, in the matter of Community Financial Services Association of America, Ltd., et al. v. Federal Deposit Insurance Corporation, et al. (Civil Action No. 14-953-GK).

[19]Recent studies using the Federal Reserve's Y-14Q data include Brown, Gustafson, and Ivanov (2021), Chodorow-Reich, Darmouni, Luck, and Plosser (2021), and Crosignani, Macchiavelli, and Silva (2023).

[20]We emphasize that the Y-14 is used for stress testing and capital assessment. Therefore, firms cannot avoid regulatory oversight by borrowing amounts below the $1 million threshold. Additionally, banks with total assets below $50 billion were also subject to OCP, addressing concerns that firms might strategically borrow from smaller institutions.

[21]While we do not have information on this share for the subset of industries affected by OCP, using data on the universe of firms of similar size from the Quarterly Census of Employment and Wages (QCEW) we find that the Y-14Q data covers, on average, 73.6% of the number of firms within these industries.

In addition to the amount of committed credit for each firm-bank pair, the data set contains information on drawn amounts on credit lines, amounts past due, interest rate spreads, and maturities. It also provides information on each banks internal assessment of the default probability of a given firm, among other details. Finally, the data set also includes several firm-level information such as total assets, net income, cash holdings, total debt, and capital expenditures.

We supplement this data with financial information at the bank holding company level from publicly available FR Y-9C reports, including consolidated quarterly balance sheets, income statements, and detailed supporting schedules. Given that the Federal Reserve started collecting the Y-14Q data in the second quarter of 2012, we employ quarterly data spanning the period of the second quarter of 2012 to the second quarter of 2016.

Pivotal to our study, we also determine which banks were part of Operation Choke Point and their targeting date. We accomplish this by manually reviewing publicly available government and legal documents and speaking to former regulators with knowledge of the operation. We present a timeline listing the targeted banks and the corresponding dates in Figure 1.

We report key summary statistics for our main data set in Table 1, with the variable definitions reported in Table IA3. In Panel A of Table 1, we provide details on the sample of loan-level data at the firm-bank-quarter level. We include information on total committed and utilized credit, credit terms (interest rate spread, maturity, whether the loan is collateralized), and the lending bank's information (capital, profitability, liquidity, and size). For our analysis of the effect of the initiative on firm-level outcomes, we aggregate the data across banks at the firm-quarter level. Panel B summarizes this data, including firms' financial information and summary statistics on the initiation and termination of bank relationships.

2.2 Targeted Banks

To analyze the effect of credit rationing on targeted industries, a key issue is to understand the criteria employed by regulators to target banks, as this consideration can potentially in-

troduce bias in our estimations. To this end, we analyze data on Operation Choke Point's targeting from expert witness testimonies and other supporting documents. As described in the previous section, we find administrative and regulatory documents suggesting that the selection process was not driven by particular bank characteristics.

To test this claim, we collect information on targeted banks from documentary evidence produced during lawsuits, regulatory reports, internal communications, and hearings. In particular, the empirical design in this paper is primarily based on expert witness testimony from Calomiris (2017), which identifies targeted banks and some of the first known dates in which those banks allegedly began terminating credit to firms in "high-risk industries" while under the influence of Operation Choke Point.[22] Although the exact list of banks targeted by the DOJ is redacted,[23] we find corroborating evidence regarding the involvement of these lenders in other documents.[24]

We formally examine Operation Choke Point's selection criteria by comparing pre-period characteristics of targeted and control banks. Table 2 presents summary statistics for targeted and control banks and their comparison. Specifically, we compare banks' financial measures prior to the targeting of the first bank to address concerns related to anticipation, including lenders' size, tier 1 capital, liquidity, profitability, and overhead-to-assets ratios. We further consider whether there are differences between targeted and control banks' shares of lending to targeted industries, both in terms of volume and number of relationships with firms in those industries. Finally, we compare the average profitability as well as the average liquidity, leverage, and assessed probability of default of the firms in the banks' portfolios. For each measure, we calculate a weighted average for the firms in each portfolio, with firm assets serving as the weighting factor. Overall, we find that targeted and control banks do not differ

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[22]The affected firms engaged in legal dispute with banks in Calomiris (2017) were payday lenders, who were among the most vocal in addressing perceived, unfair, banking practices.

[23]See U.S. Department of Justice Civil Division Communication, titled "Payment Processor Investigation – Request for Issuance of Subpoenas to Payment Processors and Banks used to Process Fraudulent Payments," from Michael S. Blume, Consumer Protection Branch, to Stuart F. Delery, Principal Deputy Assistant Attorney General, dated February 8, 2013 (HOGR-3PPP000029-34).

[24]See, for example, "Statement of Financial Service Centers of America To the U.S. House of Representatives Committee on Financial Services Regarding The Impact of Recent Regulator Supervisory and Enforcement Actions on Consumer Financial Services," dated April 8, 2014.

significantly in any commonly observable characteristic, which suggests a lack of evidence of sorting on pre-period bank characteristics.

2.3 Targeted Firms

We identify firms that were targeted by the DOJ using as a baseline the list of targeted sub-industries identified by the FDIC and listed in the expert witness report (Calomiris, 2017). Using this list, we manually search for the NAICS codes corresponding to the targeted industries on the NAICS Association website. For each industry, we conduct keyword searches, summarized in Table IA4, to obtain the associated six-digit industry NAICS codes. Given the potential illegality of certain targeted industries, we exclude firms in industries such as cable box de-scramblers, credit card schemes, debt consolidation scams, get rich products, government grants, home-based charities, life-time guarantees and memberships, money transfer networks, Ponzi schemes, racist materials, and travel clubs. In addition, as it is standard in the literature, we remove financial firms. In the context of our paper, this implies we exclude the relatively few payday lenders borrowing from regulated banks with at least $50 billion in total assets. Our final data set contains 5,670 affected firms, 595 of which are publicly listed.

3 Bank-Level Analysis

We start our analysis by examining whether Operation Choke Point affected lending to firms in affected industries by targeted banks, relative to lending by non-targeted banks.

3.1 Empirical Specification

Our baseline specification is a staggered difference-in-differences model, exploiting the fact that firms that operated in the same industry and location borrowed from banks that were targeted at different points in time or were never targeted.[25] Specifically, we estimate:

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[25]A key assumption is that firms were not matched to banks in a way that might affect our results. We address this issue in Section 3.3. To construct an appropriate control group, we excluded banks that did not lend to any firms in the targeted industries during the sample period.

$$Y_{f,i,b,t} = \beta_1 \, ChokePoint_{b,t} + X_{b,t}\gamma + \delta_b + \delta_f + \delta_{t,size,industry,state} + \varepsilon_{f,i,b,t}, \tag{1}$$

where $Y_{f,i,b,t}$ is one of our outcomes of interest (e.g., committed credit, share of drawn credit, interest rate spread) for firm f, operating in industry (six-digit NAICS code) i, borrowing from bank b, at the calendar-quarter t time. Our baseline specification includes bank, δ_b, and firm fixed effects, δ_f, to control for time-invariant heterogeneity of both banks and firms. We include time–firm size–industry–state fixed effects, $\delta_{t,size,industry,state}$, with size attributed by quartiles to control for time-varying trends that affect firms of similar size operating in the same six-digit NAICS code and state. $ChokePoint_{b,t}$ is an indicator variable at the bank level and is set to one following the targeting of the bank by Operation Choke Point. The vector γ includes time-varying bank controls such as size, capital, liquidity, and profitability. In the baseline analysis, we focus on the sample of loans to firms in industries affected by OCP.[26] As such, the primary coefficient of interest, β_1, captures the within bank-firm changes following the targeting of the bank by Operation Choke Point. Standard errors are double clustered at the bank and state level.[27]

3.2   Effect of Operation Choke Point on Credit Supply

We present the results of the estimation of Equation 1 in Table 3. The coefficient in column (1) is negative and statistically significant at the 1% level, suggesting that banks targeted by the DOJ reduced their level of committed credit to firms in "high-risk" industries, relative to control banks, by approximately 3.4%. In column (2), we use our preferred specification including a tighter set of fixed effects (time–firm size quartiles–six-digit NAICS industry code–state, all interacted), and the effects remains large (4.6%) and statistically significant at the 1% level.

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[26] As a robustness test, we also consider a triple-interaction specification using cash-intensive industries and firms from the same 3-digit NAICS code as a control group.

[27] The state in which firms are located impacts the regulation of their activities in some cases. For instance, in 2011, the Department of Justice changed the way the federal government interpreted the Wire Act of 1961, which criminalized and prohibited the operation of certain betting or wagering businesses, such as online gambling. Over the following years, six states legalized online casino games, one of the targeted industries in our analysis.

Given the literature documenting the heterogeneous effect of financing across firms based on their size, we consider how lending practices change across large firms and SMEs—as in Chodorow-Reich et al. (2021), for instance, firms are classified as SMEs if their assets are less than \$250 million. As reported in column (3) of Table 3, we find that the reduction in lending is concentrated among these smaller firms, with a decline of 9.5% in committed credit. In contrast, we find no significant effect for large firms. We next consider the share of drawn credit in columns (4) to (6), defined as the volume of utilized credit divided by the level of committed credit. We find no significant effect, suggesting that the level of credit drawn by firms changes proportionately to changes in committed credit.

We then analyze the dynamic effects of Operation Choke Point on committed credit by plotting the dynamic coefficients relative to the quarter before the targeting by the DOJ. The evidence in Figure 2 presents two key pieces of evidence. First, and crucial for our identification strategy, it supports the parallel trends assumption in our setting—the point estimates before the program are close to zero and statistically insignificant in the entire pre-program period, indicating that there is no differential pre-trend in lending activity to firms in affected industries by targeted vs. non-targeted banks. Second, following the targeting, there is a gradual and significant decrease in committed credit between treated and control banks to firms within the same affected industry.

Next, we explore the drivers of the decline in total committed credit. As reported in Table IA5, we find evidence that targeted banks reduce not only committed credit lines but also the rollover of term loans for affected firms. Lastly, we study whether the terms of the credit to affected firms are impacted, following the empirical specification described in Equation 1. The results in Table IA6 suggest no effect on interest rate spreads (columns 1 and 2). In contrast, the results in columns (3) and (4) show that SMEs experience a decline in maturity of approximately 2.2 months, or 4.5% of the mean maturity of 46 months. We also find that affected firms are more likely to post collateral, an effect driven by the terms imposed on small and medium-sized firms (columns (5) and (6)).

3.3 Additional Tests of Operation Choke Point on Credit Supply

The previous results suggest that the operation reduced lending by targeted banks to firms in affected industries. In this subsection, we conduct a series of additional tests to mitigate several concerns related to our tests and interpretation. First, we explore whether our results are biased based on our empirical specification. Second, we examine whether our results are biased due to the issues identified by the recent literature on staggered differences in differences designs. Third, we consider whether our results are driven by spurious correlation. Fourth, we assess whether our results might be driven by events other than Operation Choke Point. Finally, we assess whether our results are affected by loans with volumes close to the reporting threshold.

3.3.1 Empirical Specification

We first rule out the possibility that our empirical specification drives our estimates. In column (1) of Panel A of Table 4, we present the estimates of a fixed effects Poisson specification on the level of committed credit and find similar economics and statistical results as those in Table 3. Next, we balance our sample by adding zeros to bank-firm-year observations with no reported loans to examine the intensive and extensive margins, combined, and estimate an OLS model.[28] We report the estimates in column (2) of Panel A, where we find similar results to our baseline. In column (3), we present the estimates resulting from the balanced panel but using a Poisson specification to account for the issues involving an outcome variable that is positive but can often equal zero (Chen and Roth, 2024; Cohn, Liu, and Wardlaw, 2022; Correia, Guimarães, and Zylkin, 2020). We again find consistent evidence that there was a contraction in credit supply in response to Operation Choke Point. Finally, we use these three alternative estimation approaches for the share of drawn credit (columns 4 through 6) and estimate no statistical change around the initiation of Operation Choke Point, again matching our baseline estimates in Table 3.

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[28]In our baseline intensive margin specification, following a relationship termination, the bank-firm pair would exit the sample.

3.3.2 Firm-bank matching

Another potential concern is that firms that borrow from targeted banks differ from those that borrow from other banks (e.g., have different demand for credit), even if these two types of firms operate in the same six-digit NAICS industry, have similar size, and are headquartered in the same state. To mitigate this concern, in column (1) of Panel B (Table 4), we present the results of a specification that includes firm-time fixed effects to better control for credit demand and the non-random matching between firms and banks (Khwaja and Mian, 2008). Exploiting variation within firms that borrow from multiple banks, we find that the coefficient is still negative, large, and statistically significant. This finding suggests that, for the same firm, targeted banks reduce lending more than non-targeted banks. Similar to our baseline, in column (4) of Panel B, we find no change in the share of drawn credit when using a similar approach.

3.3.3 Biases in differences-in-differences designs

We explore whether our results are affected by the biases identified by the recent literature on staggered differences-in-differences designs—see Roth, SantAnna, Bilinski, and Poe (2023), for instance, for a detailed review. We repeat our analysis using the stacked regression estimator methodology developed by Gormley and Matsa (2011, 2016) and described in Baker, Larcker, and Wang (2022a) and present the results in columns (2) and (5), where we find estimates for the log of committed credit and share of drawn credit, respectively, that are largely consistent with those obtained using the two-way fixed effects methodology.

