To File or Not to File: Customer Claims and Firm Response After the Wells Fargo Enforcement Action

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Using Consumer Financial Protection Bureau complaints around Wells Fargo's September 2016 enforcement disclosure, we study whether enforcement changes customers' decisions to formalize problems as claims, a process we call claim production. A synthetic difference-in-differences design estimates a 71% increase in Wells Fargo's average monthly complaint flow during the three months following the action. Bank-account complaints also rise and remain elevated six months later. After the action, Wells Fargo's timely-response rate for complaints falls by 45%. The complaint increase recurs after similar actions at other banks. Beyond fines and restitution, enforcement actions create additional formal claims that firms must process.

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1. Introduction

When a regulator announces an enforcement action against a bank, the firm faces penalties, restitution, and reputational damage. But that is not all. The disclosure can also change which customer problems become formal complaints. This paper studies that change in filing and follows the added complaints into the firm's response process.

Filing a formal complaint requires information and effort. A customer must recognize a problem, identify the company and filing channel, and decide that a response or remedy justifies the effort. Public enforcement can change that decision by naming the conduct, identifying affected products, describing remediation, and making a regulator-run complaint process easier to find. We call the conversion of recognized customer problems into formal complaints routed to the firm *claim production*. This paper asks whether public enforcement changes claim production and how the targeted firm responds to the resulting complaint inflow.

We study the September 8, 2016 enforcement disclosure against Wells Fargo. That day, the Consumer Financial Protection Bureau (CFPB) and Office of the Comptroller of the Currency (OCC) issued coordinated orders documenting unauthorized deposit accounts, credit-card applications, transfers, and fees (Consumer Financial Protection Bureau 2016a; Office of the Comptroller of the Currency 2016).

The CFPB complaint process lets us observe customer filing and company response around the disclosure. The Consumer Complaint Database records when the Bureau received each complaint and when it sent the complaint to the company. It also identifies the product and issue and whether the company responded on time (Consumer Financial Protection Bureau 2026a,b). These records let us locate the break in complaint flow, identify the products in which the increase persisted, and measure Wells Fargo's response.

Our main analysis uses a synthetic difference-in-differences design to construct a comparison path from 76 institutions, placing more weight on those whose complaint counts moved like Wells Fargo's before the disclosure. The estimator measures the post-disclosure change at Wells Fargo relative to that weighted group. Daily and weekly estimates locate the break. Monthly estimates measure the increase and its persistence. We date complaints both when the CFPB receives them and when it sends them to the company, separating customer filing from the Bureau's transmission process.

Complaint flow changes immediately and sharply after the enforcement action. Over the following three months, Wells Fargo receives an estimated 547.7 additional complaints per month relative to its weighted comparison group, or 70.6% of its earlier monthly average.

Bank-account complaints rise by 265.9 per month, or 152.5%. Each is the largest increase in its 77-institution reference distribution.

The initial increase spans the firm's product lines, but the complaints that remain are concentrated in the products closest to the conduct named in the orders. Using a triple-difference product contrast—comparing Wells Fargo's bank-account complaints with its complaints about all other products, net of the same product difference at comparison institutions—we estimate an additional 256.7 bank-account complaints per month from September through November. The estimate remains positive from December through March. The account-opening, closing, or management estimate is an additional 40.5 complaints per month. The mortgage estimate is an additional 97.2 complaints per month in the initial window and a decrease of 49.0 per month in the later window. The event produces a broad initial increase and a durable increase in bank-account-specific complaints.

Wells Fargo's response changes where complaints persist. Over equal 12-week windows, bank-account complaints sent to Wells Fargo rise 182.2%. The timely-response rate falls from 93.45% to 50.94%, a 45% decrease. By contrast, the bank-account timely-response rate at comparison institutions is essentially unchanged, moving from 99.41% to 99.33%. We estimate that Wells Fargo records about 568 more untimely responses than it would have recorded at its earlier timely-response rate.

This broader claim production pattern is not unique to Wells Fargo. We study the first eligible CFPB action at each of 18 parent institutions, restricting attention to actions that name at least one product category in the complaint data. A category-matched group-time difference-in-differences design compares complaints about the named products with complaints about the same products at 58 institutions without an eligible action. Over the four weeks following the enforcement action, named-product complaints increase by an average of 39.6%. Claim production extends beyond the focal Wells Fargo scandal.

Our first contribution is to bring claim production into research on the consequences of corporate misconduct and enforcement. Existing work measures penalties, restitution, market value, funding, reputation, operational risk, and labor-market effects (Karpoff, Lee, and Martin 2008; Armour, Mayer, and Polo 2017; Egan, Matvos, and Seru 2019; Curti and Mihov 2025; Frame, McLemore, and Mihov 2025). We show that enforcement changes the volume and composition of formal complaints entering a regulated company's response process. Each added complaint creates a case that the firm must process.

Our second contribution is to identify response throughput as a consequence for the targeted bank. Wells Fargo is simply unable to keep up with the increase in complaints and its timely-response metrics deteriorate. These complaints are transmitted by the regulator, tracked complaint by complaint, and evaluated against a formal response standard. The excess untimely responses measure an operational consequence in a process the regulator monitors.

Our third contribution is to show that complaint counts reflect both customer problems and the decision to formalize them. Existing CFPB research uses the complaint database to study public disclosure, consumer learning, spillovers to competing institutions, depositor behavior, complaint resolution, and restitution (Bhattacharya 2023; Dou and Roh 2024; Dou et al. 2024; Jou et al. 2026; Haendler and Heimer 2025). We show that the complaint database is not simply a passive record of customer problems but rather an outcome of customers' economic decisions about whether and when to file. Public enforcement affects these decisions.

The remainder of the paper is organized as follows. Section 2 describes the complaint data and the measures of filing and firm response. Section 3 sets out the empirical approach used to estimate changes in Wells Fargo's complaint flow. Section 4 presents the main estimates and identifies the products in which complaints persist. Section 5 examines how Wells Fargo responds to the added claims. Section 6 tests whether claim production recurs after enforcement actions at other banks. Section 7 concludes.

2. Complaint Data and the Decision to File

The core data come from the CFPB Consumer Complaint Database, which records formal complaints about consumer financial products and services (Consumer Financial Protection Bureau 2026a). Each record in our sample names a company, identifies a product and issue, and enters the CFPB's company-response process. Our outcome is the number of formal complaints reaching each firm.

Each complaint carries two dates. Date received records when the CFPB obtained it. Date sent to company records when the Bureau transmitted it for response. We use the first date to measure complaint arrivals and compare both dates in the weekly timing analysis. We use the second date to measure company response, aligning each record with the point at which the firm became responsible for answering it.

The CFPB expects companies to provide complete, accurate, and timely responses, generally within 15 calendar days. The timely-response field records whether the company met that standard. The Bureau monitors company response performance as part of its complaint, supervision, and enforcement functions (Ayres, Lingwall, and Steinway 2014; Consumer Financial Protection Bureau 2026b).

Our sample runs from April 2015 through March 2017. It provides a history before the September 8 disclosure and ends before the CFPB changed several product and sub-product categories on April 24, 2017 (Consumer Financial Protection Bureau 2017). The monthly panel contains Wells Fargo and 76 comparison parent institutions, for 1,848 parent-month observations. Daily and weekly analyses use the complaint-level dates from the same period.

The unit of observation is the parent institution. Large banks can appear in the database under subsidiaries, affiliates, or standardized company labels, so we group company names by parent before counting complaints. The parent is the appropriate firm-level unit because a complaint sent to an affiliate still enters the banking organization's response, compliance, and supervisory systems.

The CFPB product and issue fields tell us what each complaint concerns. Our main product is *Bank account or service*, the category that covered checking, savings, and account-management complaints during the sample. It is the category most closely tied to the deposit-account conduct in the Wells Fargo orders. We also study *Credit card*, which the orders name, and *Mortgage*, another major Wells Fargo product that shows whether complaints rose more broadly beyond the named products. The structured issue fields assign an issue category to every complaint. Submission routes divide complaints among Web, referral, phone, and mail or other channels. Published narratives let us check for repeated wording among customers who agreed to make their text public, providing a separate duplicate-record test.

Comparison-group membership is fixed by the CFPB's June 30, 2016 list of supervised large depositories. The group consists of bank and thrift parents on that pre-event list, which covers institutions above $10 billion in assets and their supervised affiliates (Consumer Financial Protection Bureau 2016b). These institutions use the same federal complaint channel and consumer-finance regulator as Wells Fargo. The group contains Wells Fargo and 76 comparison institutions, for 77 parents in total. We also use two smaller comparison groups, U.S. global systemically important banks (G-SIBs) and the organizations in the 2015 Federal Reserve stress tests. Parent identifiers and balance-sheet variables come from 2016:Q2 regulatory filings (Federal Deposit Insurance Corporation 2026; Federal Financial Institutions Examination Council 2026).[1]

Our main outcome is formal complaint volume, measured by the number of CFPB complaints reaching each firm. We report the increase in levels and as a share of Wells Fargo's pre-event average. The company outcome is timely response, which measures whether the company met the CFPB response standard for complaints sent to it.

[1]Appendix Table A.3 reports the full group definitions and comparison institutions.

The database records formal complaints, not the stock of customer problems that could potentially be filed. The analysis therefore identifies changes in formal complaint flow and uses their timing, content, submission routes, and recurrence after other actions to interpret those changes as claim production.

3. Empirical Approach

The Wells Fargo analysis follows complaints through the CFPB process and asks four questions. First, when and by how much did Wells Fargo's complaint flow increase relative to other institutions? Second, which products and issues drove the initial increase, and which complaints persisted? Third, through which submission routes did the added complaints arrive, and how widely were they distributed geographically? And finally, fourth, how did Wells Fargo's response performance change in the product with the persistent increase? Each comparison studies a different stage of the same administrative process.

3.1. Timing and Outcomes

Treatment is the September 8, 2016 public enforcement event: release of the coordinated CFPB and OCC orders and their immediate public dissemination. Let Y_{it} denote a complaint outcome for parent organization i in period t. We abbreviate Wells Fargo as WFC in equations and figure labels, so WFC_i equals one for Wells Fargo. In the monthly analysis, $Post_t$ begins in September 2016 because most of the month follows the disclosure. The daily and weekly post-periods begin on September 8. We also run the monthly analysis without September, which contains days before and after the disclosure.

The weekly arrival analysis uses 12 equal seven-day periods before and after the disclosure. For parent institution i and relative week t, we estimate

$$Y_{it} = \alpha_i + \lambda_t + \tau\left(WFC_i \times Post_t\right) + \varepsilon_{it}. \tag{1}$$

Organization fixed effects absorb stable differences in complaint volume, and relative-week fixed effects absorb changes shared by all institutions. We apply the specification in Equation (1) to total complaints and the bank-account subset using both CFPB receipt dates and company-transmission dates. Agreement across the two dating conventions—receipt and company transmission, which we call the two clocks— shows that the complaint increase reaches the company and is not an artifact of a change in CFPB forwarding speed.

Our main monthly comparison uses the three months before the disclosure (June–August) and the first three months after it (September–November 2016). We call this the *initial* window. A second comparison uses April 2015–August 2016 as the pre-period and December 2016–March 2017 as the *late* window, after the first three months. We also report a *full-post* average for September 2016–March 2017. Daily and weekly data show whether complaints begin rising on the disclosure date.

Earlier and later public events provide timing benchmarks. A 2013 *Los Angeles Times* investigation and a 2015 Los Angeles City Attorney lawsuit publicized much of the same conduct before the federal orders. A September 20 Senate hearing and the Chief Executive Officer's October 12 resignation amplified attention after the complaint increase had begun. Table 1 and Figure 2 compare complaint changes around these dates.

3.2. Synthetic Difference-in-Differences

Our main comparison uses synthetic difference-in-differences (SDiD) (Arkhangelsky et al. 2021). SDiD builds a weighted group of CFPB-supervised institutions whose complaint counts moved like Wells Fargo's before the disclosure. It then compares Wells Fargo with that group's path after disclosure. This yields a comparison based on similar pre-event changes among institutions that use the same federal complaint channel.

The estimating equation is

$$(\hat{\tau}^{\text{SDiD}}, \hat{\eta}, \{\hat{\alpha}_i\}, \{\hat{\lambda}_t\}) = \underset{\tau,\eta,\{\alpha_i\},\{\lambda_t\}}{\arg\min} \sum_i \sum_t \hat{\omega}_i \hat{\kappa}_t \times \Big[Y_{it} - \eta - \alpha_i - \lambda_t - \tau(WFC_i \times Post_t)\Big]^2. \tag{2}$$

The coefficient $\hat{\tau}^{\text{SDiD}}$ is the average post-disclosure gap between Wells Fargo and the weighted comparison path. The unit weights $\hat{\omega}_i$ put more weight on institutions that moved with Wells Fargo before the disclosure. The time weights $\hat{\kappa}_t$ align the pre-period and average the post-disclosure window. Institution and time fixed effects account for stable differences across banks and changes that affect all banks.

Wells Fargo receives more complaints than any comparison institution, so no weighted average can match its level. SDiD handles this stable level difference with fixed effects and uses the weights to match changes before the disclosure. The estimate comes from a Wells Fargo-minus-comparison gap that is stable before September 8 and widens afterward.

For the main three-month comparison, we estimate the institution weights using June–August 2016, the months just before the disclosure. The late and full-post comparisons use the complete pre-disclosure history from April 2015 through August 2016. The initial weighting window matches Wells Fargo near the disclosure and reserves the earlier pre-period data for an out-of-window fit check. We also estimate the effects across several other weighting windows.[2]

The daily and weekly estimates use the same institution weights as the monthly SDiD. Keeping the weights fixed preserves the June–August comparison and uses the higher-frequency data only to find the date of the change. The exact-date comparisons in Section 3.3 also use these weights. We report results based on separate bank-account weights as an additional check.

3.3. Unweighted Benchmark and Exact-Date Comparisons

We also estimate an unweighted difference-in-differences (DiD) model (Card and Krueger 1994). It gives every comparison institution equal weight and accounts for stable differences across banks and changes common to all banks. SDiD is our main estimate because its weighted comparison group follows Wells Fargo more closely before the orders. The unweighted model provides an additional estimate for comparison.

Monthly data show the size of the increase. Daily, weekly, and event-time estimates show when it begins. The event-time model estimates a separate gap between Wells Fargo and the comparison institutions for each period around September 8. Before the orders, that gap moves downward. It then jumps upward on September 8. Extending the earlier trend would make the estimated jump larger (Rambachan and Roth 2023). The event-time plots show the timing, while the SDiD estimates and reference-distribution ranks compare the size of the increase with the increases at other institutions.

3.4. Inference with One Treated Institution

With one treated firm, inference uses treatment reassignment. We re-estimate each model as if every comparison institution had been treated and report Wells Fargo's position in the resulting distribution (Conley and Taber 2011; Bertrand, Duflo, and Mullainathan 2004). We call this position the reference-distribution rank.

The main tables report the full-pool level rank, which measures how extreme Wells Fargo's change is in levels—the scale of the added workload. The appendix reports size-matched proportional ranks that restrict the placebo pool to institutions with pre-period complaint volume equal to at least 10% of Wells Fargo's and rank each effect as a percentage of that institution's own pre-period mean. Rank 1 denotes the most extreme effect in the relevant reference distribution. The denominator determines the minimum attainable rank value.

[2] Appendix Table B.5 reports this held-out fit and the estimates across weighting windows.

3.5. Where the New Complaints Appear

Product-level estimates show what customers complain about. Our main product is *Bank account or service*, the category that covered checking, savings, and account-management complaints and most closely matches the deposit-account conduct in the orders. We run the same analysis for *Credit card*, which the orders also name, and *Mortgage*, which captures a broader complaint increase at Wells Fargo.

For product p, parent institution i, and month t, the triple-difference specification is

$$Y_{ipt} = \alpha_{ip} + \lambda_{pt} + \mu_{it} + \theta_q(WFC_i \times Post_t \times F_p^{(q)}) + \varepsilon_{ipt}, \tag{3}$$

where $F_p^{(q)}$ equals one when product p is the focal product q, the product singled out for comparison. The fixed effects α_{ip}, λ_{pt}, and μ_{it} account for persistent differences between each bank-product pair, changes shared by all banks within a product, and changes shared by all products within a bank. The coefficient θ_q measures how much more complaints rise for Wells Fargo in product q than in its other products, relative to the same product difference at the comparison institutions.

The design makes two comparisons. Within Wells Fargo, it compares the change in product q with the change in other products. Across banks, it compares that product gap with the same gap at comparison institutions. The identifying assumption is that these two product gaps would have moved together without the orders. Under this assumption, θ_q measures a Wells Fargo-specific increase in product q.

The baseline triple difference compares each focal product with all other CFPB products. Credit-card and mortgage complaints also rise after disclosure, which makes the bank-account difference smaller. The increase in the unrelated mortgage category is consistent with the findings of Noel and Osman (2024) on the spillover effects of the CFPB action. We report that pooled estimate and a comparison that removes those two products. When estimating credit-card and mortgage effects, we likewise remove the bank-account product from the comparison group. We then calculate how much each product contributes to Wells Fargo's total increase.

The product estimates also test whether complaint growth varies with how readily customers could recognize each harm before disclosure. The orders name both bank accounts and credit cards, but the two products differ in that prior visibility. The size of each increase also depends on the stock of unresolved problems customers had not yet reported.

Within credit cards, related complaint categories help explain the smaller overall increase. Identity-theft and fraud issues are the most natural filing category for unauthorized applications that customers could already see. Credit-reporting and other categories show whether customers placed card problems outside the credit-card product.

The structured issue fields provide more detail. Within *Bank account or service*, the issue most closely tied to the orders is *account opening, closing, or management*. We estimate SDiD and DiD effects for that product-issue group, a product-issue triple difference, and changes in issue shares. These comparisons show whether customers placed the new complaints in the categories closest to the conduct in the orders.

4. Claim Production After Public Enforcement

Claim production at Wells Fargo appears directly after the enforcement disclosure. The increase begins in the week of September 8, persists most clearly in bank-account complaints through March 2017, arrives through every submission route, and appears nationwide.

4.1. Timing and Attribution

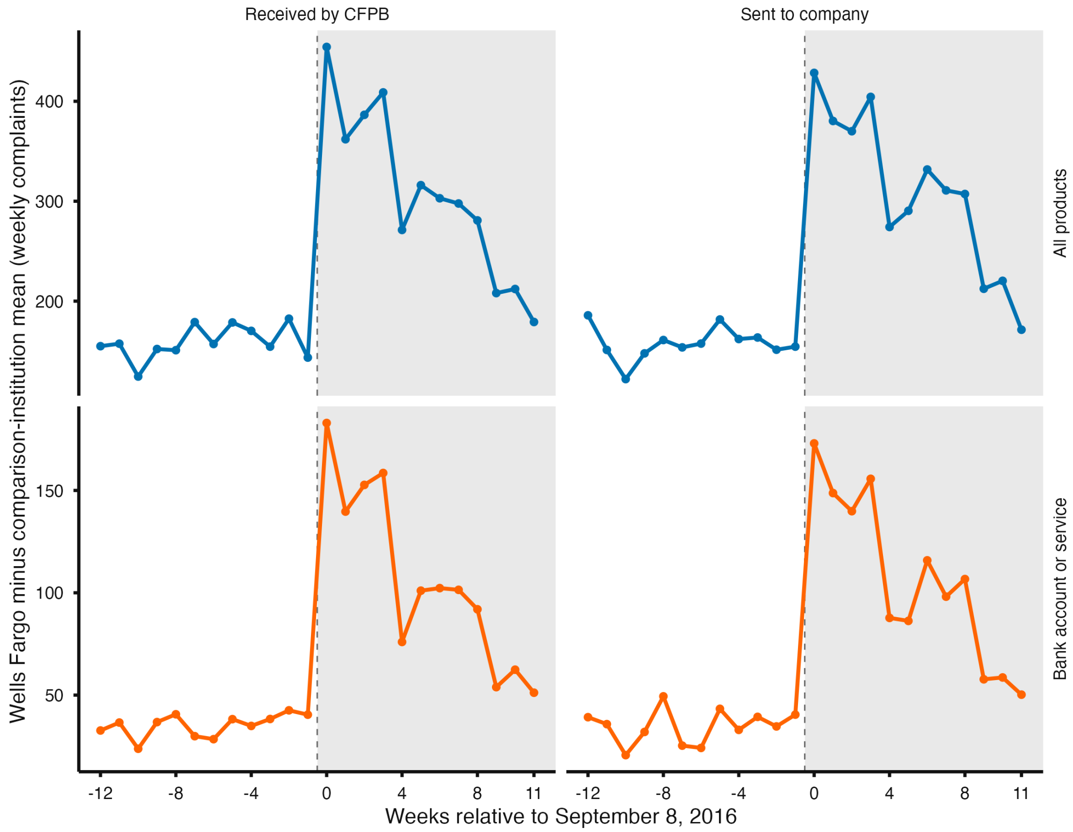
Complaint filing changes in the week of the disclosure. Figure 1 plots the Wells Fargo-minus-comparison gap for total complaints and bank-account complaints. The left panels date complaints when the CFPB received them; the right panels date the same complaints when the Bureau sent them to the company. The four series move together before September 8, break at week zero, and remain elevated over the next 12 weeks. Receipt and transmission dating produce similar paths.

Over the full 12 weeks, the Wells Fargo-minus-comparison gap increases by 147.9 complaints per week when complaints are dated by CFPB receipt. Dating complaints when the CFPB sends them to the company gives an increase of 150.8. For bank accounts, the corresponding increases are 70.9 and 71.8 complaints per week. The CFPB transmits every Wells Fargo record in both periods; the median lag is zero days before and after the disclosure, and the 90th-percentile lag falls from five to four days. The increase is present when complaints reach the Bureau and when they reach the bank.

4.1.1. When Complaints Increased

The complaint increase begins at the enforcement disclosure. In the daily $[-7, +6]$ window around September 8, total complaints rise by 36.5 per day and *Bank account or service* complaints rise by 17.2 per day (Appendix Table B.16). In the weekly $[-2, +1]$ window, total complaints rise by 235.6 per week and bank-account complaints by 118.6 per week. All four estimates rank first in their 77-institution reference distributions. The same break appears in the unweighted and weighted weekly paths (Figures B.5 and B.6).

FIGURE 1. Weekly complaint flow around the enforcement disclosure



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each panel plots weekly Wells Fargo complaints minus the mean across comparison institutions. Week zero begins on September 8, 2016. The left column assigns complaints to the date received by the CFPB; the right column assigns them to the date sent to the company. The shaded region is post-disclosure.

September 8 produces a larger change than any later Wells Fargo event. We define the daily gap as Wells Fargo complaints minus the weighted comparison path. Figure 2 compares the seven-day change in this gap at candidate dates from June 8 to November 24, 2016. The September 8 disclosure produces a 39.8 complaint-per-day jump and ranks first out of 150 candidate dates. The September 20 Senate hearing and October 12 Chief Executive Officer resignation produce jumps of 2.7 and 3.0 complaints per day, ranking 31st and 27th.

The federal orders produce a much larger complaint increase than the earlier publicity. Around the December 2013 *Los Angeles Times* investigation, bank-account complaints grow 3.9% at Wells Fargo and 6.3% at comparison institutions (Reckard 2013). Around the May 2015 Los Angeles City Attorney suit, they grow 25.9% at Wells Fargo and 22.1% at comparison institutions (Reckard 2015). Around the federal orders, they grow 104.7% at

FIGURE 2. Event-timing distribution of daily complaint jumps

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database, CFPB-supervised large-depository comparison group, and authors' calculations.
Note: Points show seven-day post minus seven-day pre changes in the daily gap for reference dates between June 8 and November 24, 2016, excluding dates within three days of September 8, September 20, and October 12. Vertical markers show the September 8 consent orders, September 20 Senate hearing, and October 12 CEO resignation. For each marked event, the rank shows where its positive jump falls in the distribution of jumps on the excluded reference dates.