3.3.4 Minimum Reporting Threshold

The credit register provides information on credit exposures exceeding $1 million for banks with more than $50 billion in assets. Thus, one potential concern is that data truncation affects our results. In our setting, if a bank reduces the committed amount from $1.01 million to $0.99 million, it would be identified as an account termination and bias our results.

To alleviate the concern that this feature of the data is biasing our results, we run an

additional test excluding loans close to the reporting threshold. The idea behind this test is that for a loan of $2 million to be dropped from our sample, it would need to be reduced by at least 50%. We sequentially exclude loans below the 25th percentile ($2 million), the median ($6 million), $10 and $20 million and re-estimate our baseline specification. We report the results in Table IA7, where we find evidence suggesting that our results are not driven by loans close to the reporting threshold. In particular, we find that, regardless of the threshold used, the level of credit commitment decreases for small firms in affected industries that borrow from targeted banks, relative to non-targeted banks, but find no effect on large firms. These results resemble those in the baseline test, including all loans. Further, in columns (5) to (8), we still do not observe a change in the share of drawn credit, again similar to our baseline. Importantly, in contrast to the setting in Ivanov, Ranish, and Wang (2023) where "two-lender" deals were excluded from supervision, banks cannot avoid supervision by lending below the $1 million threshold.[29]

An additional potential concern is that affected firms can initiate relationships with or increase borrowing from non-reporting banks, those with assets below the $50 billion threshold. This would limit our ability to measure the full impact of the initiative on affected firms. We address this potential issue in Section 5.2, where we show, using balance-sheet information, that affected firms, on average, do not experience a significant change in total debt. This suggests that non-reporting banks and other types of lenders do not play a key role in the dynamics studied.

3.3.5 Banks and Industry Trends

A potential remaining concern is that Operation Choke Point targeted banks that could have already been cutting lending to specific industries for reasons unrelated to Operation Choke Point. For instance, it could be that banks were de-risking following the effect of the Global Financial Crisis. We address this concern in several ways. First, we compare the riskiness of firms in industries affected by OCP with that of comparable cash-intensive firms in industries

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[29]It serves only to identify loans to be included in the Y-14 data, which is used in the assessment of capital and stress testing, but bank examiners have access to information on all loans, regardless of size.

that were not impacted by OCP and with that of other similar firms in the same 3-digit NAICS industries. We find that the assessed probability of default of firms in industries affected by OCP (2.1%) was similar to that of the other two groups (1.9% and 2%, respectively) and that the small difference was statistically insignificant.

Second, we expand our analysis and estimate the impact of the initiative on affected firms using a triple-differences estimator, including loans made by banks to firms in other industries. For robustness, we provide the results using two different sets of unaffected firms as controls. In the first group, we include as controls firms in comparable, cash-intensive industries, as identified by the NAICS association in conjunction with industry experts-, that were not affected by OCP.[30] In the second group, we include all the firms in the same 3-digit NAICS industries as those affected by OCP. We present the results in Table IA8 in the Internet Appendix.

Using either set of control firms, we find results that suggest that our findings are not driven by contemporaneous events. When studying *Committed Credit* in columns (1) to (4), we find that the baseline coefficient for banks targeted by the initiative, *Choke Point*, is small and statistically insignificant. In contrast, the estimate for firms affected by the initiative, as measured by the interaction term *Choke Point × OCP Industries* is negative and statistically significant, suggesting that targeted banks only reduced lending to affected industries. Moreover, we find that the effect is concentrated in small firms (columns 2 and 4). When we explore the impact on the share of drawn credit in columns (5) to (8), we find results similar to the ones in our baseline analysis. That is, there was no change in the share of drawn credit, suggesting that the level of utilized credit reduced proportionally to the reduction in committed credit. Overall, these sets of tests provide further confidence that targeted banks were limiting the supply of credit to firms in affected industries.

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[30]These include gas stations, convenience stores, liquor stores, and parking lots, among others.

3.3.6 Other Robustness

To test if a specific industry drives our results, we iteratively drop an industry from our sample and re-estimate our baseline specification. We present the estimates in Table IA9 in the Internet Appendix, where we show the effect on *committed credit* in Panel A and the effect on *share of drawn credit* in Panel B. In each column, we exclude from the sample firms in one industry (e.g., in Column (1) we exclude firms in the Ammunition/Firearms Sales industry). Overall, we find that the effect of the policy remains similar in magnitude and statistically significant across columns, mitigating concerns that one industry drives the results. In the last column, we exclude firms in the three industries with a significantly larger number of firms (Tobacco Sales and Paraphernalia, Pharmaceutical Sales, and Ammunitions/Firearms Sales) and find that the results are not driven by firms in those industries.

Further, we address the concern that the results are biased by specific drivers of the timing of each bank's targeting date. We conduct a placebo test to mitigate this concern by randomizing treatment dates for affected banks. We run our baseline test 1,000 times, randomizing the targeting dates, and present the mean coefficient in Panel B, column (3) in Table 4, where we find no significant effect. Finally, we re-run this test for the share of drawn credit in column (6) and estimate no statistical relation. Overall, these tests provide further evidence that targeted banks were limiting the supply of credit to firms in affected industries in response to the initiative.

3.4 Heterogeneity Across Firm Characteristics

We examine whether specific types of firms were more affected by Operation Choke Point. More specifically, we explore whether banks rationed credit differently for firms in different financial situations. To test this, we expand our empirical specification by interacting our main explanatory variables with a series of firm-level ratios that proxy for financial strength. In particular, we include profitability, liquidity, and leverage measures, splitting the sample based on their pre-period values.

Testing the relationship between financial strength and committed credit, columns (1) to (3)

of Table 5 shows consistent evidence that SMEs were affected irrespective of their profitability, liquidity, or leverage. These results underline our evidence that targeted credit rationing primarily sorted on firm size, and not financial strength. We also find no differences across firms with different financial strengths when focusing on the share of drawn credit—as seen in columns (4) to (6).[31]

4   Bank-Firm Relationships

A core aspect of Operation Choke Point was to cut off banking relationships for affected firms. Having established that targeted banks reduced their supply of credit to firms in affected industries at the intensive margin, we turn our attention toward bank-firm relationships. In this section, we first discuss our empirical strategy to explore this issue and then discuss the results on the termination and creation of bank relationships.

4.1   Empirical Specification

To study bank-firm relationships, we aggregate data at the firm-quarter level to examine whether Operation Choke Point had an overall impact on firms in affected industries. As before, our baseline specification is a staggered difference-in-differences model, where we exploit the fact that firms that operate in the same industry and location borrowed from banks that were targeted at different points in time or were never targeted. Specifically, we estimate:

$$Y_{f,i,t} = \beta_1 \, FirmExposuretoChokePoint_{f,t} + \delta_b + \delta_f + \delta_{t,size,industry,state} + \varepsilon_{f,i,t}, \tag{2}$$

where $Y_{f,i,t}$ is our outcome of interest at the firm-quarter level, studying firm f, operating in the industry i, at the calendar-quarter t time. Our baseline specification includes main bank

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[31]The Y-14 data includes information on firms' assessed probability of default, but this information is included for a subset of firms and is measured by each bank without providing information on how it is measured. Given these limitations, we use this measure as an additional cross-sectional characteristic and present the results in the Internet Appendix, Table IA10, where we find that a firm's probability of default does not seem to affect the degree to which it is affected by the initiative and that it is size and not the probability of default that affects this, mitigating concerns of de-risking initiatives driving our results.

fixed effects, δ_b, and firm fixed effects, δ_f, to control for time-invariant heterogeneity of banks and firms. Main bank is defined as the bank with the most lending to a firm in a quarter, which might vary over time. We include time–firm size quartiles–six-digit NAICS industry–state fixed effects, $\delta_{t,size,industry,state}$, to control for time-varying trends that affect firms of similar size operating in the same industry and state. *FirmExposuretoChokePoint*$_{f,t}$ is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. Importantly, the specification in Equation 2 studies shocks at the firm level, whereas the specification described in Equation 1 allows us to study the effect of Operation Choke Point at the bank-firm level. Our primary coefficient of interest, β_1, captures the within-firm changes following the targeting of a bank from which the firm borrows. Standard errors are double clustered at the main bank and state levels.

4.2 Termination and Creation of Relationships

We start by examining whether firms linked to targeted banks experience account terminations and present the results in Table 6. We estimate a variation of Equation 2 with the outcome variable defined as a dummy equal to one if, for a given time period, a firm got a relationship terminated in the following quarter with any bank (columns 1–2), with a targeted bank (columns 3–4), or with a control bank (columns 5–6), and zero otherwise. The coefficient reported in column (1) is small and statistically indistinguishable from zero, suggesting that affected firms do not experience a significant change in the number of account terminations following Operation Choke Point. This effect is similar across firm sizes, as shown in column (2). However, when we examine heterogeneous effects across bank types (targeted versus non-targeted), we find results that are consistent with our findings on the effectiveness of the initiative. Specifically, we show that affected firms experience an increase in the frequency at which their accounts with targeted banks are terminated (column 3). This ef-

fect is significant, with an increase in the frequency of account terminations of 4.5 percentage points, corresponding to an increase of 94% over the baseline level of 4.8 percent. This effect is driven by a significant increase in account terminations for small and medium firms and by a similar effect on large firms (column 4). In addition, we find that affected firms experience a reduction in the frequency at which their accounts with non-targeted banks are terminated (column 5), suggesting that these firms try to mitigate the impact of Operation Choke Point on credit availability. More specifically, this frequency declines by 4.2 percentage points, a decline equivalent to 87.5% of the baseline level. This effect is large and significant for both SMEs and large firms. This finding is consistent with the evidence presented in the expert witness report of Calomiris (2017) and with the idea that affected firms try to preserve their relationships with non-targeted banks.

In Table 7 we explore the effect of the initiative on the development of new relationships. The outcome variable is now defined as a dummy equal to one if, in a given time period, a firm created a relationship with any bank (columns 1–2), with a targeted bank (columns 3–4), or with a control bank (columns 5–6), and zero otherwise. We find that, on average, affected firms increase the rate at which they initiate new relations with banks by 3.4 percentage points, or approximately 32% of the baseline level (column 1). We find that this effect is driven by new accounts opened by SMEs (column 2). As with account terminations, we then explore heterogeneous effects across bank types. We find that, following the targeting of their banks, affected firms initiate fewer relationships with banks singled out by Operation Choke Point (column 3). This effect is large across firm sizes and statistically significant for SMEs (column 4). In addition, we find that these firms significantly increase the rate of initiation of new relationships with non-targeted banks, evidenced by the large and significant coefficients in columns (5) and (6), which translate into an average increase of 74% over the baseline level.

We provide the results of this analysis further split across different types of SMEs and large firms in Table IA11 and Table IA12. Overall, we find that targeted banks terminate relationships with all types of firms, regardless of their size and ratios of profitability, liquidity, or leverage. Similarly, firms of all types preserve relationships with non-targeted banks. When

we study the creation of new relationships with targeted banks, we find a large and similar decline across all firm types, although the effect is statistically significant only for SMEs. This effect does not depend on these firms' profitability, liquidity, or leverage ratios. Last, we find that all types of firms increase the rate at which they initiate relationships with non-targeted banks, regardless of their type. This suggests that non-targeted banks still find it profitable to lend to firms terminated by targeted banks, given that they have not faced regulatory pressure.

Overall, the evidence presented in this subsection suggests that banks targeted by Operation Choke Point effectively terminate accounts with firms in affected industries. In response, these firms initiate new relationships or preserve relationships with non-targeted banks to mitigate or offset the effect of Operation Choke Point. However, given the results presented so far, the net effect on firms' access to credit is still unclear. On one hand, a long-term banking relationship can be beneficial to borrowers as it may lessen information asymmetries through the generation of private information, enabling the bank to offer improved loan conditions (Petersen and Rajan, 1994), especially within ESG decisions (Houston and Shan, 2022). On the other hand, banks could potentially leverage this exclusive information to exploit firms and provide less favorable terms (Rajan, 1992). In the next section, we explore this issue in more detail.

5   Firm-Level Borrowing

Having shown that targeted banks terminate relationships with affected firms and that these firms respond by establishing new relationships with non-targeted banks, we now explore the overall effect of Operation Choke Point on firms. We start by studying the effect of the initiative on firm-level access to credit and then we analyze its impact on firm performance and operations.

5.1 Net Effect on Committed and Utilized Credit

We first examine the effect on total committed credit and share of drawn credit for affected firms. As before, we use aggregate data at the firm-quarter level. For spread and maturity, we calculate a weighted average of the terms using the volume of credit as the weight.

The results are reported in Table 8. We find that affected firms experience no change in aggregate committed credit, with statistically insignificant coefficients across specifications in columns (1) through (3)—that is, for not only the average firm but also for large firms and SMEs. When we analyze the share of drawn credit in columns (4) through (6), we also find that all the coefficients are statistically indistinguishable from zero, pointing to no overall effect on total committed or drawn credit. Overall, these findings indicate that affected firms were generally able to offset the reduction in committed credit by targeted banks by obtaining more committed credit from non-targeted banks.