Wells Fargo and 4.2% at comparison institutions. The sharp increase in CFPB bank-account complaints begins with the federal disclosure.

TABLE 1. Complaint flows around earlier Wells Fargo public-information events

Event	Group	Total pre	Total post	Total % chg.	Bank acct. pre	Bank acct. post	Bank acct. % chg.
LA Times investigation (Dec. 2013)	Wells Fargo	845.0	805.2	-4.7	196.5	204.2	3.9
	Comparison institutions	4,055.3	4,179.3	3.1	856.3	910.3	6.3
LA City Attorney suit (May 2015)	Wells Fargo	650.5	863.7	32.8	169.3	213.2	25.9
	Comparison institutions	3,891.8	4,528.2	16.4	940.7	1,148.7	22.1
Federal consent orders (Sept. 2016)	Wells Fargo	786.5	1,113.8	41.6	175.5	359.3	104.7
	Comparison institutions	4,844.0	4,933.5	1.8	1,418.0	1,477.2	4.2

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database.
Note: Cells report mean monthly complaints in the six months before and the six months beginning with each event month, for Wells Fargo and for the pooled CFPB-supervised comparison group. The LA Times investigation (December 2013) and the Los Angeles City Attorney lawsuit (May 2015) made versions of the sales-practice conduct public before the September 2016 federal consent orders. Figure B.3 plots the full monthly series.

Together, these comparisons place the break at the September 8 disclosure of the federal orders rather than at earlier or later publicity events. The increase is not an artifact of assigning all of September to the post-period; starting the monthly post-period in October yields increases of 435.3 total complaints and 195.6 bank-account complaints per month. The daily and weekly analyses place the break precisely at September 8.[3]

4.2. Scale and Persistence

The monthly counts show the size of the break. Wells Fargo averaged 775.3 complaints per month from June through August and 1,340.7 from September through November, an increase of 565.3. Over the same months, the weighted comparison average rises only from 654.1 to 681.3, an increase of 27.3. SDiD uses the full pre-disclosure path to weight the comparison institutions and pre-period months. It estimates that 547.7 of Wells Fargo's monthly increase is above the change in that comparison path. This estimate equals 70.6% of Wells Fargo's pre-disclosure monthly average and ranks first among the 77 institutions.

TABLE 2. Initial and late SDiD complaint-flow estimates

Panel A. Initial estimates and reference-distribution ranks

Outcome	Effect	% pre mean	Reference-distribution rank
Total complaints	547.7	70.6	1/77
Bank account or service	265.9	152.5	1/77

Panel B. Late estimates (December 2016–March 2017)

Outcome	Effect	% pre mean	Reference-distribution rank
Total complaints	129.2	16.2	1/77
Bank account or service	67.9	36.0	2/77

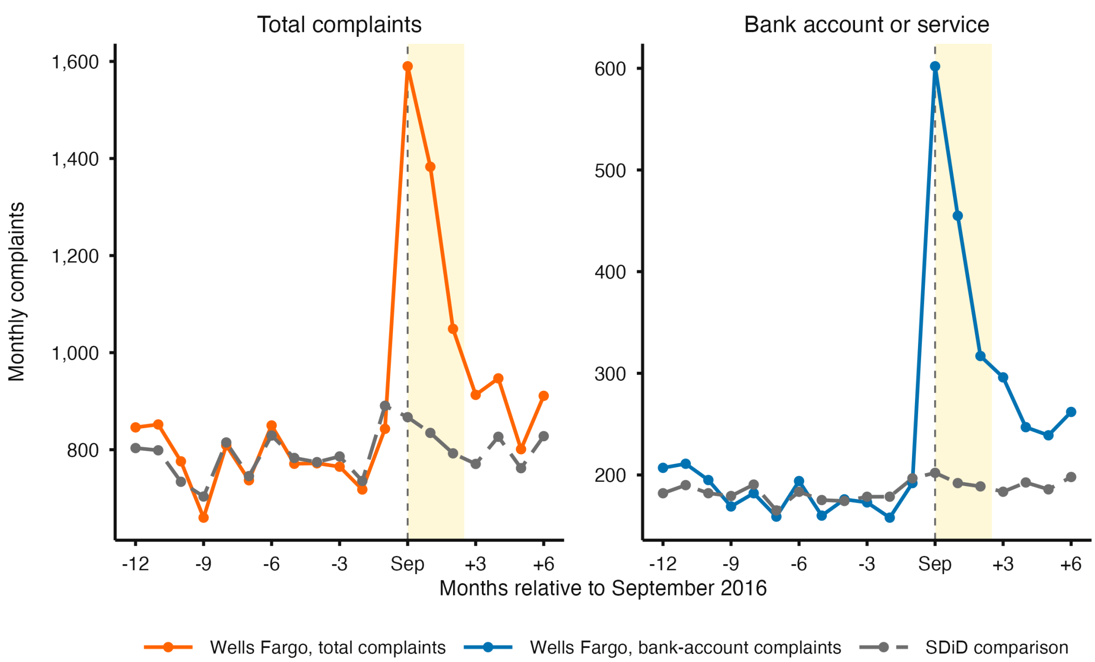
Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Effects are monthly Wells Fargo complaint counts relative to the SDiD comparison path. Panel A compares June–August with September–November 2016. Panel B compares April 2015–August 2016 with December 2016–March 2017 and excludes the initial post-disclosure months. To calculate the reference-distribution ranks, we assign treatment to each comparison institution in turn and exclude Wells Fargo from the comparison group. % pre mean divides each effect by Wells Fargo's pre-period mean. The appendix reports size-matched proportional ranks of 1/14 for total complaints and 1/18 for bank-account complaints in Panel A. Full-post averages that include September–November appear in Table B.17.

The same comparison is still positive after the first wave of attention. From December 2016 through March 2017, Wells Fargo receives an estimated 129.2 additional complaints per month relative to the weighted comparison path. This later increase equals 16.2% of the earlier average and also ranks first in levels. The initial surge therefore recedes, but the Wells Fargo comparison gap does not return to its pre-disclosure level by the end of the sample.

[3] Tables B.16 and B.17 report the monthly and higher-frequency timing checks.

Bank-account complaints display an even larger break relative to their starting level. Wells Fargo's raw monthly average rises from 174.3 complaints in June–August to 458.0 in September–November. The weighted comparison path moves from 90.7 to 100.3. Against that path, SDiD estimates 265.9 additional Wells Fargo bank-account complaints per month, or 152.5% of the pre-disclosure average. From December through March, the estimate remains 67.9 per month, or 36.0% of the earlier average. In levels, that later increase ranks second among 77 institutions. Bank-account complaints thus more than double at first and remain unusually high after November. Wells Fargo also has the largest proportional increase among size-matched institutions, ranking 1/14 for total complaints and 1/18 for bank-account complaints.

FIGURE 3. Monthly Wells Fargo complaints and the SDiD comparison path



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each panel plots monthly Wells Fargo complaints and the SDiD comparison path; the left panel shows total complaints and the right panel shows *Bank account or service* complaints. The comparison path is shifted vertically so that the series have the same pre-disclosure mean over the plotted window. The dashed line marks September 2016; the shaded band marks September–November 2016.

Figure 3 plots monthly Wells Fargo complaints against the weighted comparison path for total and bank-account complaints. The two paths separate sharply after September, and the gap remains positive through March 2017.[4]

[4]Appendix Tables B.1 and B.6 report the pre-period fit and the complete reassignment distribution.

The total estimate remains between 513.2 and 555.4 complaints per month when we remove comparison institutions one at a time or change the weight-estimation window. Wells Fargo ranks first in every specification. The weights imply 9.1 effective comparison institutions for total complaints and 12.4 for bank-account complaints.[5] Leave-one-out estimates remain above 546.3 and 263.7 complaints per month, respectively.[6]

The complaint increase does not depend on the estimator. Unweighted DiD, SDiD, and fixed-weight SDiD estimate increases of 547.7 to 566.5 total complaints and 265.6 to 284.8 bank-account complaints per month.[7]

The estimates also do not depend on the definition of the comparison group. Restricting the comparison institutions to U.S. G-SIBs or 2015 Federal Reserve stress-test organizations produces increases of 545.3 to 550.9 total complaints and 266.1 to 272.2 bank-account complaints per month. Wells Fargo ranks first in both restricted reference distributions.[8]

Possible spillovers to comparison institutions would attenuate rather than produce the Wells Fargo estimate. Several large comparison institutions show modest increases in complaints about account opening, which could reflect the disclosure helping their customers recognize similar problems. Such spillovers would raise the comparison path and bias the Wells Fargo estimate downward. Removing the five largest branch-network retail depositories—Bank of America, JPMorgan Chase, Citigroup, U.S. Bancorp, and PNC—makes the estimates slightly larger, at 566.9 total complaints and 275.3 bank-account complaints per month.[9]

4.3. Submission Routes and Geographic Reach

We use submission routes, complaint text, and geography to see how new complaints entered the CFPB system. Route-specific counts divide the increase among Web, referral, phone, and mail or other submissions. Exact-record de-duplication tests whether repeated administrative records drive the count. Published narratives provide a separate check on repeated wording, while geography shows whether the increase was national or concentrated near Wells Fargo's largest branch networks.

[5]These effective comparison-institution counts are calculated from the Herfindahl index of the SDiD weights.

[6]Tables B.1, B.2, B.4 and B.30 report pre-period fit, weight concentration, and leave-one-bank-out estimates.

[7]Tables B.11 and B.12 report the alternative-estimator estimates.

[8]Table B.18 reports the alternative comparison groups.

[9]Tables B.30 and B.31 report issue trends among comparison institutions and the five-institution exclusion.

4.3.1. *Submission Routes*

Most of the additional complaints enter through the CFPB website. Over the 12 weeks after disclosure, Web submissions account for 108.2 of the estimated 147.9 additional Wells Fargo complaints per week relative to comparison institutions, or 73.2%. Among bank-account complaints, Web submissions account for 53.5 of the 70.9 additional complaints per week, or 75.5%. Referral, phone, and mail or other submissions also increase. The complaint increase is concentrated in Web filings but appears in every submission channel.

Exact duplicate records do not account for the increase. Removing them changes the initial SDiD estimate from 547.7 to 551.4 additional complaints per month across all products and from 265.9 to 266.1 for bank-account complaints. We retain these records in the baseline because each represents a formal complaint filing, but the results do not depend on their inclusion.[10]

4.3.2. *Where Customers Filed*

Complaint growth is not concentrated in Wells Fargo's strongest local markets. For each of the 59 CFPB jurisdictions in the sample—fifty states, the District of Columbia, and territories—we measure branch exposure as the number of Wells Fargo branches divided by the total number of bank branches operating there in 2016. We then divide the jurisdictions into quartiles of this local branch share. The average share is zero in the lowest quartile and 1.0%, 8.4%, and 17.3% in the remaining quartiles. From June–August to September–November, aggregate monthly complaints against Wells Fargo increase by 54.4%, 75.8%, 81.0%, and 70.4% across the four groups. Complaint growth has no monotonic relationship with Wells Fargo's local branch presence. Over the same period, complaints against comparison institutions fall by 11.3%, 3.5%, and 3.5% in the first three quartiles and rise by only 1.4% in the fourth.

State-month regressions likewise test whether a larger local Wells Fargo presence predicts greater complaint growth after disclosure. Each specification compares changes within a jurisdiction, net of common monthly changes, and measures local exposure using Wells Fargo's 2016 branch or deposit share. The estimated relationships are positive but imprecise for both the number of Wells Fargo complaints and Wells Fargo's share of complaints against the institutions in the sample. None is statistically distinguishable from zero at the 5% level.[11] Together, the quartile comparisons and regressions show that the complaint increase extended beyond jurisdictions in which Wells Fargo operated branches.

[10] The route decomposition and de-duplication results appear together in Appendix Table B.32.