When we study the impact of firms with different characteristics, we find evidence of mostly homogeneous effects across firm types. More specifically, we find that the majority of coefficients in Table 9 for both aggregate committed credit and the share of drawn credit are not statistically significant, with two important exceptions. First, large profitable firms manage to increase their level of committed credit, suggesting that they hedged against future potential terminations (column 1). In contrast, highly levered SMEs experience a modest reduction in total committed credit (column 3). These results indicate that targeted credit rationing driven by Operation Choke Point did not reduce overall credit for most firms, except for a small subset, yielding it broadly ineffective.

Finally, we also examine potential changes in firm-level loan terms and find that these firms do not seem to experience aggregate changes in interest rate spreads, as evidenced in columns (1) and (2) of Table IA13. However, they experience a shortening in the maturity of the loans (column 3). This effect is concentrated on SMEs (column 4). We also find an increase in the likelihood of these firms pledging collateral, but again only among SMEs (columns 5 and 6).

5.2 Financial Performance of Affected Firms

Given the impact of Operation Choke Point on banking relationships, we additionally examine the impact of the initiative on the financial and operational performance of affected firms. We follow the specification in Equation 2 and analyze firm-level measures, such as leverage, profitability, and investment.

The estimates presented in Table 10 suggest no observable change, on average, for firms exposed to targeted banks. The coefficients in columns (1) and (2) suggest that there was no effect on leverage, as defined by total debt over assets. This finding is consistent across firm sizes and mitigates concerns related to the truncation of our data, given that this data includes lending by all banks. These firms also do not experience changes in the level of profitability, as measured by return on assets (columns 3 and 4). Similarly, we find no effect on investment, as measured by capital expenditures scaled by assets (columns 5 and 6).

We find similar results across firm types. In particular, the coefficients in Table IA14 suggest that the initiative was ineffective at impacting firms of different characteristics. We find that the overall effect on leverage, profitability, and investment was economically small and statistically insignificant regardless of firm size, profitability, liquidity, and leverage ratios. Last, we test whether banks adjust trade credit or change their assessment of the affected firms' default probability but still find no effect, as shown in Table IA17.

Overall, our results show that targeted credit rationing had a neutral effect on firms' performance. Although Operation Choke Point had an initial effect on lending by targeted banks, affected firms responded by lending from other banks. The borrowing terms of these new loans did not differ significantly from the original terms that those firms had with the targeted banks. More generally, we find that these firms did not experience an impact in terms of total committed or drawn credit, leverage, profitability, or investment, suggesting that credit rationing had an insignificant effect on firms in targeted industries.

5.3   Potential Attrition Bias

Given the structure of the Y-14Q data, a natural concern with our analysis is that there might be an attrition bias that could affect our results. Indeed, our findings are conditional on firms continuing to receive credit from reporting banks, which could present a selection problem if some firms are more likely to be rationed to the point that their firm-level performance is unobserved ex-post. Given the importance of this possibility, we investigate this potential issue in multiple ways.

First, we plot the evolution of the number of firms in industries affected by OCP in our sample over time. As counterfactual, we also plot the evolution of (i) the number of firms in cash-intensive industries not affected by OCP, and (ii) the number of firms in industries not affected by OCP but within the same 3-digit NAICS codes of those affected by OCP. As shown in Figure IA5, the trends in the underlying data are similar, indicating comparable attrition rates and no considerable relative difference between these types of firms.

Second, we take a step further by estimating a Cox Proportional Hazard Model to measure the survival rates of firms in industries affected by OCP relative to firms in non-affected industries. This model is chosen for its flexibility in providing a baseline hazard rate without relying on parametric assumptions. It handles right censoring in the data, using a maximum likelihood estimator to account for firms that have not yet dropped out of the sample. As reported in Table IA15, we reject the null hypothesis that firms in industries affected by OCP drop out of the sample at a different rate than non-affected firms in the two counterfactual groups. Indeed, both estimates are economically small and statistically insignificant, further mitigating concerns of a possible selection bias.

Third, given the possibility that riskier firms might be rationed first or more stringently and thus be at a higher risk of dropping out from the sample, we show in Table IA16 this is also unlikely in our setting since firms in industries affected by OCP do not have a higher ex-ante PD than firms in non-affected industries. Specifically, the mean assessed PD for firms in industries affected by OCP is 2.1% as of 2012:Q2 (1.9% when considering only affected firms at targeted banks), while for firms in cash-intensive industries not affected by OCP is 1.9%

and for other firms in the same 3-digit NAICS code is 2% in the same period.[32] None of these differences is statistically significant.[33]

Finally, we also examine whether firms' exposure to the shock has an effect on attrition rates within our baseline sample of firms in industries affected by OCP, with the outcome variable set to one at time t if a given firm f no longer appears in the data in the following quarter $(t+1)$, and zero otherwise. As shown in column (5) of Table IA17, the main coefficient of interest is small in magnitude and statistically insignificant. In column (6) we observe the same pattern when disaggregating the effect across SMEs and large firms. Overall, our evidence suggests that the results are not affected by attrition from the sample.

6 Discussion

6.1 Interpretation

Evaluating the efficacy of such mandates is challenging, if not impossible, using observational data alone. The main challenge in studying targeted credit rationing lies in the endogenous nature of banks' lending decisions. Our study addresses this by leveraging a quasi-random shock to lending relationships, allowing us to isolate the impact of credit rationing on socially controversial firms. By exploiting this shock, we can compare firms that experience credit rationing due to the intervention with similar firms that do not, while controlling for other firm and market characteristics. This method enables us to isolate the economic effect of targeted credit rationing, separate from confounding factors like changes in firm risk profiles or market conditions.

Our analysis provides insights into the effectiveness and limitations of a targeted credit rationing program by a subset of banks as a tool to hold firms accountable for negative ex-

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[32]Note that the PDs when considering only affected firms at targeted banks (1.9%) and that in Table 2 (PD=2.0%) are slightly different since the former is the mean across firms, while the latter is a mean of means with differences in portfolio sizes across banks.

[33]As shown before in Table 2, we also find no evidence that the ex-ante PD of firms in industries affected by OCP borrowing from targeted banks is statistically different from that of firms borrowing from non-targeted banks. In addition, the results reported before in Table IA10 indicate that SMEs are impacted at the intensive margin to the same degree regardless of differences in their ex-ante PD.

ternalities. Specifically, our findings highlight the likely effects on relationship substitution, lending decisions, and firm performance by exploiting the quasi-random targeting of banks to disentangle the endogenous relationships between banks and firms. We observe that targeted banks reduced their committed credit to firms in affected industries, particularly small and medium-sized enterprises (SMEs). This heterogeneous effect suggests that such targeting has limited impact, as larger firms manage to offset the effect of the regulatory pressure applied by the DOJ.

These estimates underscore the challenges of using targeted credit rationing to influence corporate behavior. While this approach can initially restrict access to credit for affected firms, the observed credit substitution limits its overall effectiveness. This suggests that stakeholders may need to explore alternative or complementary strategies to hold firms accountable, especially larger ones.

6.2   Potential Policy Implications

The findings of this study have significant implications for understanding current targeted credit rationing practices, especially in the context of financial intermediaries' commitments to environmental and social goals. Currently, the Net Zero Banking Alliance (NZBA) has gained popularity but has also been controversial. The NZBA, a UN-convened bank-led group, includes leading global banks committed to aligning their lending, investment, and capital markets activities to achieve net-zero greenhouse gas emissions by 2050. As of this writing, the alliance comprises 145 banks from 44 countries, representing over 40% of global banking assets. For banks aiming to limit lending to "brown" firms–those whose activities contribute to higher carbon emissions–this paper highlights the potential substitution effects that may arise when financial institutions align their credit allocation with non-financial preferences.

Our study also provides potentially valuable insights into the ongoing and contentious debate surrounding the implementation of Operation Choke Point 2.0 (Forbes, 2024). Recent proposals around this topic suggest that banks and financial intermediaries should curtail

lending to firms in cryptocurrency and digital assets industries. Our study sheds light on the potential implications of such initiatives.

More broadly, this paper sheds light on one of several tools available to regulators and government entities aiming to drive societal change. Historical approaches have included blanket bans on banks operating within specific jurisdictions (Garrett and Ivanov, 2024) or restricting firms' access to essential cash management systems (Berger and Seegert, 2024). Our paper contributes to the broader environmental and social finance literature by documenting the efficacy of such programs and highlighting potential unintended consequences. In doing so, we provide a comprehensive analysis that situates targeted credit rationing within the larger framework of tools to achieve societal goals.

6.3   Potential Caveats

This study comes with important caveats that we discuss here. First, Operation Choke Point refrained from implementing a blanket ban on lending to controversial but legal industries in question. This factor allows us to probe the key question of the paper: Can the actions of a single bank or a cluster thereof effectively influence operations in particular sectors? We underline the fact that this is *very different* from a setting where the government implemented a blanket ban on previously legal industries. Studying such a setting would change the null of the paper, likely the findings, and possible policy implications.

A second possible concern in our study is that despite using comprehensive FR-Y14 data, we do not observe lending by smaller banks and non-banks. While this is possible, substituting credit from traditional banks for other sources would bias us against finding that targeted credit rationing is ineffective. Second, smaller banks not in the FR-Y14 data were also subject to OCP, so they were not immune to such a shock. Moreover, in addition to finding that firms substitute credit within the traditional banking sector in our dataset, we find that firms' leverage ratios remain unchanged, suggesting that smaller banks and non-banks are not key actors in providing credit to targeted firms.

7 Conclusion

Over the last decade, stakeholders have increasingly searched for mechanisms to affect the operations of firms that generate negative externalities. These actions can be undertaken by shareholders, who can exercise voting rights or divest, or by banks, which can ration credit. Thus, assessing the effectiveness of targeted credit rationing in disrupting the operations of firms in controversial industries is crucial. Nonetheless, the empirical evidence on this issue is scarce.

In this paper, we exploit a regulatory initiative that provides exogenous variation in credit rationing to firms in specific industries. Using supervisory loan-level data, we document that credit rationing does affect banking relationships, with targeted banks reducing lending and terminating relationships with firms in affected industries. However, these firms initiate new relationships with non-targeted banks and manage to obtain loans with similar terms to the ones they had. Using financial statements data, we show that these firms do not experience measurable changes in performance. Overall, our findings highlight that target credit rationing by a subset of banks can be ineffective. Our findings have significant implications for current debates on whether credit rationing to specific industries helps bring about change.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the authors used ChatGPT in order to polish the writing of certain paragraphs. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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FIGURE 1: **TIMELINE OF TARGETING**

This figure plots a segment of the timeline of the targeting of bank holding companies (BHC) by the Department of Justice (DOJ) used in our paper.
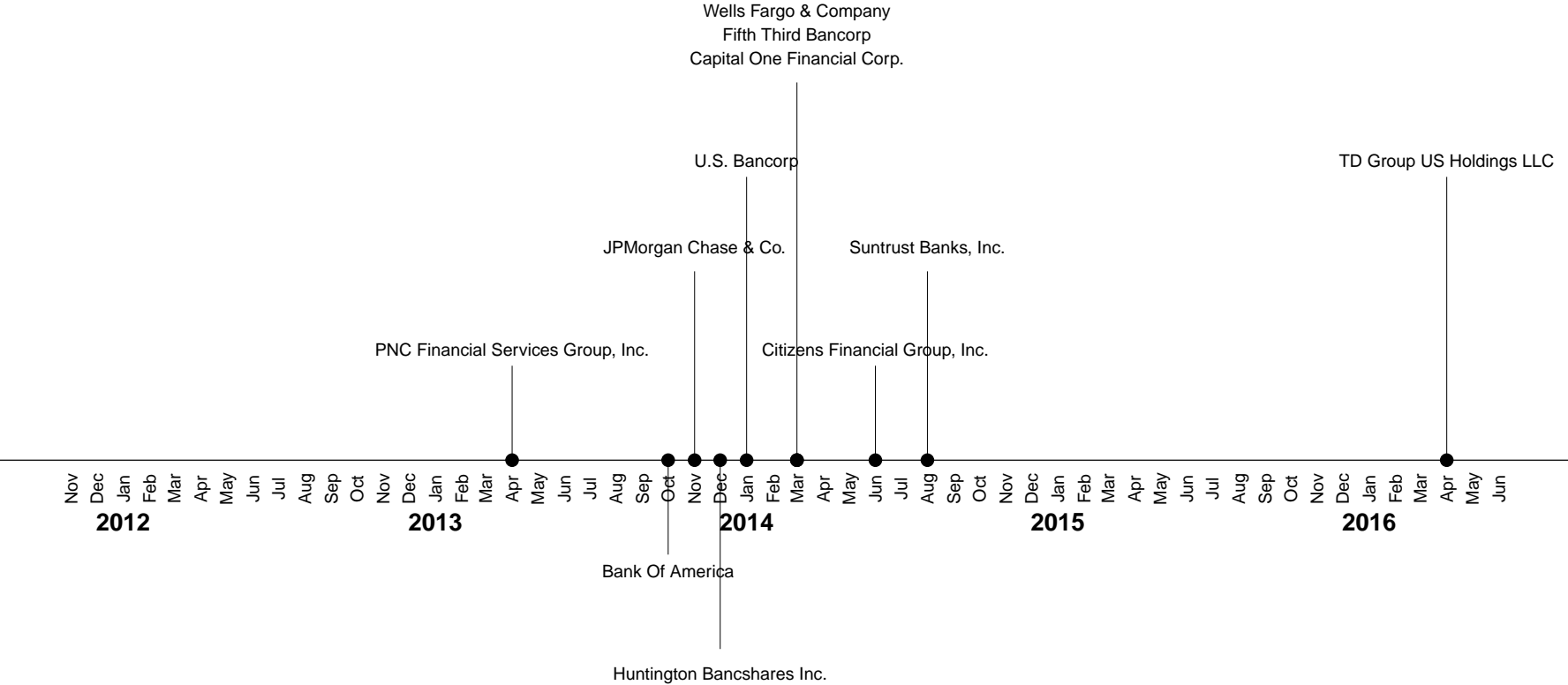
FIGURE 2: **COMMITTED CAPITAL AROUND OPERATION CHOKE POINT**

This figure plots coefficients from a difference-in-differences specification, where the dependent variable is the natural logarithm of total committed credit at the bank-firm-quarter level. The horizontal axis is in event time relative to the quarter before targeting by Operation Choke Point. The estimated coefficients and their corresponding 95% confidence intervals correspond to the difference in the total committed credit lending between targeted and non-targeted banks, within the same treated industry. Data Source: Federal Reserve Y-9C.
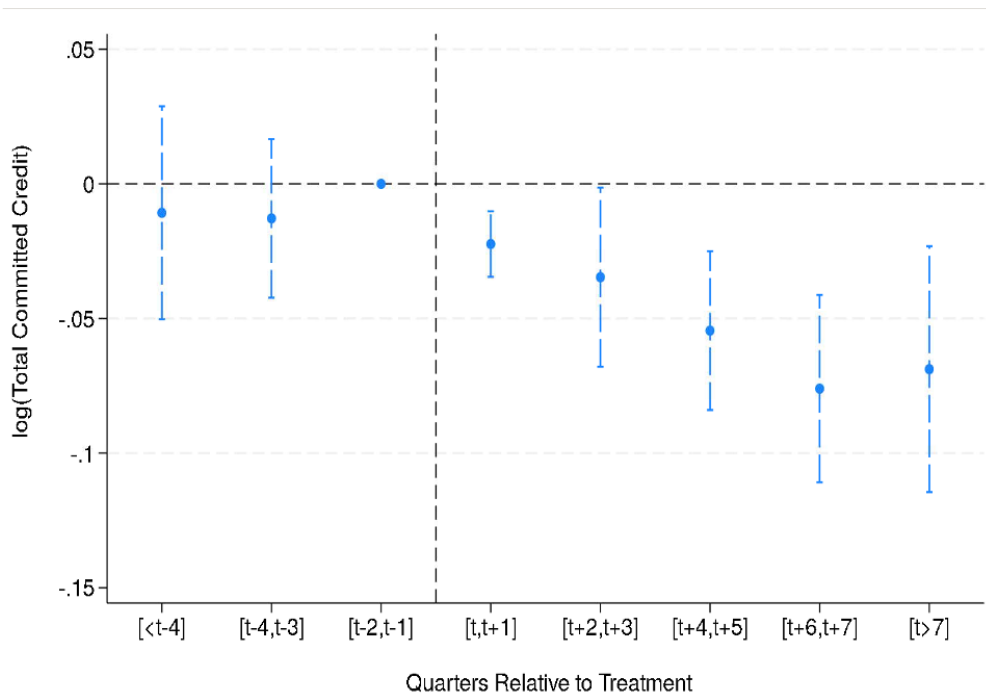
TABLE 1: **SUMMARY STATISTICS**

The table reports the summary statistics for firm-bank-quarter-level and firm-quarter-level characteristics relating to bank lending between the thirty largest bank holding companies and U.S. firms. Variable definitions are reported in the Appendix. The sample period covers 2012 Q2 to 2016 Q2. Data Source: Federal Reserve Y-14Q and Y-9C.

	N (1)	Mean (2)	p50 (3)	SD (4)
Panel A: *Firm-Bank-Quarter*				
Total Committed Exposure	51,105	29.822	5.981	90.073
Share of Drawn Credit	51,105	0.545	0.604	0.393
Bank Size	51,105	20.076	19.713	1.281
Bank Capital	51,105	8.996	9.167	1.214
Bank Profitability	51,105	0.980	1.009	0.502
Bank Liquidity	51,105	13.307	11.318	10.647
Panel B: *Firm-Quarter*				
Total Committed Exposure	41,891	36.381	3.867	182.492
Share of Drawn Credit	41,891	0.637	0.767	0.386
SME	41,891	0.845	1.000	0.362
Large Firm	41,891	0.155	0.000	0.362
Relationship Creation with Any Bank	41,891	0.106	0.000	0.308
Relationship Termination with Any Bank	41,891	0.048	0.000	0.214
Relationship Creation with Targeted Bank	41,891	0.069	0.000	0.254
Relationship Termination with Targeted Bank	41,891	0.024	0.000	0.154
Relationship Creation with Control Bank	41,891	0.039	0.000	0.194
Relationship Termination with Control Bank	41,891	0.025	0.000	0.155
Total Debt to Assets	41,891	0.298	0.260	0.248
Return on Assets	41,891	0.095	0.063	0.156
Capital Expenditures to Assets	41,891	0.022	0.000	0.046

TABLE 2: **EX-ANTE CHARACTERISTICS, TARGETED VS. NON-TARGETED BANKS**

This table reports summary statistics across targeted banks (n=11) and non-targeted banks (n=19) as of 2012 Q2.***, **, * denote significance at the 1%, 5%, and 10% level. Data Source: Federal Reserve Y-14Q and Y-9C.

	Targeted Banks (1)	Non-targeted Banks (2)	Difference *t*-stat (3)
Bank Size	19.582	19.040	0.231
Bank Capital	8.540	8.561	0.984
Bank Liquidity	0.278	0.345	0.289
Bank Profitability	0.723	0.391	0.115
Bank Overhead to Assets	1.521	1.467	0.883
Bank Share of Lending to Targeted Industries	0.071	0.062	0.416
Bank Share of Relationships in Targeted Industries	0.061	0.060	0.875
Profitability of Firms in a Bank's Portfolio	0.045	0.043	0.682
Liquidity of Firms in a Bank's Portfolio	0.106	0.075	0.330
Leverage of Firms in a Bank's Portfolio	0.311	0.311	0.996
PD of Firms in Bank's Portfolio	0.016	0.015	0.706
PD of Firms in Affected Industries in Bank's Portfolio	0.020	0.018	0.678

TABLE 3: **IMPACT OF OPERATION CHOKE POINT ON EXISTING LENDING**

This table reports the impact of Operation Choke Point on existing lending. The regression uses firm-bank-quarter level data to compare lending between targeted and non-targeted banks, within the same treated industries. The regressions use the following dependent variables to estimate the effects on lending: columns (1)-(3) use the natural logarithm of committed capital; and columns (4)-(6) use the share of drawn credit. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Bank controls include bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Log(Committed Credit)			Share of Drawn Credit		
	(1)	(2)	(3)	(4)	(5)	(6)
Choke Point$_{b,t}$	-0.034***	-0.046***		-0.001	0.001	
	(0.012)	(0.015)		(0.004)	(0.006)	
Choke Point$_{b,t}$ × SME$_f$			-0.095***			0.001
			(0.026)			(0.009)
Choke Point$_{b,t}$ × Large Firm$_f$			0.020			0.001
			(0.040)			(0.012)
Firm FE	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y
Time FE	Y	N	N	Y	N	N
Time × Firm Size Quartiles × Industry × State FE	N	Y	Y	N	Y	Y
Bank Controls	N	Y	Y	N	Y	Y
Observations	51,105	51,105	51,105	51,105	51,105	51,105

TABLE 4: **ROBUSTNESS TESTS**

This table reports the impact of Operation Choke Point on existing lending based on various robustness tests. The dependent variables include committed credit and share of drawn credit. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. Regressions include bank controls, such as bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Balanced Panel	Committed Credit ($bn)			Share of Drawn Credit		
	Poisson, Unbalanced Panel	OLS, Balanced Panel	Poisson, Balanced Panel	Poisson, Unbalanced Panel	OLS, Balanced Panel	Poisson, Balanced Panel
Choke Point$_{b,t}$	-0.067**	-0.026**	-0.159***	0.000	-0.022	-0.022
	(0.033)	(0.010)	(0.048)	(0.014)	(0.058)	(0.047)
Observations	51,105	86,101	86,101	51,105	86,101	86,101

	(1)	(2)	(3)	(4)	(5)	(6)
Panel B: Robustness Tests	Log(Committed Credit)			Share of Drawn Credit		
	Firm $\times$ Time FE (Khwaja-Mian)	Stacked Regression	Randomization Test	Firm $\times$ Time FE (Khwaja-Mian)	Stacked Regression	Randomization Test
Choke Point$_{b,t}$	-0.073**	-0.061***	0.000	0.003	0.005	0.000
	(0.029)	(0.021)	(0.018)	(0.014)	(0.006)	(0.006)
Observations	12,884	241,617	51,105	12,884	241,617	51,105

TABLE 5: **IMPACT OF OPERATION CHOKE POINT BY FIRM CHARACTERISTICS**

This table reports the impact of operation choke point on existing lending across firm characteristics. The regression uses firm-bank-quarter level data to compare lending between treated and non-treated banks, within the same treated industries. The regressions use the following dependent variables to estimate the effects on lending: columns (1)-(3) use the natural logarithm of committed capital; and columns (4)-(6) use the share of drawn credit. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. High and low measures of firm profitability, liquidity, and leverage are split relative to pre-period median values. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	log(Committed Credit)			Share of Drawn Credit		
	(1)	(2)	(3)	(4)	(5)	(6)
$\text{Choke Point}_{b,t} \times \text{SME}_f \times \text{Low Profitability}_f$	-0.102***			0.003		
	(0.024)			(0.009)		
$\text{Choke Point}_{b,t} \times \text{SME}_f \times \text{High Profitability}_f$	-0.083**			-0.002		
	(0.034)			(0.011)		
$\text{Choke Point}_{b,t} \times \text{Large Firm}_f \times \text{Low Profitability}_f$	-0.020			0.012		
	(0.051)			(0.015)		
$\text{Choke Point}_{b,t} \times \text{Large Firm}_f \times \text{High Profitability}_f$	0.110			-0.026		
	(0.072)			(0.020)		
$\text{Choke Point}_{b,t} \times \text{SME}_f \times \text{Low Liquidity}_f$		-0.097***			-0.003	
		(0.032)			(0.009)	
$\text{Choke Point}_{b,t} \times \text{SME}_f \times \text{High Liquidity}_f$		-0.086***			0.013	
		(0.028)			(0.013)	
$\text{Choke Point}_{b,t} \times \text{Large Firm}_f \times \text{Low Liquidity}_f$		0.045			0.014	
		(0.074)			(0.020)	
$\text{Choke Point}_{b,t} \times \text{Large Firm}_f \times \text{High Liquidity}_f$		-0.005			-0.013	
		(0.090)			(0.020)	
$\text{Choke Point}_{b,t} \times \text{SME}_f \times \text{Low Leverage}_f$			-0.075**			0.008
			(0.030)			(0.011)
$\text{Choke Point}_{b,t} \times \text{SME}_f \times \text{High Leverage}_f$			-0.120***			-0.007
			(0.031)			(0.009)
$\text{Choke Point}_{b,t} \times \text{Large Firm}_f \times \text{Low Leverage}_f$			-0.038			-0.012
			(0.063)			(0.021)
$\text{Choke Point}_{b,t} \times \text{Large Firm}_f \times \text{High Leverage}_f$			0.073			0.012
			(0.051)			(0.014)
Firm FE	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y
Time × Firm Size Quartiles × Industry × State FE	Y	Y	Y	Y	Y	Y
Bank Controls	Y	Y	Y	Y	Y	Y
Observations	51,105	51,105	51,105	51,105	51,105	51,105

TABLE 6: **TERMINATION OF BANKING RELATIONSHIPS**

This table reports the impact of Operation Choke Point on the termination of bank relationships. Columns (1)-(2) study relationships with any bank, columns (3)-(4) focus on relationships with targeted banks, and columns (5)-(6) focus on relationships with non-targeted banks. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

| | Relationship Termination | | | | | |
| | with Any Bank | | with Targeted Banks | | with Non-Targeted Banks | |
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$	0.003		0.045***		-0.042***	
	(0.008)		(0.005)		(0.007)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$		0.005		0.044***		-0.039***
		(0.008)		(0.005)		(0.007)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$		-0.015		0.056***		-0.073***
		(0.020)		(0.017)		(0.010)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891

TABLE 7: **CREATION OF BANKING RELATIONSHIPS**

This table reports the impact of Operation Choke Point on the creation of bank relationships. Columns (1)-(2) study relationships with any bank, columns (3)-(4) focus on relationships with targeted banks, while columns (5)-(6) focus on relationships with non-targeted banks. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

| | Relationship Creation | | | | | |
| | with Any Bank | | with Targeted Banks | | with Non-Targeted Banks | |
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$	0.034***		-0.042**		0.079***	
	(0.012)		(0.016)		(0.023)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$		0.036***		-0.043**		0.080***
		(0.012)		(0.017)		(0.023)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$		0.015		-0.038		0.063**
		(0.038)		(0.032)		(0.023)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891