[11] Appendix Tables B.28 and B.29 reports the state-level regressions and quartile comparisons.

4.4. Persistence and Content

4.4.1. Which Products Drove the Increase

Bank accounts make up the largest share of Wells Fargo's initial complaint increase. Credit-card and mortgage complaints also rise. The mortgage increase shows that the initial filing increase extends beyond the products named in the orders. The key distinction is persistence: bank-account and account-management complaints remain elevated after the initial window, while the mortgage contrast reverses.

The raw Wells Fargo counts show that the first wave is broad. Average monthly bank-account complaints rise from 174.3 in June–August to 458.0 in September–November. Mortgage complaints rise from 419.3 to 558.7, and credit-card complaints from 71.3 to 145.7. Of the increase of 565.3 complaints per month in Wells Fargo's total average, bank accounts contribute 283.7, mortgages 139.3, and credit cards 74.3. The initial increase therefore includes complaints about several products, including mortgages, which were not named in the orders.

TABLE 3. Initial (September–November 2016) and late (December 2016–March 2017) product contrasts

Product or issue contrast	Initial effect	Initial % pre	Late effect	Late % pre	Late absolute-effect rank
Bank account vs. all other products	256.7	147.2	67.4	35.7	1/77
Mortgage vs. all other products	97.2	23.2	−49.0	−10.9	3/77
Credit card vs. all other products	23.4	32.8	11.7	19.3	8/77
Account opening, closing, or management	162.6	225.9	40.5	51.9	1/77

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Product rows are pooled all-other-products triple differences. The issue row compares the structured *Account opening, closing, or management* category with other bank-account issues. The initial period compares June–August with September–November 2016. The late period compares April 2015–August 2016 with December 2016–March 2017 and excludes the initial post-disclosure months. The pre-period means therefore differ. Late ranks order absolute effect magnitudes. The sign of each estimate appears in the effect column.

The product contrasts show which increases are unusual relative to the rest of Wells Fargo and to the same product mix at comparison institutions. During September–November, bank-account complaints rise by an estimated 256.7 per month on this triple-difference basis. The mortgage contrast is 97.2 and the credit-card contrast is 23.4. These estimates confirm that the initial increase extends across products, while identifying bank accounts as the largest part of the increase.

The later period separates that broad initial attention from persistence. From December through March, the bank-account contrast remains positive at 67.4 complaints per month and is positive in every month. The credit-card contrast also remains positive, though much smaller, at 11.7. The mortgage contrast instead reverses to −49.0. By the end of the sample, the remaining increase is therefore concentrated in bank accounts rather than spread across the product portfolio. The late bank-account estimate ranks first among 77 institutions in absolute magnitude.[12]

4.4.2. Which Bank-Account Issues Drove the Increase

Within bank-account complaints, the largest shift is toward *account opening, closing, or management*. From June 1 through September 7, this category accounts for 235 of Wells Fargo's 567 bank-account complaints (41.4%). From September 8 through November 30, it accounts for 690 of 1,330 complaints (51.9%). The comparison institutions move in the opposite direction: the category accounts for 2,697 of 5,062 bank-account complaints in the earlier window and 1,910 of 4,256 in the later one, a decline in share from 53.3% to 44.9%. Before disclosure, the category is 11.8 percentage points less common at Wells Fargo than at the comparison institutions. After disclosure, it is 7.0 points more common. The resulting 18.9 percentage-point pooled-share difference is the largest among bank-account issues.[13] The composition of the increase thus shifts toward the category that most closely matches the account-opening conduct described in the orders.

The count estimators reach the same conclusion from different comparisons. SDiD compares Wells Fargo's monthly category count with a weighted institution path and estimates 152.5 additional account-opening, closing, or management complaints per month, or 211.8% of the earlier average.[14] Wells Fargo ranks first among 77 institutions, and an unweighted institution-month DiD gives a similar estimate of 166.7. Applying SDiD over the longer post-disclosure window gives 90.7 additional complaints per month, or 116.4% of the earlier average.

The issue-level triple difference imposes a more demanding comparison. It asks whether this category grows more than other bank-account issues at Wells Fargo, net of the same within-bank-account difference at the comparison institutions. That estimate is 162.6 additional complaints per month during the initial period and remains 40.5 during December–March. Both comparisons identify account opening, closing, and management as the main source of the initial bank-account increase. The late triple difference shows that the category remains elevated through March. These complaints account for 29.1% of Wells Fargo's total increase from June–August to September–November 2016.

[12]The appendix reports the full product decomposition, monthly paths, and alternative comparison groups (Tables B.21, B.22 and B.24).

[13]See Table B.25.

[14]The match with the 152.5% bank-account increase in Table 2 is a numerical coincidence; that figure is a percentage of the pre-period mean, while this estimate is a monthly complaint count.

4.4.3. *Credit-Card Complaints*

Credit-card complaints rise less than bank-account complaints. Unauthorized card applications can generate familiar signals such as application notices, statements, credit inquiries, or credit-report entries. Unauthorized deposit accounts and related fees may be harder to recognize as part of a systematic sales-practice problem before public enforcement identifies the conduct.

Identity-theft and fraud complaints rise 147.5% at Wells Fargo, from 9.2 to 22.8 per month, compared with 6.9% at comparison institutions. Most of the added credit-card complaints, however, appear in other credit-card issues, which rise from 60.9 to 130.4 per month.[15]

The complaints that remain after November still cluster in bank accounts, especially account opening, closing, and management. A smaller positive increase also remains in credit cards.[16] This pattern is consistent with the orders helping customers recognize and report account problems.

5. Firm Response to the Added Claims

The durable complaint increase is concentrated in bank-account and account-management complaints. We next ask whether Wells Fargo's response process scaled with that inflow.

The firm-level consequence appears in Wells Fargo's response throughput. The increase in complaints coincides with a sharp change in response performance. We date each complaint by the week the CFPB sent it to the company, aligning each complaint with the point at which Wells Fargo became responsible for a response. Figure 4 shows the weekly paths. Wells Fargo's timely-response rate falls across all products and falls much further for bank-account and account-management complaints. The rate at comparison institutions remains near 100%. Wells Fargo had not recovered its pre-disclosure bank-account timely-response rate by the end of the sample in March 2017.

For complaint j sent to parent institution i in product p during week t, let $Timely_{jipt}$ equal one when the company responds on time. We estimate the linear probability model

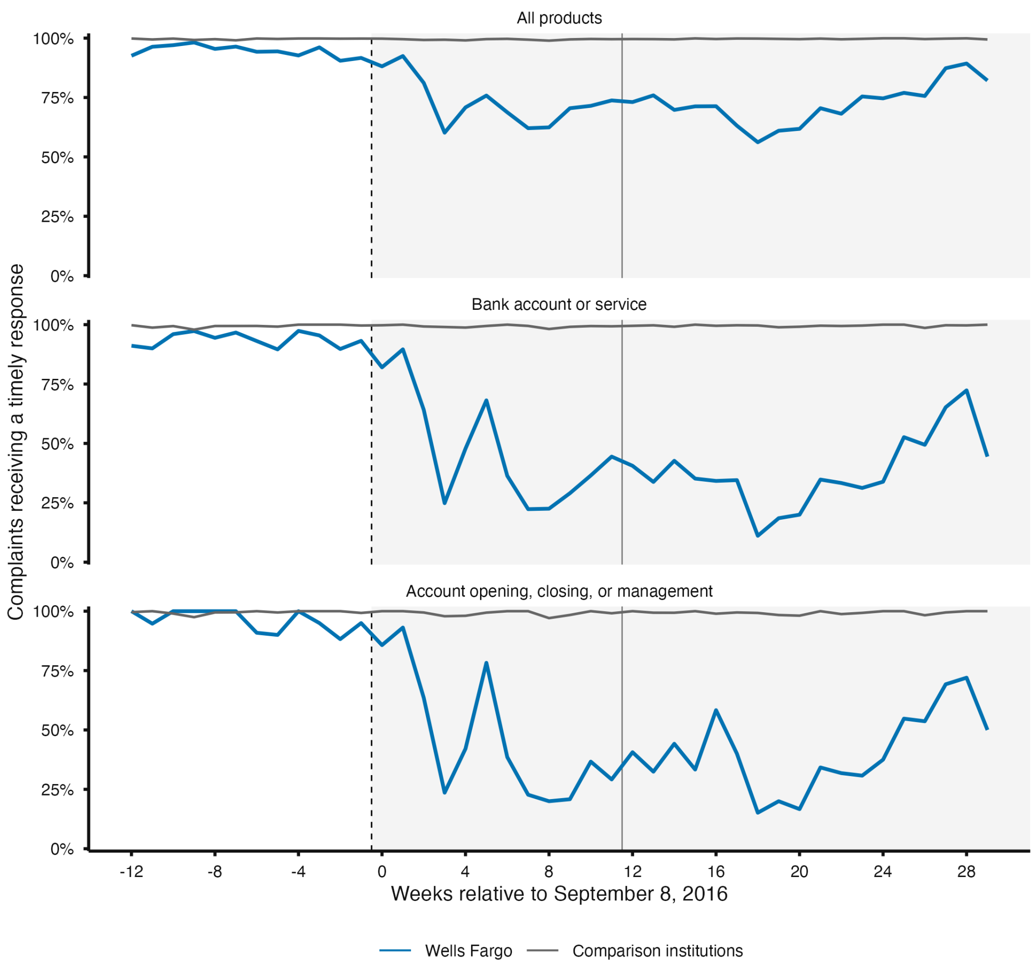
$$Timely_{jipt} = \alpha_{ip} + \gamma_{it} + \delta_{pt} + \beta(WFC_i \times Bank_p \times Post_t) + \varepsilon_{jipt}. \tag{4}$$

Organization-by-product fixed effects absorb persistent differences between each bank-product pair. Organization-by-week fixed effects absorb changes common to all products

[15] Appendix Table B.26 reports the detailed classification.

[16] Appendix Tables B.20 and B.25 report the complete product and issue estimates.

FIGURE 4. Weekly timely response after complaints reach the company



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Complaints are assigned to Date sent to company. Lines report the weekly share receiving a timely company response from 12 weeks before the September 8, 2016 event through March 31, 2017. Week 0 begins on September 8. The second vertical marker identifies the end of the equal 12-week post-event window used in Tables 4 and 5. The comparison series pools complaints across the other institutions.

within an institution. Product-by-week fixed effects absorb changes common to a product across institutions. The coefficient β is the percentage-point change in timely response for Wells Fargo bank-account complaints relative to Wells Fargo's other products and the corresponding product change at comparison institutions. Inference uses the reference-distribution procedure described in Section 3.4.

In a separate exercise, we reweight post-event Wells Fargo bank-account complaints to the pre-event distribution of issue, sub-issue, sub-product, submission route, state, weekday, and narrative availability. The standardized estimate holds this observed complaint mix fixed.

Table 4 reports the magnitudes. Across all products, Wells Fargo's timely-response rate falls from 94.55% to 73.83%. For bank accounts, it falls from 93.45% to 50.94%. The comparison rate for bank-account complaints barely moves, from 99.41% to 99.33%, and Wells Fargo responds on time to every mortgage complaint in both periods.

The response contrast widens as the complaint inflow accumulates. Wells Fargo's bank-account timely-response rate falls by 42.51 percentage points over the full 12 weeks, while the corresponding rate at comparison institutions changes by less than one-tenth of a percentage point. The decline is not common to every Wells Fargo product; the bank responds on time to every mortgage complaint in both periods. The triple difference puts these comparisons together. It asks whether timely response deteriorates more for Wells Fargo bank-account complaints than for its other products, after removing the corresponding change between bank-account and other-product complaints at the comparison institutions. That contrast is already −8.28 percentage points over the first two weeks, grows to −26.36 over five weeks, and reaches −34.95 over 12 weeks.