TABLE 8: **CHANGE IN FIRM LEVEL BORROWING**

This table reports the impact of Operation Choke Point on firm level borrowing. The regressions use firm-quarter level data to compare changes in total credit between treated firms of targeted and non-targeted banks. The dependent variable of columns (1)-(3) is the natural logarithm of committed capital, while columns (4)-(6) use the share of drawn credit. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Log(Committed Credit)			Share of Drawn Credit		
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$	-0.029	0.005		0.009	0.003	
	(0.017)	(0.013)		(0.008)	(0.009)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$			-0.003			0.003
			(0.011)			(0.009)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$			0.084			0.003
			(0.051)			(0.015)
Time × Industry × Firm Size Quartiles × State FE	N	Y	Y	N	Y	Y
Time FE	Y	-	-	Y	-	-
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891

TABLE 9: **CHANGE IN FIRM LEVEL BORROWING BY FIRM CHARACTERISTICS**

This table reports the impact of Operation Choke Point on firm level borrowing across firm characteristics. The regressions use firm-quarter level data to compare changes in total credit between treated firms of targeted and non-targeted banks. The dependent variable of columns (1)-(3) is the natural logarithm of committed capital, while columns (4)-(6) use the share of drawn credit. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. High and low measures of firm profitability, liquidity, and leverage are split relative to pre-period median values. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Log(Committed Credit)			Share of Drawn Credit		
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Profitability$_f$	-0.009			0.006		
	(0.018)			(0.005)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Profitability$_f$	0.006			-0.001		
	(0.012)			(0.017)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Profitability$_f$	0.047			0.026		
	(0.067)			(0.029)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Profitability$_f$	0.225**			-0.086		
	(0.083)			(0.066)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Liquidity$_f$		-0.004			0.006	
		(0.009)			(0.009)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Liquidity$_f$		-0.002			-0.005	
		(0.028)			(0.015)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Liquidity$_f$		0.041			-0.007	
		(0.050)			(0.012)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Liquidity$_f$		0.173			0.023	
		(0.136)			(0.045)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Leverage$_f$			0.017			0.004
			(0.016)			(0.010)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Leverage$_f$			-0.031**			0.003
			(0.014)			(0.014)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Leverage$_f$			0.077			-0.015
			(0.059)			(0.025)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Leverage$_f$			0.098			0.028
			(0.069)			(0.023)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891

TABLE 10: **CHANGE IN FIRM PERFORMANCE**

This table reports the impact of Operation Choke Point on firm performance. The dependent variables are total debt to assets (columns 1-2), return on assets (column 3-4), and total capital expenditures to assets (column 5-6). *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. High and low measures of firm profitability, liquidity, and leverage are split relative to pre-period median values. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Total Debt/Assets		ROA		Capex/Assets	
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$	0.005		0.002		-0.002	
	(0.007)		(0.004)		(0.002)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$		0.007		0.002		-0.002
		(0.006)		(0.004)		(0.002)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$		-0.010		0.004		-0.000
		(0.022)		(0.008)		(0.004)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891

Defunding Controversial Industries

INTERNET APPENDIX
FOR ONLINE PUBLICATION

FIGURE IA1: **EVIDENCE ON THE FDIC'S INVOLVEMENT IN OPERATION CHOKE POINT**

This figure provides references from the 2018 letter sent by former chairman of the FDIC, Jelena McWilliams, to Representative Blaine Luetkemeyer, addressing concerns of the FDIC's involvement in Operation Choke Point and responding to the issue of the FDIC having applied regulatory threats and intimidation tactics to achieve ideological and political motives.

FEDERAL DEPOSIT INSURANCE CORPORATION

JELENA McWILLIAMS
CHAIRMAN
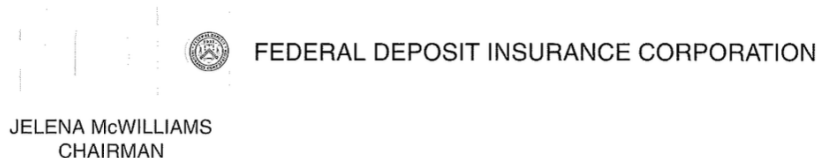
November 15, 2018

Honorable Blaine Luetkemeyer
House of Representatives
Washington, D.C. 20515

Dear Congressman Luetkemeyer:

This is in further response to your October 15, 2018, letter expressing concerns about allegations of past misconduct at the FDIC.

I assumed my duties as Chairman of the Federal Deposit Insurance Corporation with utmost respect for the rule of law and for the obligation of the United States government to be accountable to its citizens. I have seen first-hand what happens when these values are not respected. Growing up in communist Yugoslavia under a system where ordinary citizens could not question the government, I witnessed the abuses that can arise when those in power are accountable only to themselves.

I am deeply invested in transparency and accountability at the FDIC. These principles are paramount to maintaining the public trust. As such, I am troubled that certain FDIC employees acted in a manner inconsistent with FDIC policies in what has been generically described as "Operation Choke Point."[1] To ensure that the FDIC's commitment to integrity remains unequivocally clear, I am asking an outside law firm to review the prior actions taken by the FDIC in this matter so that I can better ascertain the effectiveness of our response.

The FDIC has an obligation to ensure that the banks we supervise are operating in a safe and sound manner. We have a responsibility to ensure that these banks have processes and procedures in place to identify fraudulent or illegal activity, whether it occurs at the bank or at vendors or customers with whom the bank has relationships. The exercise of these fundamental FDIC responsibilities must be borne out of our laws and regulations. They must never be based on personal beliefs or political motivations. Regulatory threats, undue pressure, coercion, and intimidation designed to restrict access to financial services for lawful businesses have no place at this agency.

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[1] The FDIC's role in Operation Choke Point and Supervisory Approach to Institutions that Conducted Business with Merchants Associated with High-Risk Activities, Office of the FDIC Inspector General, Rep. No. AUD-15-008 at iv (September 2015).

The FDIC's guidance is clear: insured institutions are encouraged "to take a risk-based approach in assessing individual customer relationships rather than declining to provide banking services to entire categories of customers."[2] Institutions "that can properly manage customer relationships and effectively mitigate risks are neither prohibited nor discouraged from providing services to any category of customer accounts or individual customer operating in compliance with applicable state and federal law."[3]
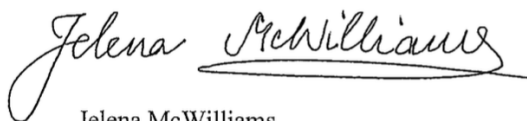
We have placed clear limitations on the ability of any FDIC personnel to recommend the termination of account relationships, including requirements that any such recommendations be made in writing, that Regional Directors review such recommendations, and that all such recommendations are reported to the FDIC Board of Directors and Division Directors.[4] The memorandum also makes clear that examiners should not use "informal," unwritten suggestions related to account terminations or criticism of a bank's "management or mitigation of risk associated with deposit accounts."[5] No recommendation should be made to terminate an account relationship based solely on reputational risk to the institution.[6] Independently, banks must also make responsible decisions about whether servicing any particular customer is consistent with their business plan, risk-appetite, and management capabilities – a decision most appropriately left with the bank's management and directors.

To reiterate these principles, I have directed additional training for our examination workforce to ensure that we adhere to the highest standards of conduct and respect the rule of law. The leaders of our examination workforce already have conducted targeted discussions with their staffs, and we will incorporate case studies on "Operation Choke Point" into our formal examiner training.

Consistent with my "Trust through Transparency" initiative, I also ask that anyone aware of any improper conduct by the FDIC to email me at Transparency@FDIC.gov. Any allegation of misconduct will be investigated fully and any employee engaged in the activity will be disciplined appropriately.

Under my leadership, the FDIC's oversight responsibilities will be exercised based on our laws and our regulations, not on personal or political beliefs.

Sincerely,

Jelena McWilliams

Jelena McWilliams

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[2] FDIC Financial Institution Letter, FIL-5-2015 (28 January 2015).
[3] Id.
[4] FDIC Memorandum to Regional Directors (28 January 2015).
[5] Id. See also Statement of the FDIC Board of Directors on the Development and Communication of Supervisory Recommendations (29 July 2016).
[6] FDIC Memorandum to Regional Directors (28 January 2015).

FIGURE IA2: **EVIDENCE ON THE IDEOLOGICAL NATURE OF OPERATION CHOKE POINT**

This figure provides references from congressional hearings and government reports questioning the ideological and political motives behind Operation Choke Point. Panel A provides a part of the Transcript of the Hearing Before the Subcommittee on Oversight and Investigations of the Committee on Financial Services U.S. House of Representatives One Hundred Thirteenth Congress Second Session, dated July 15, 2014, "The Department of Justice's 'Operation Choke Point'". Panel B provides a part of the Select Transcript of the Hearing Before the Subcommittee on Oversight and Investigations of the Committee on Financial Services U.S. House of Representatives One Hundred Fourteenth Congress First Session, dated March 24, 2015, "The Federal Deposit Insurance Corporation's Role in Operation Choke Point"

Panel A: July 15, 2014

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Directly contacted from enterprises and individuals, Congress has learned that after "Operation Choke Point's" onset, various lawful businesses were identified, and were notified that their bank accounts were being terminated.

When these legitimate enterprises inquired about this sudden termination of their accounts, their banks expressed that it was a result of "regulatory trends" or "heightened scrutiny," and explicitly denied any negative review of the account holder's financial risk.

Upon receiving copies of account termination letters from targeted merchants, Members of Congress questioned why banks had unexplainably used the cliched teenage break-up excuse, "It's not you, it's me."

In the last year, to comprehend how "Operation Choke Point's" targets were identified and how banks were getting mixed up, members of this Committee and of the Oversight and Government Reform Committee here in the House have written letters to regulators and requested documents from the Department of Justice.

From the committee's experience, the Department of Justice initially attempted to block congressional oversight and investigations of "Operation Choke Point." But the DOJ has since provided 854 pages of internal memoranda, e-mail communications, and presentations that have provided some detail of its investigation.

The initial findings are quite disturbing. Rather than directly investigate merchants for fraudulent activities, the Department of Justice subpoenaed banks and payment processors of targeted merchants to effectively compel them to choke off businesses from accessing the banking system.

Consequently it seems that "Operation Choke Point" may have led to banks terminating their relationship with unjustifiably named, "high-risk" merchants out of fear of civil and criminal liability from the Department and other financial regulators, as well.

Equally as troubling, "Operation Choke Point's" regulatory approach of employing an axe rather than a scalpel and informal operations suggests it, as another iteration of this Administration's game plan to circumvent the rule of law and Congress to achieve ideological objectives.

Even worse, the Department of Justice and the FDIC have blocked the committee from meaningfully understanding "Operation Choke Point" by failing to provide details about the program, and financial regulators have even misled this committee as to the breadth of their cooperation when engaging with banks.

Even with this much established, the irony is that the full role of financial regulators in "Operation Choke Point" remains a mystery. That is why we had this hearing today.

But then again, what a congressional inquiry has made clear is that this Administration and financial regulators have raised serious concerns of collaborated effort to facilitate an ideological crusade against industries profiled by the government through their abusive threat of launching Federal investigations.

This is not the intent of the rule of law in our system.

The Department of Justice may have originally advertised "Operation Choke Point" as an honorable, authentic investigation to combat consumer fraud.

Panel B: March 24, 2015

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Chairman DUFFY. Yes, he is. And is he still in the same position, as Regional Director?

Mr. GRUENBERG. Yes.

Chairman DUFFY. And is it part of your policy now that if you have an issue with one of your banks, you should go to the Regional Director Mr. Lowe? Yes?

Mr. GRUENBERG. Yes.

Chairman DUFFY. Yes. Do you think a bank is going to feel comfortable having an examiner that is going after them for payday lending to go to Mr. Lowe who is targeting payday lending?

Mr. GRUENBERG. And the—

Chairman DUFFY. That is your big answer to targeting payday lenders?

Mr. GRUENBERG. I think, as you know, the Inspector General is currently reviewing—

Chairman DUFFY. I don't care about—

Mr. GRUENBERG. If I may just answer.

Chairman DUFFY. Is the Inspector General the Chairman of the FDIC or is it Martin Gruenberg? The buck stops with you, Mr. Gruenberg.

Mr. GRUENBERG. Yes, and it was important to us to get the facts in the case before taking any action.

Chairman DUFFY. So, you have these facts, this letter, and you have done nothing, right?

Mr. GRUENBERG. We have taken the actions I described, Mr. Chairman.

Chairman DUFFY. So, what you have done is, in the last 2 years you have waited for the Oversight Committee to do a report, then you asked for an IG investigation. So this is classic slow walking. He is still in this position. And we will get to, I think, what the truth is behind what is happening here.

I want to go through just a few more documents to make sure we are on the same page and how prevalent this work at the FDIC is. Thomas Dujenski—I am saying his last name wrong. He no longer works at the FDIC, right?

Mr. GRUENBERG. Yes, sir.

Chairman DUFFY. Was he fired or did he leave on his own accord?

Mr. GRUENBERG. He retired, I believe.

Chairman DUFFY. He retired, he wasn't fired. Here is an email from February 7th: "I am pleased we are getting the banks out of the payday bad practice," et cetera. "Another bank is griping, but we are doing good things for them. For example, the redacted bank, is going the hate DOJ being involved. We are doing the right thing for sure. One or two banks may complain next week when the Florida bankers come to D.C. as a group."

So we have old Thomas, we see how he feels about payday lending, but he retired, wasn't penalized at all. Thomas again says that he literally can't stand payday lending. That was in an email on November 26th. Let's see, we now have Seth Rosebrock: "Jonathan, heard where you are coming from, but nonetheless, wants to retain a reference to pornography in our letters and slash talking points. He thinks it is important for Congress to get a good picture regarding the unsavory nature of the business at issue. He represented

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that one is judged by the friends one keeps, and he seems to feel strongly that including payday lenders in the same circle as pornographers and online lenders and gaming businesses will ultimately help get the message at issue." Have you seen this email?

Mr. GRUENBERG. Yes, I have.

Chairman DUFFY. Would that disturb you?

Mr. GRUENBERG. Yes.

Chairman DUFFY. Was Seth reprimanded?

Mr. GRUENBERG. Well, the—

Chairman DUFFY. Is Seth still employed at the FDIC?

Mr. GRUENBERG. No, no. Just so I understand, I think that email was referencing a comment by—

Chairman DUFFY. Jonathan.

Mr. GRUENBERG. —the individual you mentioned.

Chairman DUFFY. Is Jonathan still employed at the FDIC?

Mr. GRUENBERG. Yes, and his conduct is under review as well.

Chairman DUFFY. Have you done anything to—has he been reprimanded by you, the Chairman?

Mr. GRUENBERG. Not—

Chairman DUFFY. No?

Mr. GRUENBERG. —until we get the facts in the case, Mr. Chairman.

Chairman DUFFY. These are pretty—and he is still in the same position. He hasn't been demoted, right?

Mr. GRUENBERG. No. I think the view of myself and the other inside Directors was we wanted to get the facts in the case before making a judgment in regard to an employee.

Chairman DUFFY. Dana Lesemann, she says that although payday lending is a particularly ugly practice—and it goes on, but I am sure Dana is still employed and not been reprimanded. Here is one. Do you know an individual by the name of Mark Pearce?

Mr. GRUENBERG. Yes.

Chairman DUFFY. High ranking at the FDIC?

Mr. GRUENBERG. Yes.

Chairman DUFFY. Okay. This was from Marguerite, and I always have a hard time with Marguerite's last name. You know Marguerite, correct, though?

Mr. GRUENBERG. Yes.

Chairman DUFFY. Yes. Marguerite says, "Second, at the request of Mark Pearce, we are looking into the avenues by which the FDIC can potentially prevent our banks from facilitating payday lending."

Mark Pearce, we are looking into avenues by which the FDIC can potentially prevent our banks from facilitating payday lending. Chairman Gruenberg, Mark Pearce is at almost the top of the pyramid. Is he still employed at the FDIC?

Mr. GRUENBERG. Yes, he is, Mr. Chairman.

Chairman DUFFY. Has he been reprimanded by you?

Mr. GRUENBERG. We are awaiting the results of the—

Chairman DUFFY. Waiting for—

Mr. GRUENBERG. —IG's review of his conduct.

Chairman DUFFY. This was sent in 2013. This was 2 years ago. I am not going to go through all of the emails, but I would argue that if I were you, the Chairman, and I actually agreed with the

FIGURE IA3: **SAMPLE ANNOUNCEMENTS OF RELATIONSHIP TERMINATIONS**

- In June 2014, Chemical Bank informed Advance America that, [a]fter evaluating the Payroll Advance businesses serviced by Chemical Bank, and due to the overall risks associated with Money Services Business transactions, our financial institution has decided to reduce the services we provide to these types of business account. This reduction in service entailed the closing of Advance Americas accounts.

- In August 2014, SunTrust issued a press release announcing that [w]e have decided to discontinue banking relationships with three types of businesses specifically payday lenders, pawn shops and dedicated check-cashers due to compliance requirements.

- In December 2016, MainSource Bank informed Advance America by letter that the bank had made the strategic decision to discontinue deposit account and banking services to businesses identified as money service businesses.

FIGURE IA4: **EVIDENCE FROM NEWS ON THE IMPACT OF OPERATION CHOKE POINT**

This figure provides references from news articles showing the impact of Operation Choke Point on lending to targeted industries, including but not limited to firms in adult entertainment, payday lending, and gun and ammunition sales. Panel A provides a news article on the effects of OCP on adult entertainment businesses. Panel B provides a news article on the effects of OCP on payday lenders and gun stores.

Panel A: News article showing OCP targeting adult entertainment

DOW JONES NEWSWIRES

Porn Merchants Targeted by Bank Regulators, Trade Group Says

By Alan Zibel

509 words
3 October 2014
18:35 GMT
Dow Jones Institutional News
DJDN
English
Copyright © 2014, Dow Jones & Company, Inc.

WASHINGTON -- U.S. bank regulators tried to "coerce and intimidate" banks in an effort to force them to sever ties to the porn industry, a trade group says.

In a court filing this week, a year-old trade group called the Third Party Payment Processors Association accused the the Federal Deposit Insurance Corp of engaging in "moralistic regulation" over the banking industry,.

The filing is the latest wrinkle in a long-running fight about a regulatory crackdown on fraud schemes processed through payment firms. Bank regulators in recent years have been stepping up warnings to banks to keep close watch over payment firms that work with certain merchants -- such as escort services, coin dealers and payday lenders -- over concerns about fraudulent or illicit behavior.

Banks earn money by charging fees to such payment firms, which in turn provide thousands of merchants with access to the U.S. financial system.

The Third Party Payment Processors Association, a trade group formed last year to represent payment firms, accused the FDIC of using the bank-examination process "to coerce and intimidate banks" into cutting off relationships with payment processing firms that do business with porn merchants.

The FDIC has engaged in an "improper practice of moralistic regulation over the banking industry, the legal brief says.

Regulators didn't target the pornography industry because of evidence of fraud against consumers, the group wrote. "Regulators targeted the industry because they thought pornography was not good for consumers."

An FDIC spokesman said the regulator does not comment on pending litigation.

The payment processors' group filed their amicus brief Thursday in a lawsuit against U.S. banking regulators filed in June by a different trade group representing short-term lenders. That suit, filed by the Community Financial Services Association of America, seeks to stop federal banking regulators from pushing banks to terminate their business relationships with short-term lenders, gun shops and other kinds of businesses.

The Justice Department has also been probing banks' relationships with payment firms. As part of an investigation dubbed "**Operation Choke Point**," the Justice Department has issued more than 50 subpoenas and has opened at least 15 civil and criminal investigations into whether banks and payment-processing firms helped enable fraudulent activity. Officials at the DOJ say their probe is focused on illegal activity and not on forcing banks to cut off businesses' accounts.

Marsha Jones, the payment group's president, issued a statement criticizing the government for "legitimate, albeit politically-unfavorable, businesses from the economy according to the flavor of the day. Today it's payday lenders and firearms-related businesses; tomorrow, it could be environmental and civil rights groups or family planning clinics. No one can predict who's next."

The FDIC has backed down somewhat on its crackdown. In July, after criticism from lawmakers, the regulator announced it would no longer list specific categories of high-risk merchants that banks should monitor carefully.

Panel B: News article showing OCP targeting payday lenders and gun stores

WASHINGTON BUSINESS JOURNAL

Mysterious group to spend $5 million to break Operation Choke Point stranglehold

Washington Business Journal Online ,
Mark Holan,
13 June 2014,
535 words,
English,
WASBJO,

A mysterious group of business people will spend up to $5 million campaigning against the federal government's "Operation Choke Point" crackdown on financial fraud.

The United States Consumer Coalition says the U.S. Department of Justice (javascript:void(0);) operation unfairly targets legal businesses by choking off their access to banks and third-party payment processors (javascript:void(0)). Those businesses include payday lenders, guns and ammo stores and a host of online businesses and charities. A few porn stars have been targeted, too.

Brian Wise, a partner in the Washington strategic communications shop Wise Public Affairs, began forming USCC at the beginning of the year. A Facebook (javascript:void(0);) site was launched in March, and the group has stepped up its media campaign with a new feature called "Whistleblower Wednesdays," which highlights business that allegedly have been hurt by Choke Point.

But who are the "grassroots" behind the campaign?

"If the donors are identified they will automatically have a target on their back," Wise told me in a telephone interview. "The donors will never be disclosed."

Wise said the donors are not payday lenders, including the industry-association plaintiffs in a lawsuit (javascript:void(0)) against the government. And there's no porn star money, he added. He said, "No comment" when asked if banks were putting money into the campaign.

Wise describes himself on LinkedIN as a "results-focused, politically savvy and effective leader with proven ability to turn around troubled organizations, campaigns and companies." He was listed as USCC's senior advisor in a June 6 press release and he has appeared on Fox Business Network's "The Independents" talking about Choke Point.

Wise Public Affairs announced in February it hired Laura Keehner Rigas, a former communications director for the American Conservative Union (ACU) and its Conservative Political Action Conference (CPAC). The former Bush Administration official is now the press contact for the USCC.

Wise said by late summer the campaign will begin spending at least $1.5 million on paid television commercials targeting U.S. Attorney General Eric Holder (javascript:void(0);) and some Congressional Democrats who have supported Choke Point.

"This is a situation where the banks are kind of the victims," Wise said. "This is the ultimate chilling effect. Now we are seeing people lose bank accounts who can't get new accounts."

I've talked to several community bankers in Greater Washington about whether Operation Choke Point is having a chilling effect. They are naturally cautious about criticizing the government, which already heavily regulates their operations.

"We have turned down some potential account holders because we don't want to have to be the morality police," said Hunt Burke, chairman and CEO of Burke & Hurbert Bank in Alexandria. "We don't want to give the impression that we don't want to do business, but it is making us question every account we open."

Camden Fine, president and CEO of the Independent Community Bankers Association of America, described Choke Point as "ready, shoot, aim" and "a witch hunt."

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FIGURE IA5: **NUMBER OF FIRMS BY INDUSTRY TYPE**

This figure plots the number of firms included in the Y-14 data by industry type from 2012 Q4 to 2016 Q4. The blue line represents firms affected by OCP. The green line represents cash-intensive firms that are not affected by OCP. The red line represents firms in industries that are not affected by OCP but are in the same 3-digit NAICS codes as the affected industries. The left vertical axis tracks the count of firms and corresponds to firms that are affected by OCP as well as non-OCP, cash intensive firms. Similarily, the right vertical axis corresponds to non-OCP firms that are in the same 3-digit NAICS codes as the OCP-affected firms. Data Source: Federal Reserve Y-14Q.
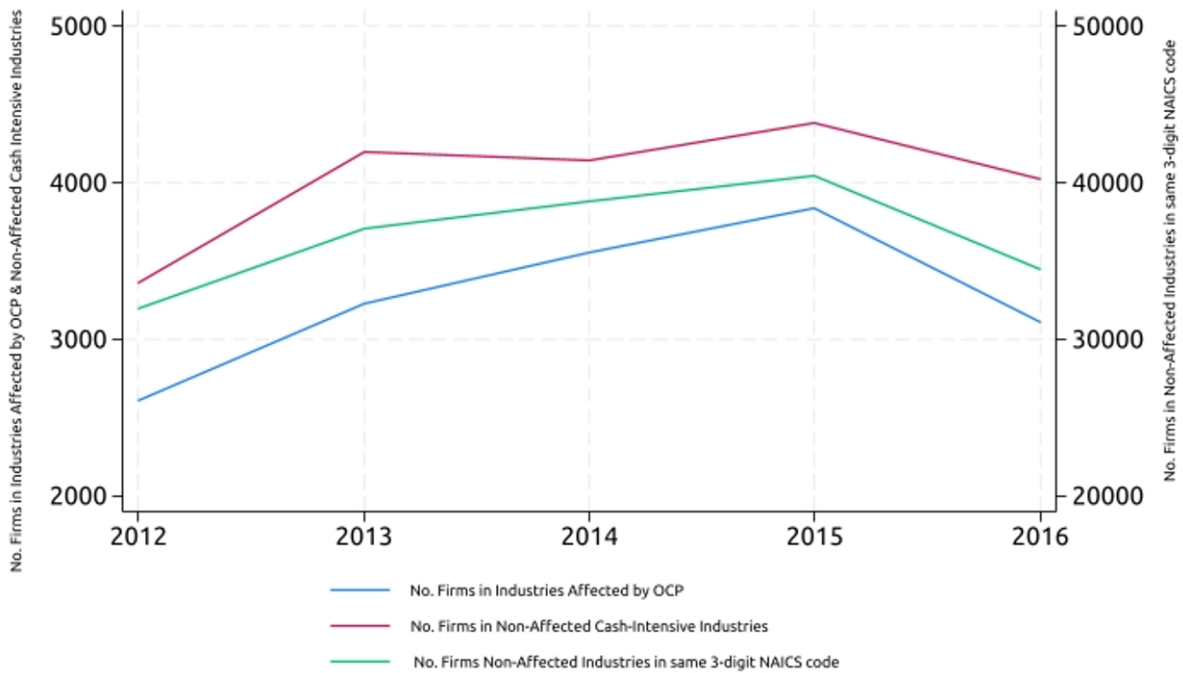
TABLE IA1: **KEY DATES OF OPERATION CHOKE POINT**

This table summarises the key dates of Operation Choke Point and provides key dates of its initiation and termination. The initial supervisory insight article that contained the 30 merchant categories was generated in the Summer of 2011, while the initial inception of the OCP started on November 2012.