Changes in the observed bank-account complaint mix do not explain the decline. Standardizing later bank-account complaints to match the earlier complaint mix produces a timely-response rate of 50.0%, compared with the raw 50.94%. The 12-week triple difference is −34.94 percentage points after the same adjustment. In the receipt-dated reference distribution, Wells Fargo's bank-account rate decline ranks first among 67 institutions, its product contrast ranks second among 50, and its increase in untimely bank-account responses ranks first among all 77. The deterioration is largest in the product where the complaint increase is largest and most persistent.

Table 5 translates the rate decline into throughput. Bank-account complaints sent to Wells Fargo increase by 862, from 473 to 1,335. Timely responses increase by 238, from 442 to 680, while untimely responses increase by 624, from 31 to 655. Relative to maintaining the pre-event timely-response rate, Wells Fargo records about 568 excess untimely responses.

TABLE 4. Timely company responses after complaints reached the company

Panel A. Timely-response rates over equal 12-week periods

Sample	Pre rate	Post rate	Standardized post rate	Pre *N*	Post *N*
Wells Fargo, all products	94.55	73.83	—	2,074	3,890
Wells Fargo, bank account or service	93.45	50.94	50.0	473	1,335
Comparison institutions, bank account or service	99.41	99.33	—	4,222	4,297
Wells Fargo, mortgage	100.00	100.00	—	1,106	1,618

Panel B. Bank-account response contrasts

Horizon	Unadjusted	Composition adjusted
2 weeks	−8.28	−8.88
5 weeks	−26.36	−26.39
12 weeks	−34.95	−34.94

Panel C. Receipt-dated reference-distribution ranks

Response statistic	Wells Fargo value	Reference-distribution rank
Bank-account timely-response rate change	−42.51 pp	1/67
Bank-account triple difference, 12 weeks	−34.78 pp	2/50
Increase in untimely bank-account responses	624	1/77

Source: Consumer Financial Protection Bureau Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Complaints in Panels A and B are assigned to the CFPB *Date sent to company*. Rates and Panel B estimates are percentage points. Panel A pools the 12 weeks before September 8, 2016, and the 12 weeks beginning that day. Standardization reweights later Wells Fargo bank-account complaints to the earlier distribution of issue, sub-issue, sub-product, submission route, state, weekday, and narrative availability. Appendix Table B.34 reports weight diagnostics for the standardized estimate. Panel B compares timely response for Wells Fargo bank-account complaints with timely response for its other products, net of the corresponding product-level change at comparison institutions. Panel C reports complementary reference-distribution ranks using CFPB receipt dates. Denominators differ because each comparison retains institutions with usable pre- and post-period response data for the relevant outcome. Rank 1 denotes the most extreme effect in the expected direction. Appendix Figure B.8 plots the full receipt-dated 12-week product-contrast reference distribution.

TABLE 5. Bank-account complaint inflow and response throughput at Wells Fargo

Measure	Pre	Post	Change	% change
Bank-account complaints sent to Wells Fargo	473	1,335	862	182.2
Timely responses	442	680	238	53.8
Untimely responses	31	655	624	—
Excess untimely responses relative to pre-event rate	—	≈ 568	≈ 568	—

Source: Consumer Financial Protection Bureau Consumer Complaint Database.
Note: Cells report Wells Fargo bank-account complaints over the equal 12-week periods used in Table 4. The 31 and 655 untimely responses are observed counts. Excess untimely responses equal observed post-event untimely responses minus the number implied by maintaining the pre-event timely-response rate: $655 - [1 - (442/473)] \times 1{,}335 \approx 568$.

Wells Fargo answers more bank-account complaints on time, but its response process fails to scale with the inflow.

The enforcement disclosure changed more than the number of claims entering the CFPB process. It produced a large deterioration in a response outcome monitored by the regulator. Untimely responses can trigger supervisory follow-up and delay resolution for consumers. The CFPB uses complaint and response data to assess compliance-management systems and support supervision and enforcement (Consumer Financial Protection Bureau 2026b). The excess untimely responses quantify a firm-level operational consequence of enforcement.

6. Claim Production Beyond Wells Fargo

The Wells Fargo analysis shows how one salient enforcement action changes claim production and firm response. The complaint increase is stable across estimators, comparison groups, timing conventions, and complaint-record definitions. Standardizing the observed complaint mix leaves the response decline unchanged. But a single event cannot establish whether claim production is a broader consequence of public enforcement. We test that proposition using the first eligible CFPB action at each of 18 parent institutions. Complaints about products named in these actions increase by approximately 39.6% over the following four weeks.

6.1. Empirical Design

We construct an inventory of CFPB actions filed from January 2013 through January 2017 against parent institutions in the same fixed comparison universe used for the Wells Fargo analysis. Each action must describe conduct that maps directly to a product category in the complaint data, and we fix that mapping from the action description rather than from subsequent complaint outcomes. The inventory contains 22 eligible actions at 18 parent institutions. The analysis retains each parent's first eligible action, producing 18 treated parents in 17 weekly treatment cohorts and six named-category sets. The comparison group consists of 58 parent institutions that never appear in the action inventory.[17]

Following the group-time approach of Callaway and Sant'Anna (2021), we use a category-matched first-action difference-in-differences design. For each treated parent, the outcome is the log of one plus weekly complaints in the category or categories named by its first eligible action. We compare that outcome with the same-category outcome at the 58

[17] Appendix Section C lists the actions, product mappings, sample rules, and design diagnostics. The inventory begins with 27 linked events. We remove both actions in each of two overlapping same-parent episodes and one event without sufficient pre-action complaint support; these rules use no post-action complaint outcomes. The September 2016 focal event is not part of the inventory; a separate January 2015 Wells Fargo mortgage action is included.

never-treated parents and measure changes relative to event week −1. We then average the effects with equal weight across treated parents and use 999 parent-cluster bootstrap draws for inference. Identification requires that, absent the action, named-category complaints at treated and never-treated parents would have followed parallel trends. Using the first eligible action avoids repeated-treatment histories, while the same-category comparison keeps the outcome tied to the conduct identified by each action. The design estimates the average effect of a parent's first eligible action on named-category complaints, not the effect of every action in the inventory.

6.2. Claim Production Across Actions

TABLE 6. Claim production after other CFPB actions

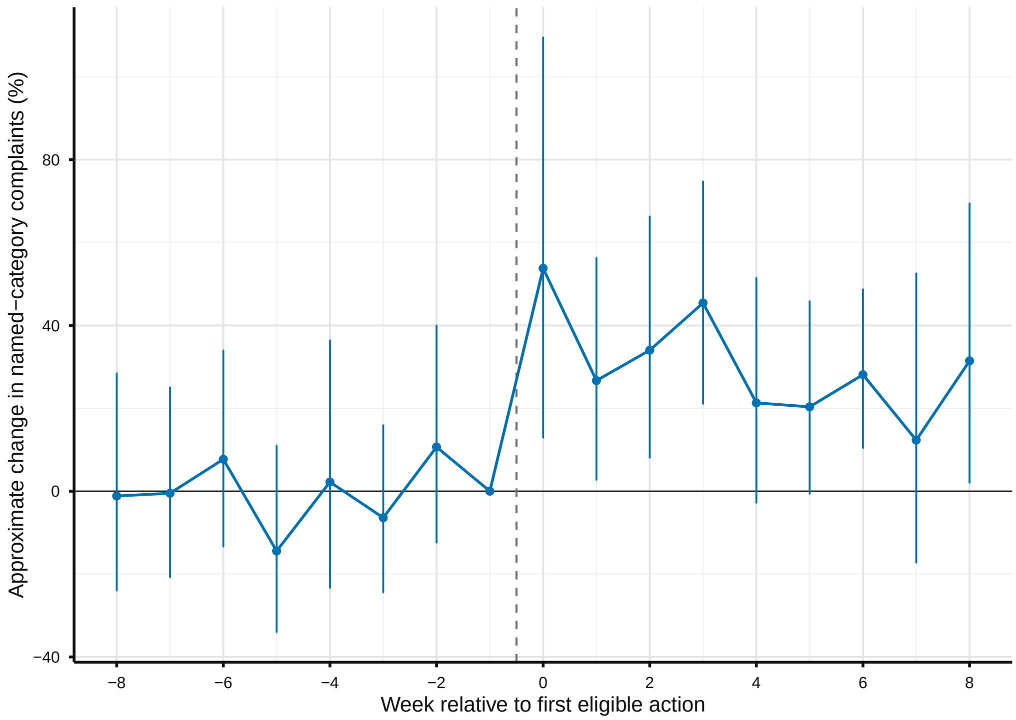
Sample	Treated parents	Change	95% interval	p-value
First eligible actions, weeks 0–3	18	39.6%	[15.5, 68.8]	0.0006
Wells Fargo excluded	17	40.8%	[16.5, 70.1]	0.0004

Source: Consumer Financial Protection Bureau enforcement-action inventory and Consumer Complaint Database.
Note: The design uses each treated parent's first eligible action, 17 treatment cohorts, six category sets, and 58 never-treated parents. It reports the equal-parent mean effect on log(1 + weekly complaints) over event weeks 0–3, expressed as an approximate percentage, with 999 treated-parent and never-treated-parent cluster-bootstrap draws using seed 20260728. The Wells Fargo-exclusion row removes the separate 2015 Wells Fargo mortgage action and Wells Fargo as a treated parent; the September 2016 focal event is not part of the action inventory.

As Table 6 shows, complaints in the categories named by an action increase by approximately 39.6% over the first four event weeks, relative to the change in the same categories at parents that never appear in the action inventory. The 95% interval runs from 15.5% to 68.8%. Each treated parent receives equal weight, so the result describes the average parent-level effect rather than allowing the largest institutions or the highest-volume actions to determine the estimate. Excluding the earlier 2015 Wells Fargo mortgage action leaves the estimate nearly unchanged at 40.8%, with a 95% interval of 16.5%–70.1%.

The weekly comparisons in the event plot of Figure 5 show when this average is produced. Relative to event week −1, named-category complaints rise by approximately 53.8% in the week of the action, 26.7% one week later, 34.0% two weeks later, and 45.4% three weeks later. All four 95% pointwise intervals exclude zero, so the four-week average is not driven by a single short-lived spike. Before the actions, every pointwise interval from event weeks −8 through −2 covers zero, and the joint test over those leads has a p-value of 0.136. In substantive terms, the estimate is the change in a treated parent's named categories after its action, net of contemporaneous changes in those same categories at never-treated parents.

FIGURE 5. Complaints increase in the categories named by CFPB actions



Source: Consumer Financial Protection Bureau enforcement-action inventory and Consumer Complaint Database.
Note: Points report equal-parent category-matched group-time effects for the first eligible action at each of 18 treated parent institutions, relative to event week −1. The outcome is log(1 + weekly complaints in the category or categories named by each action), expressed as an approximate percentage. The 58 never-treated parents provide same-category comparison trends. Bars are pointwise 95% normal intervals from 999 parent-cluster bootstrap draws.

This broader action analysis suggests that claim production is not unique to Wells Fargo. An official enforcement action against a bank appears to alter the cost-benefit analysis of filing a claim—either by reducing the cost of information or increasing the expected benefit of filing a formal complaint—and to produce more claims.

7. Conclusion

Filing a complaint is a choice. The September 8, 2016 Wells Fargo enforcement disclosure changed that choice. In comparisons that date the break to the disclosure, complaints rose by 547.7 per month over the next three months, or 70.6% of Wells Fargo's earlier average. The increase initially spanned products and then persisted in bank accounts and account management.

The complaint data also reveal a consequence inside the firm. Bank-account complaints sent to Wells Fargo rose 182.2% over 12 weeks, while timely responses rose 53.8%. The timely-response rate fell from 93.45% to 50.94%, producing about 568 excess untimely responses relative to the earlier rate. The bank's timely-response process failed to scale with the inflow.

The category-matched first-action design shows that claim production is not unique to Wells Fargo. Across first eligible CFPB actions at 18 parent institutions, complaints in named product categories rise approximately 39.6% over the next four weeks. Beyond fines and restitution, public enforcement can expand the formal claims firms must process.