Date	Event
Summer 2011	**FDIC issues a Supervisory Insight Article** Article warning banks of high risks activities associated with doing business with a list of 30 merchant categories, including payday lenders, firearm sellers, etc.
January 2012	**FDIC Issues New Guidance** Document indicating that banks could face consequences for failing to adequately manage relationships involving borrowers that engage in industries with higher incidences of consumer fraud and potentially illegal activities.
November 2012	**Inception of Operation Choke Point** Attorneys within the DOJ's Civil Division proposed an internal initiative intended to protect consumer from fraud perpetrated by fraudulent merchant, financial institutions, and financial intermediaries. Initiative named Operation Choke Point.
February – August 2013	**Initial Waves of Subpoenas** DOJ issued 60 administrative subpoenas to entities for which the Department determined it had evidence of potential consumer fraud.
2013 – 2016	**Continuation of Operation Choke Point** Banks are targeted by the DOJ for their lending relationships with specific industries.
August 2017	**Official Termination of Operation Choke Point** Operation choke point officially ended in August 2017. FDIC commits to Congress to provide additional training for its examiners, and to cease issuing similar information and unwritten suggestions to banks it regulates.

TABLE IA2: FDIC LIST OF MERCHANTS INVOLVED IN "HIGH-RISK" ACTIVITIES

This table reproduces the lists of thirty merchants categories the FDIC's advisory notice identified as being involved in "high-risk" activities.

Merchants Categories Listed By the FDIC	
(1) Ammunition Sales	(16) Life-Time Memberships
(2) Cable Box De-scramblers	(17) Lottery Sales
(3) Coin Dealers	(18) Mailing Lists/Personal Info
(4) Credit Card Schemes	(19) Money Transfer Networks
(5) Credit Repair Services	(20) On-line Gambling
(6) Dating Services	(21) PayDay Loans
(7) Debt Consolidation Scams	(22) Pharmaceutical Sales
(8) Drug Paraphernalia	(23) Ponzi Schemes
(9) Escort Services	(24) Pornography
(10) Firearms Sales	(25) Pyramid-Type Sales
(11) Fireworks Sales	(26) Racist Materials
(12) Get Rich Products	(27) Surveillance Equipment
(13) Government Grants	(28) Telemarketing
(14) Home-Based Charities	(29) Tobacco Sales
(15) Life-Time Guarantees	(30) Travel Clubs

TABLE IA3: **VARIABLE DEFINITIONS**

Variable	Description
Average Long-term Debt of Firms in a Bank's Portfolio	Weighted average long-term debt (based on utilized exposure) of firms in the bank's loan portfolio
Average Profitability of Firms in a Bank's Portfolio	Weighted average ratio of net income to sales (based on utilized exposure) of firms in the bank's loan portfolio
Average Short-term Debt of Firms in a Bank's Portfolio	Weighted average short-term debt (based on utilized exposure) of firms in the bank's loan portfolio
Average Total Debt of Firms in a Bank's Portfolio	Weighted average debt (based on utilized exposure) of firms in the bank's loan portfolio
Bank Capital	Ratio of bank's core capital to total assets, multiplied by 100
Bank Liquidity	Ratio of bank's liquid assets to total assets, multiplied by 100
Bank Profitability	Ratio of bank's net income to total assets, multiplied by 100
Bank Share of Firm Relationships in Target Industries	Ratio of number of relationships with firms in targeted industries to total number of relationships
Bank Share of Lending to Targeted Industries	Ratio of loan amount committed in targeted industries to total loan amount committed
Bank Size	Natural logarithm of assets of the bank holding company in thousands of dollars
Capital Expenditures to Assets	Ratio of firm's capital expenditure to assets
Large Firm	Indicator variable that equals one if the firm's assets is greater than or equal to $250 million, and zero otherwise
Liquidity of Firms in a Bank's Portfolio	Weighted average liquidity (based on utilized exposure) of firms in bank's loan portfolio
Profitability of Firms in a Bank's Portfolio	Weighted average profitability (based on utilized exposure) of firms in bank's loan portfolio
Relationship Creation with Any Bank	Indicator variable that equals one if the firm obtained a new lending relationship with any bank, and zero otherwise
Relationship Creation with Targeted Bank	Indicator variable that equals one if the firm obtained a new lending relationship with a targeted bank, and zero otherwise
Relationship Creation with Non-Targeted Bank	Indicator variable that equals one if the firm obtained a new lending relationship with a non-targeted bank, and zero otherwise
Relationship Termination with Any Bank	Indicator variable that equals one if the firm experienced a termination of a lending relationship with any bank, and zero otherwise
Relationship Termination with Targeted Bank	Indicator variable that equals one if the firm experienced a termination of a lending relationship with a targeted bank, and zero otherwise
Relationship Termination with Non-targeted Bank	Indicator variable that equals one if the firm experienced a termination of a lending relationship with a non-targeted bank, and zero otherwise
Return on Assets	Ratio of firm's net income to assets
Share of Drawn Credit	Ratio of utilized credit to total committed credit
SME	Indicator variable that equals one if the firm's assets is less than $250 million, and zero otherwise
Total Committed Exposure	Committed exposure in $ billions
Total Debt to Assets	Ratio of firm's debt to assets

This table lists the the industries that were targeted as part of Operation Choke Point. Column (1) lists the the industries that were outlined in the DOJ bulletin. Column (2) lists the search terms used to find the relevant NAICS codes. Column (3) lists the related NAICS codes that were identifies as corresponding to the respective industries.

Industry (1)	Search Terms (2)	NAICS Codes (3)
Ammunition/Firearm Sales	ammunition, firearm, gun	332992, 332993, 339920, 325920, 321920, 424690, 332994, 332439, 332994, 423910, 423990
Coin Dealers	coin	339910, 423940, 453310, 453998
Credit Repair Services	credit repair	541990
Drug Paraphernalia	drug, paraphernalia	446110, 325412, 446199, 325411
Escort Services/Pornography	escort, dating, porn, adult	812990
Firework Sales	firework	325998, 423920, 453998, 713990
Lottery Sales	lottery	713290, 334118
Mailing List/Personal Info.	mailing list	511140, 541860, 561431
Online Gambling	gambling, online gambling	713290, 519130
Pharmaceutical Sales	pharmaceutical	424210, 325412, 325411, 325199
Surveillance Equipment	surveillance, monitor, monitoring	334511, 561621, 334290, 453998
Telemarketing	telemarketing	561422
Tobacco Sales and Tobacco Paraphernalia	tobacco, cigarette, nicotine	424940, 312230, 111910, 453991, 453998, 424590, 339910, 321920, 333249, 115114, 333111, 339999, 326299, 316998

This table reports the impact of Operation Choke Point on existing lending across credit types. The regression uses firm-bank-quarter level data to compare lending between targeted and non-targeted banks, within the same treated industries. The regressions are split based on the following outcome variables: total committed account of credit lines (columns 1-2); total committed credit on term loans (columns 3-4); and committed credit amounts of other credit types (columns 5-6). *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Bank controls include bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Committed Amount, Credit Lines		Committed Amount, Term Loans		Committed Amount, Other Credits	
	(1)	(2)	(3)	(4)	(5)	(6)
Choke Point$_{b,t}$	-0.027		-0.059		-0.265	
	(0.019)		(0.043)		(0.157)	
Choke Point$_{b,t}$ × SME$_f$		-0.082**		-0.146***		-0.235
		(0.036)		(0.052)		(0.156)
Choke Point$_{b,t}$ × Large Firm$_f$		0.019		0.055		-0.284
		(0.031)		(0.087)		(0.209)
Time × Firm Size Quartiles × Industry × State FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y
Bank Controls	Y	Y	Y	Y	Y	Y
Observations	31,676	31,676	16,594	16,594	3,387	3,387

TABLE IA6: **CHANGE IN LOAN TERMS**

This table reports the impact of Operation Choke Point on loan terms. The regression uses firm-bank-quarter level data to compare lending between targeted and non-targeted banks, within the same treated industries. The regressions use the following dependent variables to estimate the effects on lending: columns (1)-(2) use average interest rate spread; columns (3)-(4) use average loan maturity (months); and columns (5)-(6) use an indicator variable that sets to one if collateral is required for any loan between a bank-firm pair. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to \$250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than \$250 million. Bank controls include bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Interest Rate Spread		Maturity		Collateral	
	(1)	(2)	(3)	(4)	(5)	(6)
Choke Point$_{b,t}$	0.023		-1.190		0.168***	
	(0.024)		(0.899)		(0.044)	
Choke Point$_{b,t}$ × SME$_f$		0.046		-2.197*		0.177***
		(0.038)		(1.090)		(0.040)
Choke Point$_{b,t}$ × Large Firm$_f$		-0.012		0.551		0.132
		(0.035)		(0.908)		(0.080)
Time × Firm Size Quartiles × Industry × State FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y
Bank Controls	Y	Y	Y	Y	Y	Y
Observations	25,835	25,835	37,619	37,619	17,318	17,318

TABLE IA7: **ROBUSTNESS TEST - LOAN THRESHOLD**

This table reports the impact of Operation Choke Point on existing lending across different loan threshold sub-samples. In columns (1), (2), (3), and (4), only observations with loan commitments exceeding $2 million, $6 million, $10 million, and $20 million, respectively, are included. Columns (5), (6), (7), and (8) have similar sample restrictions. The dependent variables include committed credit and share of drawn credit. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *OCP Industries* is an indicator variable at the firm level and is set to one if the firm is in an industry that is targeted by OCP. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Regressions include bank controls, such as bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Log(Committed Credit)				Share of Drawn Credit			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Choke Point$_{b,t}$ × SME$_f$	-0.105**	-0.123**	-0.158***	-0.165***	0.011	0.011	0.007	0.003
	(0.040)	(0.051)	(0.054)	(0.046)	(0.010)	(0.011)	(0.013)	(0.014)
Choke Point$_{b,t}$ × Large Firm$_f$	0.028	0.006	0.003	-0.011	-0.004	-0.005	-0.002	-0.008
	(0.043)	(0.035)	(0.029)	(0.022)	(0.010)	(0.009)	(0.008)	(0.009)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y
Time × Firm Size Quartiles × Industry × State FE	Y	Y	Y	Y	Y	Y	Y	Y
Bank Controls	Y	Y	Y	Y	Y	Y	Y	Y
Observations	35,828	22,822	19,176	13,824	35,828	22,822	19,176	13,824
Threshold (in millions)	2	6	10	20	2	6	10	20

TABLE IA8: **ROBUSTNESS TEST - TRIPLE DIFFERENCES**

This table reports the impact of Operation Choke Point on existing lending using triple difference tests. The dependent variables include committed credit and share of drawn credit. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *OCP Industries* is an indicator variable at the firm level and is set to one if the firm is in an industry that is targeted by OCP. In columns (1), (2), (5), and (6), non-targeted firms are defined as non-OCP, cash-intensive firms. In columns (3), (4), (7), and (8), non-targeted firms are defined as non-OCP firms that share the same 3-digit NAICS codes as that of OCP firms. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Regressions include bank controls, such as bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Log(Committed Credit)				Share of Drawn Credit			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Choke Point$_{b,t}$	0.026	0.028	0.009	0.010	0.001	0.002	-0.003	-0.003
	(0.029)	(0.025)	(0.010)	(0.011)	(0.006)	(0.005)	(0.003)	(0.003)
Choke Point$_{b,t}$ × OCP Industries$_f$	-0.125**		-0.078**		-0.000		-0.003	
	(0.056)		(0.037)		(0.011)		(0.008)	
Choke Point$_{b,t}$ × OCP Industries$_f$ × SME$_f$		-0.141***		-0.087*		-0.005		-0.009
		(0.036)		(0.043)		(0.013)		(0.011)
Choke Point$_{b,t}$ × OCP Industries$_f$ × Large Firm$_f$		-0.115		-0.074		0.003		0.000
		(0.080)		(0.056)		(0.016)		(0.012)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y
Time×Firm Size×Industry×State FE	Y	Y	Y	Y	Y	Y	Y	Y
Control Group	Cash-Intensive		3-digit NAICS		Cash-Intensive		3-digit NAICS	
Observations	105,799	105,799	522,267	522,267	105,799	105,799	522,267	522,267

This table reports the robustness test of the impact of Operation Choke Point on existing lending by removing firms operating in each industry one at a time. The dependent variables include committed credit (in Panel A) and share of drawn credit (in Panel B). *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. Regressions include bank controls, such as bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	13
Panel A: log(Committed Credit)													
Choke Point$_{b,t}$	−0.059***	−0.048***	−0.045***	−0.044***	−0.045***	−0.045***	−0.046***	−0.041**	−0.036*	−0.040**	−0.046***	−0.038**	−0.063*
	(0.017)	(0.015)	(0.015)	(0.015)	(0.015)	(0.016)	(0.015)	(0.016)	(0.020)	(0.018)	(0.015)	(0.018)	(0.034)
Panel B: Share of Drawn Credit													
Choke Point$_{b,t}$	−0.001	0.002	0.000	0.002	0.001	0.001	0.001	0.000	0.004	−0.001	0.001	0.001	0.009
	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)	(0.008)	(0.008)	(0.006)	(0.008)	(0.013)
Industry Excluded	Ammunition/Firearms Sales	Coin Dealers	Debt Consolidation Schemes	Drug Paraphernalia	Escort Services Pornography	Fireworks Sales	Mailing lists Personal info	Online Gambling	Pharmaceutical Sales	Surveillance Equipment	Telemarketing	Tobacco Sales and Paraphernalia	Columns 1, 9, and 12
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time x Firm Size Quartiles x Industry x State FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	42,386	49,924	48,336	49,360	50,804	49,701	50,521	49,982	41,499	47,311	50,959	30,661	12,677