References

Arkhangelsky, D., S. Athey, D. A. Hirshberg, G. W. Imbens, and S. Wager. 2021. "Synthetic Difference-in-Differences." *American Economic Review* 111 (12): 4088–4118. DOI: https://doi.org/10.1257/aer.20190159.

Armour, J., C. Mayer, and A. Polo. 2017. "Regulatory Sanctions and Reputational Damage in Financial Markets." *Journal of Financial and Quantitative Analysis* 52 (4): 1429–1448. DOI: https://doi.org/10.1017/S0022109017000461.

Ayres, I., J. Lingwall, and S. Steinway. 2014. "Skeletons in the Database: An Early Analysis of the CFPB's Consumer Complaints." *Fordham Journal of Corporate & Financial Law* 19 (2): 343–434, https://ir.lawnet.fordham.edu/jcfl/vol19/iss2/2.

Bertrand, M., E. Duflo, and S. Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?" *Quarterly Journal of Economics* 119 (1): 249–275. DOI: https://doi.org/10.1162/003355304772839588.

Bhattacharya, A. 2023. "Consumer, Bank, and Stock Market Reaction to CFPB's Complaint Data Disclosure." *Journal of Financial Services Marketing* 28 (1): 128–145. DOI: https://doi.org/10.1057/s41264-022-00143-2.

Callaway, B., and P. H. C. Sant'Anna. 2021. "Difference-in-Differences with Multiple Time Periods." *Journal of Econometrics* 225 (2): 200–230. DOI: https://doi.org/10.1016/j.jeconom.2020.12.001.

Card, D., and A. B. Krueger. 1994. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review* 84 (4): 772–793, https://www.jstor.org/stable/2118030.

Conley, T. G., and C. R. Taber. 2011. "Inference with "Difference in Differences" with a Small Number of Policy Changes." *Review of Economics and Statistics* 93 (1): 113–125. DOI: https://doi.org/10.1162/REST_a_00049.

Consumer Financial Protection Bureau. 2016a. "In the Matter of Wells Fargo Bank, N.A.: Consent Order." Administrative Proceeding 2016-CFPB-0015, https://files.consumerfinance.gov/f/documents/092016_cfpb_WFBconsentorder.pdf. Filed September 8, 2016.

——— 2016b. "Institutions Subject to CFPB Supervisory Authority: Depository Institutions and Affiliates." https://files.consumerfinance.gov/f/documents/CFPB_Institutions_20160630_Dist.xlsx. List dated June 30, 2016.

——— 2017. "Summary of Product and Sub-Product Changes." https://files.consumerfinance.gov/f/documents/201704_cfpb_Summary_of_Product_and_Sub-product_Changes.pdf. Effective April 24, 2017.

——— 2026a. "Consumer Complaint Database." Public database and bulk data download, https://www.consumerfinance.gov/data-research/consumer-complaints/. Accessed June 9, 2026.

——— 2026b. "Consumer Complaint Program." https://www.consumerfinance.gov/compliance/consumer-complaint-program/. Accessed July 24, 2026.

Curti, F., and A. Mihov. 2025. "Catch the Thief! Fraud in the U.S. Banking Industry." *Review of Corporate Finance Studies*: cfaf027. DOI: https://doi.org/10.1093/rcfs/cfaf027.

Dou, Y., M. Hung, G. She, and L. L. Wang. 2024. "Learning from Peers: Evidence from Disclosure of Consumer Complaints." *Journal of Accounting and Economics* 77 (2–3): 101620. DOI: https://doi.org/10.1016/j.jacceco.2023.101620.

Dou, Y., and Y. Roh. 2024. "Public Disclosure and Consumer Financial Protection." *Journal of Financial and Quantitative Analysis* 59 (5): 2164–2198. DOI: https://doi.org/10.1017/S0022109023000613.

Egan, M., G. Matvos, and A. Seru. 2019. "The Market for Financial Adviser Misconduct." *Journal of Political Economy* 127 (1): 233–295. DOI: https://doi.org/10.1086/700735.

Federal Deposit Insurance Corporation. 2026. "Bank Call Report Information." Current Quarter Call Report Forms, Instructions, and Related Materials, https://www.fdic.gov/bank-financial-reports/current-quarter-call-report-forms-instructions-and-related-materials. Accessed June 9, 2026.

Federal Financial Institutions Examination Council. 2026. "Central Data Repository Public Data Distribution." https://cdr.ffiec.gov/public/. Accessed June 9, 2026.

Frame, W. S., P. McLemore, and A. Mihov. 2025. "Haste Makes Waste: Banking Organization Growth and Operational Risk." *Review of Corporate Finance Studies* 15 (2): 427–467. DOI: https://doi.org/10.1093/rcfs/cfaf003.

Haendler, C., and R. Z. Heimer. 2025. "The Hidden Costs of Financial Services: Consumer Complaints and Financial Restitution." SSRN Working Paper. DOI: https://doi.org/10.2139/ssrn.5218602.

Jou, J., A. V. Kleymenova, A. Passalacqua, L. Sandor, and R. Vijayaraghavan. 2026. "Disciplining Banks through Disclosure: Evidence from CFPB Consumer Complaints." SSRN Working Paper. DOI: https://doi.org/10.2139/ssrn.5041008.

Karpoff, J. M., D. S. Lee, and G. S. Martin. 2008. "The Cost to Firms of Cooking the Books." *Journal of Financial and Quantitative Analysis* 43 (3): 581–611. DOI: https://doi.org/10.1017/S0022109000004221.

Noel, M. D., and S. M. I. Osman. 2024. "Bank Scandal Contagion: Evidence from the Wells Fargo Cross-Selling Scandal." *Global Finance Journal* 63: 101044. DOI: https://doi.org/10.1016/j.gfj.2024.101044.

Office of the Comptroller of the Currency. 2016. "OCC Assesses Penalty Against Wells Fargo, Orders Restitution for Unsafe or Unsound Sales Practices." News Release 2016-106, https://www.occ.gov/news-issuances/news-releases/2016/nr-occ-2016-106.html. September 8, 2016.

Rambachan, A., and J. Roth. 2023. "A More Credible Approach to Parallel Trends." *Review of Economic Studies* 90 (5): 2555–2591. DOI: https://doi.org/10.1093/restud/rdad018.

Reckard, E. S. 2013. "Wells Fargo's Pressure-Cooker Sales Culture Comes at a Cost." *Los Angeles Times*, https://www.latimes.com/business/la-fi-wells-fargo-sale-pressure-20131222-story.html. December 21, 2013.

——— 2015. "L.A. Sues Wells Fargo, Alleging 'Unlawful and Fraudulent Conduct'." *Los Angeles Times*, https://www.latimes.com/business/la-fi-wells-fargo-suit-20150505-story.html. May 4, 2015.

Appendix for "To File or Not to File: Customer Claims and Firm Response After the Wells Fargo Enforcement Action"

Appendix A. Constructing the Complaint Panel

We build the analysis sample in three steps. We select complaint records, group companies by parent institution, and choose the comparison institutions before estimation. The records come from the Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database bulk download (Consumer Financial Protection Bureau 2026a). Table A.1 lists the sample and the fields used to measure when complaints arrive, how many are filed, and how companies respond. We then count complaints by parent institution and month.

TABLE A.1. Primary complaint panel and variable definitions

Element	Definition
Analysis window	2015-04-01 through 2017-03-31.
Primary analysis panel	77 parent institutions over 24 months, or 1,848 parent-month observations.
Panel complaint count	133,649 complaints in the primary CFPB-supervised parent-month panel.
Comparison pool	Wells Fargo and 76 CFPB-supervised large-depository comparison institutions fixed from the June 30, 2016 supervised-institution list.
Period assignment	Monthly specifications use the CFPB Date received field aggregated to calendar month; exact-date timing tests use the same field at daily and weekly frequency.
Parent institution unit	Complaint-level company names are mapped to parent institutions before aggregation.
Main outcomes	Total complaints, Bank account or service complaints, Credit card complaints, and product-level complaint counts.
Company-response outcomes	Complaints requiring company response, the timely-response indicator, and company response categories.

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database, CFPB supervised-institution list, and parent-organization crosswalk.
Note: The table reports the analysis panel used by the main monthly specifications after parent-organization mapping and comparison-pool construction.

The CFPB's product categories determine how we group complaints. *Bank account or service* covers the account-service complaints most directly tied to the orders. *Credit card* is the second product named in the orders. We use *Mortgage* to measure Wells Fargo's broader complaint increase. In each triple-difference specification, we compare the focal product with all other CFPB product categories. Table A.2 gives these definitions and records the April 2017 complaint-form change.

TABLE A.2. Product definitions

Element	Definition
Direct account-service product	Bank account or service, the legacy CFPB product category covering checking, savings, and account-management complaints during the sample window.
Secondary implicated product	Credit card, also implicated because the orders covered unauthorized card applications.
Broader-attention product	Mortgage, not directly implicated in the orders, captures Wells Fargo's broader complaint increase.
Other products	All CFPB products outside the focal product being tested in a given triple-difference specification.
Taxonomy treatment	The sample ends before the CFPB's April 24, 2017 complaint-form product changes; product labels are used as originally submitted in the legacy form.

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB product-change documentation.
Note: Product labels are fixed before estimating the product-level effects and ranks.

The main comparison group comes from the CFPB's June 30, 2016 list of supervised banks and thrifts above the statutory large-depository threshold of $10 billion in assets, including supervised affiliates (Consumer Financial Protection Bureau 2016b). We use this pre-disclosure list to set group membership. Parent identifiers and balance-sheet measures come from 2016:Q2 regulatory filings (Federal Deposit Insurance Corporation 2026; Federal Financial Institutions Examination Council 2026). We also use two smaller comparison groups, U.S. global systemically important banks and bank holding companies included in the Federal Reserve's 2015 stress-test sample. Table A.3 lists every institution.

Table A.4 lists the versions and dates of the public data used to build the complaint sample and supporting analyses.

We check for duplicate complaint records in two ways. We classify records as exact duplicates when they share the parent, received date, product, sub-product, issue, sub-issue, state, ZIP code, submission channel, and normalized narrative text. To identify near duplicates, we compare nonempty complaint narratives that consumers consented to publish. Table A.5 lists how we prepare and compare the text.

TABLE A.3. Comparison-pool definitions

Pool	Units	Comparison institutions
CFPB-supervised depositories	77	Ally Financial Inc.; American Express Co.; Arvest Bank; Associated Banc-Corp; Astoria Bank; Banco Popular De Puerto Rico; BancorpSouth Bank; Bank of America Corp.; Bank of Hawaii; Bank of New York Mellon Corp.; Bank of the West; BankUnited, National Association; Barclays Bank Delaware; BB&T Corp.; BBVA Compass Bancshares; BMO Financial Group; BOK Financial Corp.; Bremer Bank, National Association; Capital One Financial Corp.; Cathay Bank; Charles Schwab Corp.; CIT Bank, National Association; Citigroup Inc.; Citizens Financial Group Inc.; City National Bank; Comerica Inc.; Commerce Bancshares Inc.; Cullen/Frost Bankers Inc.; Deutsche Bank Trust Corporation; Discover Financial Services; E*TRADE Bank; East West Bank; Everbank; Fifth Third Bancorp; First Citizens Bancshares Inc.; First Hawaiian Inc.; First National Bank of Omaha; First National Bank of Pennsylvania; First Niagara Financial Group Inc.; First Republic Bank; Firstbank; Firstbank Puerto Rico; Flagstar Bank, FSB; Goldman Sachs Bank USA; Hancock Whitney Corp.; HSBC North America Holdings Inc.; Huntington Bancshares Inc.; Investors Bank; JPMorgan Chase & Co.; KeyCorp; M&T Bank Corp.; MidFirst Bank; Morgan Stanley; Pacific Western Bank; People's United Bank, National Association; PNC Financial Services Group Inc.; Prosperity Bancshares Inc.; Rabobank, National Association; Raymond James Bank, National Association; Regions Financial Corp.; Santander Bank, National Association; Scottrade Bank; State Farm Bank, FSB; State Street Bank and Trust Company; SunTrust Banks Inc.; Synchrony Financial; Synovus Bank; TCF National Bank; The Northern Trust Company; Toronto-Dominion Bank; U.S. Bancorp; UBS Bank USA; Umpqua Holdings Corp.; Webster Bank, National Association; Western Alliance Bancorp.; Zions Bancorp.
2015 Federal Reserve stress-test parent institutions	30	Ally Financial Inc.; American Express Co.; Bank of America Corp.; Bank of New York Mellon Corp.; BB&T Corp.; BBVA Compass Bancshares; BMO Financial Group; Capital One Financial Corp.; Citigroup Inc.; Citizens Financial Group Inc.; Comerica Inc.; Deutsche Bank Trust Corporation; Discover Financial Services; Fifth Third Bancorp; Goldman Sachs Bank USA; HSBC North America Holdings Inc.; Huntington Bancshares Inc.; JPMorgan Chase & Co.; KeyCorp; M&T Bank Corp.; Morgan Stanley; PNC Financial Services Group Inc.; Regions Financial Corp.; Santander Bank, National Association; State Street Bank and Trust Company; SunTrust Banks Inc.; The Northern Trust Company; U.S. Bancorp; Zions Bancorp.
U.S. G-SIB parent institutions	8	Bank of America Corp.; Bank of New York Mellon Corp.; Citigroup Inc.; Goldman Sachs Bank USA; JPMorgan Chase & Co.; Morgan Stanley; State Street Bank and Trust Company