TABLE IA10: **CROSS SECTIONAL HETEROGENEITY**

This table reports the impact of Operation Choke Point on lending, split by firm size and probability of default, from 2012 Q2 to 2016 Q2. The dependent variables include committed credit and share of drawn credit. *Choke Point* is an indicator variable at the bank level and is set to one following the targeting of the bank by OCP. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. *Pr(Default)*$_{q1,f}$, *Pr(Default)*$_{q2,f}$, *Pr(Default)*$_{q3,f}$, *Pr(Default)*$_{q4,f}$, *Pr(Default)*$_{q5,f}$ are indicator variables at the firm level set to one if the firm's probability of default is within a given quintile of the variable's distribution. Bank controls include bank size, capital, liquidity, and profitability. Standard errors are double clustered at the bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Log(Committed Credit)	Share of Drawn Credit
	(1)	(2)
Choke Point$_{b,t}$ × SME$_f$ × Pr(Default)$_{q1,f}$	-0.123**	0.004
	(0.059)	(0.021)
Choke Point$_{b,t}$ × SME$_f$ × Pr(Default)$_{q2,f}$	-0.180*	0.029
	(0.095)	(0.022)
Choke Point$_{b,t}$ × SME$_f$ × Pr(Default)$_{q3,f}$	-0.149*	0.006
	(0.082)	(0.030)
Choke Point$_{b,t}$ × SME$_f$ × Pr(Default)$_{q4,f}$	-0.228*	0.003
	(0.118)	(0.026)
Choke Point$_{b,t}$ × SME$_f$ × Pr(Default)$_{q5,f}$	-0.102**	0.017
	(0.037)	(0.017)
Choke Point$_{b,t}$ × Large Firm$_f$ × Pr(Default)$_{q1,f}$	0.005	-0.013
	(0.058)	(0.018)
Choke Point$_{b,t}$ × Large Firm$_f$ × Pr(Default)$_{q2,f}$	0.177	0.004
	(0.204)	(0.026)
Choke Point$_{b,t}$ × Large Firm$_f$ × Pr(Default)$_{q3,f}$	0.430	0.033
	(0.320)	(0.066)
Choke Point$_{b,t}$ × Large Firm$_f$ × Pr(Default)$_{q4,f}$	0.072	0.027
	(0.160)	(0.049)
Choke Point$_{b,t}$ × Large Firm$_f$ × Pr(Default)$_{q5,f}$	-0.045	0.014
	(0.098)	(0.028)
Firm FE	Y	Y
Bank FE	Y	Y
Time×Firm Size Quartiles×Industry×State FE	Y	Y
Bank Controls	Y	Y
Observations	32,196	32,196

TABLE IA11: **TERMINATION OF BANKING RELATIONSHIPS ACROSS FIRM CHARACTERISTICS**

This table reports the impact of Operation Choke Point on the termination of bank relationships across firm characteristics. Columns (1)-(2) study relationships with any bank, columns (3)-(4) focus on relationships with targeted banks, and columns (5)-(6) focus on relationships with non-targeted banks. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. High and low measures of firm profitability, liquidity, and leverage are split relative to pre-period median values. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Relationship Termination								
	with Any Bank			with Treated Banks			with Non-Treated Banks		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Profitability$_f$	0.008 (0.009)			0.046*** (0.005)			-0.039*** (0.007)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Profitability$_f$	0.001 (0.008)			0.040*** (0.006)			-0.039*** (0.007)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Profitability$_f$	-0.015 (0.014)			0.052*** (0.012)			-0.068*** (0.010)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Profitability$_f$	-0.014 (0.049)			0.072* (0.041)			-0.091*** (0.022)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Liquidity$_f$		0.006 (0.010)			0.043*** (0.007)			-0.038*** (0.007)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Liquidity$_f$		0.004 (0.006)			0.045*** (0.007)			-0.041*** (0.007)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Liquidity$_f$		-0.017 (0.019)			0.058*** (0.017)			-0.075*** (0.014)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Liquidity$_f$		-0.011 (0.024)			0.051* (0.029)			-0.069*** (0.017)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Leverage$_f$			-0.001 (0.008)			0.036*** (0.007)			-0.037*** (0.007)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Leverage$_f$			0.014 (0.014)			0.054*** (0.010)			-0.040*** (0.007)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Leverage$_f$			0.000 (0.024)			0.051** (0.023)			-0.055*** (0.010)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Leverage$_f$			-0.038 (0.027)			0.062*** (0.022)			-0.098*** (0.022)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891	41,891	41,891	41,891

TABLE IA12: **CREATION OF BANKING RELATIONSHIPS ACROSS FIRM CHARACTERISTICS**

This table reports the impact of Operation Choke Point on the creation of bank relationships across firm characteristics. Columns (1)-(2) study relationships with any bank, columns (3)-(4) focus on relationships with targeted banks, and columns (5)-(6) focus on relationships with non-targeted banks. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. High and low measures of firm profitability, liquidity, and leverage are split relative to pre-period median values. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Relationship Creation								
	with Any Bank			with Targeted Banks			with Non-Targeted Banks		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Profitability$_f$	0.034***			-0.042**			0.077***		
	(0.011)			(0.016)			(0.023)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Profitability$_f$	0.041***			-0.043**			0.085***		
	(0.014)			(0.017)			(0.024)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Profitability$_f$	0.014			-0.034			0.057***		
	(0.037)			(0.030)			(0.019)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Profitability$_f$	0.022			-0.054			0.087*		
	(0.062)			(0.057)			(0.047)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Liquidity$_f$		0.042***			-0.037**			0.080***	
		(0.013)			(0.014)			(0.023)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Liquidity$_f$		0.018			-0.061**			0.081***	
		(0.021)			(0.028)			(0.023)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Liquidity$_f$		0.008			-0.042			0.063**	
		(0.042)			(0.038)			(0.027)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Liquidity$_f$		0.030			-0.030			0.063*	
		(0.046)			(0.038)			(0.033)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Leverage$_f$			0.036***			-0.045**			0.083***
			(0.012)			(0.018)			(0.023)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Leverage$_f$			0.037**			-0.039**			0.076***
			(0.017)			(0.018)			(0.024)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Leverage$_f$			0.007			-0.062			0.075***
			(0.039)			(0.043)			(0.015)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Leverage$_f$			0.028			-0.005			0.047
			(0.077)			(0.053)			(0.041)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891	41,891	41,891	41,891

TABLE IA13: **CHANGE IN FIRM LEVEL LOAN TERMS**

This table reports the impact of Operation Choke Point on firm level loan terms. The regressions use firm-quarter level data to compare changes in total credit between treated firms of targeted and non-targeted banks. The regressions use the following dependent variables to estimate the effects on lending: columns (1)-(2) use average interest rate spread; columns (3)-(4) use average loan maturity (months); and columns (5)-(6) use an indicator variable that sets to one if any of a firm's loans require collateral. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to \$250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than \$250 million. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Interest Rate Spread		Maturity		Collateral	
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$	0.010		-2.554**		0.107**	
	(0.035)		(1.244)		(0.044)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$		0.028		-2.523*		0.122***
		(0.029)		(1.310)		(0.037)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$		-0.185		-2.874		-0.118
		(0.114)		(2.699)		(0.135)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891

TABLE IA14: CHANGE IN FIRM PERFORMANCE ACROSS FIRM CHARACTERISTICS

This table reports the impact of Operation Choke Point on firm performance across firm characteristics. The regressions use firm-quarter level data to compare changes in total credit between treated firms of targeted and non-targeted banks. The dependent variables are total debt to assets (columns 1-3), return on assets (column 4-6), and total capital expenditures to assets (column 7-9). *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. High and low measures of firm profitability, liquidity, and leverage are split relative to pre-period median values. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Total Debt/Assets			ROA			Capex/Assets		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Profitability$_f$	0.014			0.005			-0.002		
	(0.009)			(0.005)			(0.002)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Profitability$_f$	-0.007			-0.004			-0.002		
	(0.006)			(0.003)			(0.002)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Profitability$_f$	0.003			0.006			-0.003		
	(0.019)			(0.009)			(0.004)		
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Profitability$_f$	-0.058			-0.000			0.009		
	(0.048)			(0.009)			(0.006)		
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Liquidity$_f$		0.010			0.002			-0.003	
		(0.007)			(0.003)			(0.002)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Liquidity$_f$		-0.004			-0.001			-0.000	
		(0.011)			(0.007)			(0.003)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Liquidity$_f$		-0.004			0.005			0.002	
		(0.029)			(0.008)			(0.004)	
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Liquidity$_f$		-0.023			0.003			-0.005	
		(0.019)			(0.015)			(0.005)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × Low Leverage$_f$			0.001			0.001			-0.002
			(0.007)			(0.004)			(0.002)
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$ × High Leverage$_f$			0.014			0.003			-0.002
			(0.011)			(0.004)			(0.002)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × Low Leverage$_f$			-0.015			0.012			-0.003
			(0.034)			(0.009)			(0.004)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$ × High Leverage$_f$			-0.005			-0.007			0.003
			(0.014)			(0.010)			(0.005)
Time × Industry × Firm Size Quartiles × State FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	41,891	41,891	41,891	41,891	41,891	41,891	41,891

TABLE IA15: **COX HAZARD MODEL**

This table reports differences in the sample attrition rates of firms in OCP industries to those of control firms using Cox proportional hazard models. In model 1, the control group consists of cash-intensive firms that are not affected by OCP. In model 2, the control group consists of firms in industries that are not affected by OCP but share the same 3-digit NAICS codes as the OCP firms. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively, while N.S. indicates that a given coefficient is not statistically significant. Data Source: Federal Reserve Y-14Q.

	(1)	(2)	(3)
All Firms	*Counterfactual Firms*	*Coefficient*	*Significance*
Model 1	*Cash Intensive*	0.029	*N.S.*
Model 2	*3-digits NAICS code*	0.048	*N.S.*

This table reports the probability of default (PD), as of 2012 Q2, of firms in industries targeted by OCP (column 1) vs. cash-intensive firms that are not affected by OCP (column 3) and firms in industries that are not affected by OCP but share the same 3-digit NAICS codes as the OCP firms (column 5). For completeness, we also report the PD of affected firms with loans from targeted banks (column 2). ***, **, * denote significance at the 1%, 5%, and 10% level, respectively, while N.S. indicates that a given difference is not statistically significant. Data Source: Federal Reserve Y-14Q.

	Affected Firms	Affected Firms at Targeted Banks	Cash-Intensive Non-Affected Firms	t-test (Affected vs. Non-Affected Cash-Intensive Firms)	All Other Non-Affected Firms in same 3-digit NAICS	t-test (Affected vs. All Other Non-Affected Firms in same 3-digit NAICS)
	(1)	(2)	(3)	(4)	(5)	(6)
PD	0.021	0.019	0.019	N.S.	0.020	N.S.

TABLE IA17: **CHANGE IN FIRM PERFORMANCE AND DIFFERENCES IN ATTRITION**

This table reports the impact of Operation Choke Point on firm performance and differences in attrition across firms exposed and not exposed to treated banks. The dependent variables are the volume of trade credit (columns 1-2), probability of default (column 3-4), and an indicator variable that is set to one if the firm drops from the sample in the subsequent quarter. *Firm Exposure to Choke Point* is the interaction of two variables, *Firm Exposure to Treated Bank* and *Post*. *Firm Exposure to Treated Bank* is a firms exposure to the shock, measured as the pre-period share of its total credit provided by banks that were subsequently targeted. *Post* is an indicator variable at the firm level and is set to one following the targeting of any bank that lends to the firm. *Large Firm* is an indicator variable at the firm level and is set to one if the firms assets is greater than or equal to $250 million. *SME* is an indicator variable at the firm level and is set to one if the firms assets is less than $250 million. Standard errors are double clustered at the firm's main bank and state level and are robust to heteroscedasticity. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Data Source: Federal Reserve Y-14Q and Y-9C.

	Trade Credit		Pr(Default)		Attrition	
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Exposure to Choke Point$_{f,t}$	-0.001		0.001		-0.006	
	(0.005)		(0.001)		(0.014)	
Firm Exposure to Choke Point$_{f,t}$ × SME$_f$		-0.001		0.001		-0.006
		(0.005)		(0.001)		(0.015)
Firm Exposure to Choke Point$_{f,t}$ × Large Firm$_f$		-0.008		-0.001		-0.003
		(0.005)		(0.002)		(0.019)
Time×Industry×Firm Size Quartiles×State FE	Y	Y	Y	Y	Y	Y
Main Bank FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	41,891	41,891	26,147	26,147	41,891	41,891