Source: Consumer Financial Protection Bureau (CFPB)-supervised institution list, Call Report identifiers, Federal Reserve U.S. G-SIB source list, and Federal Reserve 2015 stress-test institutions.
Note: Unit counts include Wells Fargo, so each pool has one fewer comparison institution than its unit count (for example, the eight G-SIB units comprise Wells Fargo plus the seven listed comparison institutions). Institution lists exclude Wells Fargo and report comparison institutions. The stress-test pool contains 30 of the Federal Reserve's 31 organizations because MUFG Union Bank cannot be separated as a parent institution in the complaint extract.

TABLE A.4. Source vintages for public complaint data

Element	Description
CFPB complaint data	Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database bulk file dated 2026-06-03.
CFPB supervised-institution list	Large-depository supervised-institution list dated 2016-06-30.
Call Report data	Bank regulatory identifiers and balance-sheet variables from 2016:Q2 Call Reports.
Product taxonomy	Product labels use the legacy CFPB complaint form in place before the April 24, 2017 product-change documentation.

TABLE A.5. Duplicate-text preprocessing

Component	Implementation
Text source	CFPB published consumer complaint narrative text for Wells Fargo Bank account or service complaints with consumer consent and nonempty narrative strings.
Tokenization	Lowercase text, remove digits and punctuation, collapse whitespace, split on whitespace, and retain tokens longer than two characters.
Normalization	Term-frequency counts are multiplied by inverse-document-frequency weights and row-normalized before cosine similarity is computed.
Exact duplicate definition	Exact-duplicate records share parent unit, received date, product, sub-product, issue, sub-issue, state, ZIP, submission channel, and normalized narrative text.
Fuzzy duplicate definition	Narrative pairs with TF-IDF cosine similarity at or above the listed threshold are treated as near-duplicates for repeated-text comparison.
Similarity thresholds	Cosine thresholds 0.80, 0.85, 0.90, and 0.95.

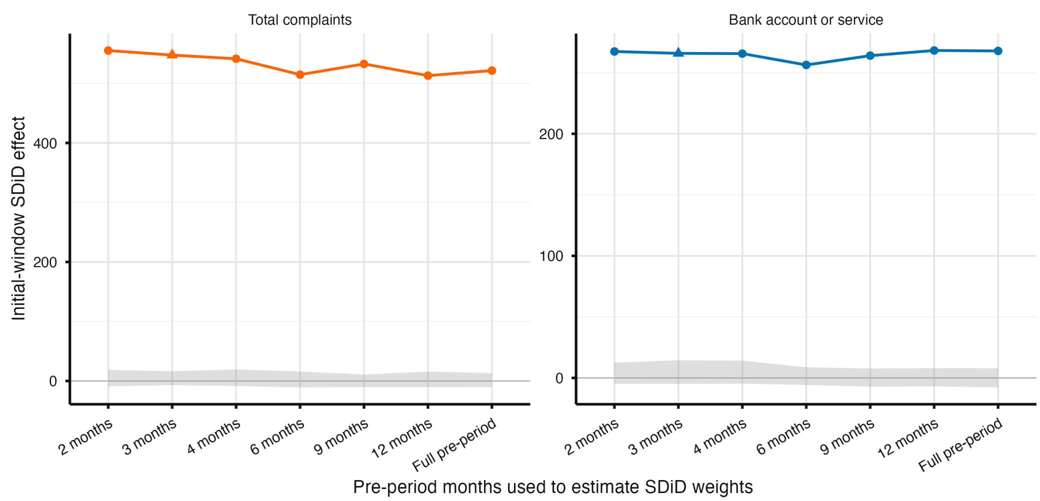
Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database narrative field.
Note: These steps define the duplicate-text comparisons reported in Appendix B.

Appendix B. Supporting Evidence and Robustness

B.1. Counterfactual Construction and Inference

Appendix B reports the checks behind the main estimates. It first shows pre-period fit, SDiD weight concentration, estimates across weighting windows with their held-out fit, and reference-distribution ranks. The remaining tables and figures report results by exact date, comparison group, company response, product, issue, filing route, geography, spillover, and duplicate status.

FIGURE B.1. SDiD effects across pre-disclosure weighting windows



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Points report the September–November SDiD estimates using alternative months to estimate institution weights. The triangle marks the June–August baseline. Bands show the reassigned-institution range for the same statistic.

We calculate ranks by assigning treatment to each comparison institution in turn and comparing the resulting effects. Each table reports Wells Fargo's position and the number of institutions in the comparison, with rank 1 indicating the largest absolute effect. The rank value divides that position by the number of eligible institutions. Level ranks use every reassigned comparison institution. Size-matched proportional ranks use institutions whose pre-period complaint volume is at least 10% of Wells Fargo's. Eligibility is recalculated for each outcome and pre-period, so rank denominators can differ across windows. We cluster standard errors by parent for fixed-effects difference-in-differences estimates. For SDiD estimates, standard errors come from variation across synthetic-control placebos. In this one-treated-bank setting, inference uses the full reference distribution.

The comparison pool contains all eligible institutions. In the SDiD tables, a *donor* is a comparison institution that receives positive weight.

The event-time benchmark in Section 3.3 estimates a separate Wells Fargo effect for each period around the September 8, 2016 disclosure by adding event-time interactions to the two-way fixed-effects DiD:

$$Y_{it} = \alpha_i + \lambda_t + \sum_{\substack{k \in \mathcal{K} \\ k \neq -1}} \delta_k \left(WFC_i \times D_t^k \right) + \varepsilon_{it}, \tag{B.1}$$

where D_t^k equals one when relative period t is event period k. Here, $\mathcal{K}$ contains all periods in the event window, and k indexes those periods relative to the September 8, 2016 disclosure. We omit $k = -1$, the period immediately before disclosure.

TABLE B.1. SDiD pre-fit statistics, CFPB-supervised comparison group

Outcome	Win.	Weight pre-period	Level RMSPE	Mean gap	Centered RMSPE	Placebo centered fit median [p25, p75]	Scaled fit rank
Total complaints	Initial	Jun. 2016–Aug. 2016	368.7	368.7	6.4	0.9 [0.7, 1.7]	2/77
	Long	Apr. 2015–Aug. 2016	155.2	148.9	43.7	2.3 [1.5, 6.8]	2/77
Bank account or service	Initial	Jun. 2016–Aug. 2016	73.1	73.0	3.9	0.5 [0.3, 1.0]	5/77
	Long	Apr. 2015–Aug. 2016	102.2	100.6	17.9	1.4 [1.0, 3.7]	3/77

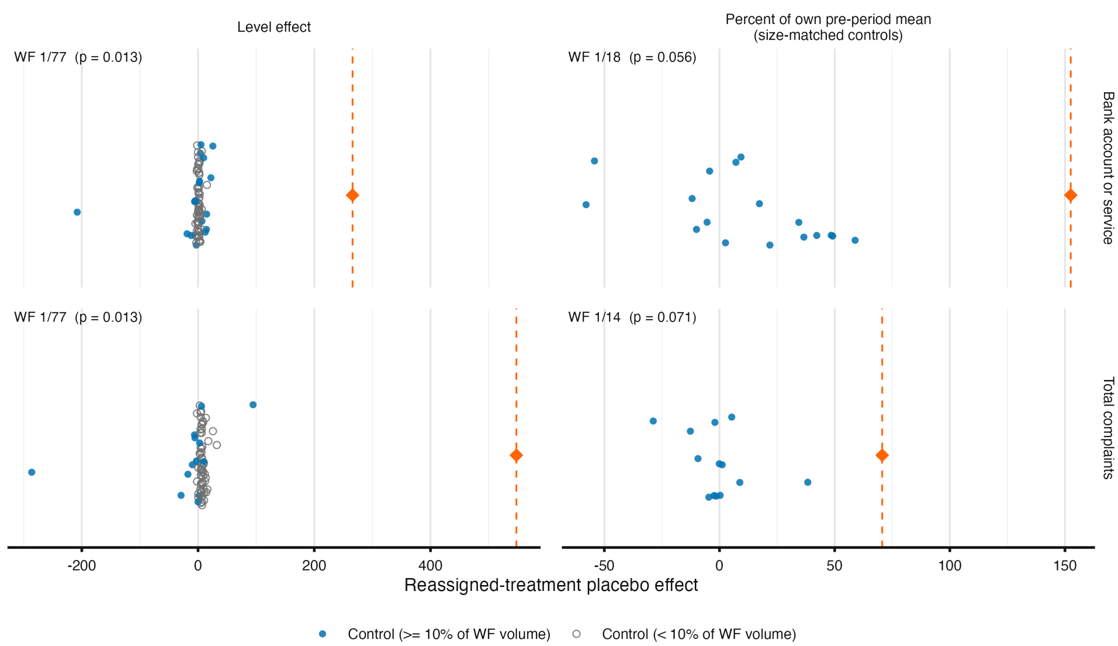
Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Level RMSPE and mean gap compare Wells Fargo with its uncentered SDiD synthetic-control path before the September 2016 public enforcement disclosure; the two are nearly identical because the pre-period misfit is almost entirely a level offset, which the SDiD intercept absorbs. Centered RMSPE measures deviations of the Wells Fargo-minus-synthetic gap around its pre-period mean and is the design-relevant fit statistic. The initial-window SDiD weights are estimated using only June–August 2016; the long-window weights use April 2015–August 2016. Placebo centered RMSPE reassigns treatment to each comparison institution after excluding Wells Fargo from the donor pool. The scaled fit rank orders centered RMSPE divided by each unit's own pre-period mean, from lowest to highest among Wells Fargo and the 76 reassigned-institution placebos, so the ranking is not driven by institution size.

TABLE B.2. SDiD donor-weight concentration

Outcome	Win.	Pos. donors	Top	Top 10	HHI	Eff. donors
Total complaints	Initial	44	22.5	83.5	0.110	9.1
	Long	4	51.7	100.0	0.364	2.7
Bank account or service	Initial	53	18.2	73.5	0.080	12.4
	Long	38	30.2	79.8	0.138	7.2

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Weights are positive SDiD unit weights. Top and Top 10 are percentages of total donor weight. HHI is the sum of squared donor weights; effective donors is the inverse HHI.

FIGURE B.2. Level and size-matched placebo distributions for one-treated-bank inference



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each panel plots reassigned-treatment placebo effects for the comparison institutions under one scaling: the level effect or the effect as a percentage of each institution's own pre-period mean within the size-matched donor subset. Size-matched comparison institutions have pre-period volume at least 10% of Wells Fargo's. The orange diamond and dashed line mark the Wells Fargo estimate, and each panel is annotated with Wells Fargo's absolute rank and rank value.

TABLE B.3. SDiD donor weights, CFPB-supervised comparison group

Outcome	Win.	Donor	Weight	Cum.
Total complaints	Initial	Bank of America Corp.	22.55	22.5
		JPMorgan Chase & Co.	16.37	38.9
		Capital One Financial Corp.	11.14	50.1
		American Express Co.	7.10	57.2
		U.S. Bancorp	6.28	63.4
		Barclays Bank Delaware	5.82	69.3
		Discover Financial Services	5.11	74.4
		PNC Financial Services Group Inc.	4.09	78.5
		Toronto-Dominion Bank	3.08	81.5
		Fifth Third Bancorp	1.97	83.5
	Long	Bank of America Corp.	51.69	51.7
		JPMorgan Chase & Co.	27.19	78.9
		Synchrony Financial	12.52	91.4
		Scottrade Bank	8.60	100.0
Bank account or service	Initial	JPMorgan Chase & Co.	18.16	18.2
		Bank of America Corp.	14.55	32.7
		PNC Financial Services Group Inc.	7.89	40.6
		U.S. Bancorp	7.52	48.1
		SunTrust Banks Inc.	6.35	54.5
		Fifth Third Bancorp	4.80	59.3
		Capital One Financial Corp.	3.80	63.1
		Citizens Financial Group Inc.	3.78	66.9
		BBVA Compass Bancshares	3.49	70.3
		Santander Bank, National Association	3.16	73.5
	Long	Bank of America Corp.	30.23	30.2
		Regions Financial Corp.	15.60	45.8
		Scottrade Bank	11.05	56.9
		BB&T Corp.	5.02	61.9
		Banco Popular De Puerto Rico	3.76	65.7
		TCF National Bank	3.31	69.0
		Umpqua Holdings Corp.	2.85	71.8
		Bank of the West	2.83	74.7
		Fifth Third Bancorp	2.75	77.4
		State Farm Bank, FSB	2.36	79.8

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Unit donor weights are percentages from the SDiD estimates for each outcome and window. Win. denotes the estimation window. Weights sum to 100 within each estimate; rows report the ten largest positive donor weights. Cum. is the cumulative share of total positive weight running down the listed donors, so the last row equals the share covered by the reported donors.

TABLE B.4. Leave-one-positive-donor-out SDiD stability

Outcome	Baseline	Min jackknife	Max jackknife	Min/baseline	Rank at min	Worst rank	Worst-effect donor
Total complaints	547.7	546.3	550.5	0.997	1/76	1/76	American Express Co.
Bank account	265.9	263.7	268.5	0.992	1/76	1/76	Citigroup Inc.
Account opening, closing, or management	152.5	151.9	153.8	0.996	1/76	2/76	Bank of America Corp.

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each row starts from the initial-window SDiD specification and re-estimates it after dropping each positive-weight donor once. Positive donor counts are 44 for total complaints, 53 for Bank account, and 34 for account opening, closing, or management. Rank columns follow the inference conventions in Section B. Rank at min is computed at the smallest jackknife estimate; worst rank is the largest rank observed across leave-one-donor-out runs. Min/baseline divides the smallest jackknife estimate by the baseline estimate.

TABLE B.5. SDiD estimates across weighting windows

Outcome	Window	Eff. donors	Top-10 wt.	Pre RMSPE	Held-out RMSE	Held-out corr.	Effect	Rank	Rank value
Total complaints	2 months	9.5	81.9	5.5	80.9	0.784	555.4	1/77	0.013
Bank account or service	2 months	12.4	71.0	4.0	35.0	0.286	267.4	1/77	0.013
Total complaints	3 months	9.1	83.5	6.4	75.9	0.806	547.7	1/77	0.013
Bank account or service	3 months	12.4	73.5	3.9	34.8	0.274	265.9	1/77	0.013
Total complaints	4 months	9.7	77.7	9.2	75.5	0.799	541.6	1/77	0.013
Bank account or service	4 months	20.9	54.4	6.1	32.5	0.236	265.7	1/77	0.013
Total complaints	6 months	5.4	97.8	18.0	65.6	0.828	514.8	1/77	0.013
Bank account or service	6 months	17.9	64.8	9.3	32.5	0.301	256.4	1/77	0.013
Total complaints	9 months	3.7	98.5	19.4	71.8	0.747	532.9	1/77	0.013
Bank account or service	9 months	16.2	65.2	7.8	38.2	0.519	264.0	1/77	0.013
Total complaints	12 months	3.4	100.0	30.2	76.5	0.983	513.2	1/77	0.013
Bank account or service	12 months	7.5	92.5	12.1	35.9	0.329	268.2	1/77	0.013
Total complaints	Full pre-period	2.6	100.0	43.4			521.7	1/77	0.013
Bank account or service	Full pre-period	5.4	91.7	17.5			267.9	1/77	0.013

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each row re-estimates the initial-window SDiD effect using the listed pre-disclosure months for donor weights and September–November 2016 as post. Top-10 wt. is the percentage of donor weight on the ten largest positive donors. Pre RMSPE is centered over the weight-estimation months. Held-out fit statistics use earlier pre-period data excluded from the weight window and are blank for the full-pre-period row. Rank values follow the inference conventions in Section B.

TABLE B.6. SDiD gap reference-distribution ranks, CFPB-supervised comparison group

Outcome	Effect	Mean post gap	Months above month max	Placebos	Rank	Rank value
Total complaints	547.7	552.1	3/3	76	1/77	0.013
Bank account or service	265.9	269.0	3/3	76	1/77	0.013

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Table reports the initial-window SDiD estimate and centered Wells Fargo-minus-synthetic-control gaps after September 2016. Placebo paths reassign treatment to each comparison institution after excluding Wells Fargo from the donor pool. Months above month max counts post months in which Wells Fargo's centered gap exceeds the maximum reassigned-institution placebo gap *in that same month*; Table B.7 reports the month-by-month comparison. Rank values follow the inference conventions in Section B.

TABLE B.7. Month-by-month SDiD placebo gap comparison, CFPB-supervised comparison group

Outcome	Month	WFC centered gap	Month max placebo gap	WFC monthly rank
Total complaints	Sep. 2016	777.4	87.6	1/77
	Oct. 2016	589.4	79.0	1/77
	Nov. 2016	289.5	98.7	1/77
Bank account or service	Sep. 2016	409.3	41.1	1/77
	Oct. 2016	263.2	45.3	1/77
	Nov. 2016	134.5	28.4	1/77

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each row compares Wells Fargo's centered post-disclosure gap in the listed month with the distribution of centered reassigned-institution placebo gaps in the same month. Month max placebo gap is the largest placebo gap in that month. WFC monthly rank is Wells Fargo's rank after adding the observed Wells Fargo gap to the 76 reassigned-institution placebo gaps; rank 1 denotes the largest centered gap.

TABLE B.8. Scaled and size-matched SDiD reference-distribution ranks, CFPB-supervised comparison group

Outcome	Placebo scaling	WFC value	Eligible placebos	Rank	Rank value
Total complaints	Level effect, all comparison institutions	547.7	76	1/77	0.013
	Level effect, size-matched comparison institutions	547.7	13	1/14	0.071
	Percent of own pre-period mean, size-matched comparison institutions	70.6%	13	1/14	0.071
Bank account or service	Level effect, all comparison institutions	265.9	76	1/77	0.013
	Level effect, size-matched comparison institutions	265.9	17	1/18	0.056
	Percent of own pre-period mean, size-matched comparison institutions	152.5%	17	1/18	0.056

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Each block re-ranks the initial-window SDiD estimate against the reassigned-institution placebo distribution under the listed scaling. Size-matched rows restrict the placebo pool to comparison institutions whose initial-window pre-period mean is at least 10% of Wells Fargo's. Percent rows divide each eligible unit's placebo effect by that unit's own pre-period mean. Rank values follow the inference conventions in Section B.

TABLE B.9. Pre-period scale and proportional placebo volatility

Outcome	Pre-period scale group	Comparison institutions	Median baseline (% WFC)	Median abs. %	90th pct. abs. %	Max abs. %	Outrank WFC
Bank account or service	Below 5%	47	0.8	90.2	431.4	726.8	14/47
Bank account or service	5–10%	7	8.6	26.1	58.4	101.6	0/7
Bank account or service	≥10% (size-matched)	17	19.3	21.9	55.7	58.9	0/17
Total complaints	Below 5%	51	0.6	150.4	845.5	2,641.6	37/51
Total complaints	5–10%	8	6.9	21.9	36.6	43.1	0/8
Total complaints	≥10% (size-matched)	13	29.8	4.6	25.5	38.3	0/13

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Rows group reassigned-institution placebo effects by each institution's initial-window pre-period complaint mean as a share of Wells Fargo's pre-period mean. Abs. % is the absolute initial-window placebo SDiD effect divided by the placebo institution's own pre-period mean. Outrank WFC counts comparison institutions whose absolute percentage placebo effect is at least as large as the Wells Fargo percentage effect.

TABLE B.10. Size-match threshold sensitivity for percentage reference-distribution ranks

Outcome	Threshold	Eligible comparison institutions	WFC % pre mean	Rank	Rank value
Total complaints	5%	21	70.6	1/22	0.045
Total complaints	10%	13	70.6	1/14	0.071
Total complaints	15%	9	70.6	1/10	0.100
Total complaints	20%	7	70.6	1/8	0.125
Total complaints	25%	7	70.6	1/8	0.125
Bank account or service	5%	24	152.5	1/25	0.040
Bank account or service	10%	17	152.5	1/18	0.056
Bank account or service	15%	12	152.5	1/13	0.077
Bank account or service	20%	8	152.5	1/9	0.111
Bank account or service	25%	7	152.5	1/8	0.125

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Threshold is the required pre-period complaint volume as a share of Wells Fargo's pre-period volume. The point estimate is unchanged across rows; only the eligible placebo pool for percent-of-own-pre-period-mean ranks changes. Rank values follow the inference conventions in Section B.

TABLE B.11. Baseline DiD estimates and reference-distribution ranks, CFPB-supervised comparison group

Outcome	Window	Effect	% pre mean	Rank	Rank value
Total complaints	Initial	566.5	73.1	1/77	0.013
		(4.1)			
	Full-post	281.9	35.4		
		(1.7)			
Bank account or service	Initial	284.8	163.4	1/77	0.013
		(3.6)			
	Full-post	153.6	81.4		
		(0.9)			

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Effects are monthly complaint counts for Wells Fargo relative to the comparison group; post begins September 2016. Initial compares June–August with September–November 2016. Full-post compares April 2015–August 2016 with September 2016–March 2017. It includes the initial period and does not measure the late period. For fixed-effect DiD rows, parenthetical standard errors are clustered by parent institution. Because the design has one treated institution, inference comes from reference-distribution ranks rather than the parenthetical standard errors. % pre mean divides the effect by Wells Fargo's pre-period mean. Rank values follow the inference conventions in Section B.

TABLE B.12. Fixed-weight SDiD estimates, CFPB-supervised comparison group

Outcome	Window	Effect	% pre mean	Rank	Rank value
Total complaints	Initial	547.7	70.6	1/77	0.013
		(24.2)			
	Full-post	297.2	37.3	1/77	0.013
		(14.6)			
Bank account or service	Initial	265.6	152.3	1/77	0.013
		(14.9)			
	Full-post	149.2	79.0	1/77	0.013
		(10.4)			

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Effects are monthly complaint counts for Wells Fargo relative to the SDiD comparison path; post begins September 2016. Initial compares June–August with September–November 2016. Full-post compares April 2015–August 2016 with September 2016–March 2017. It includes the initial period and does not measure the late period. For SDiD rows, parenthetical standard errors are placebo-based synthetic-control dispersion benchmarks. Because the design has one treated institution, inference comes from reference-distribution ranks rather than the parenthetical standard errors. Donor weights are fixed to the unit weights from the total-complaints initial-window SDiD estimate; time weights are estimated separately for each outcome and window. Reassigned-institution placebos reuse the fixed donor weights after excluding the reassigned treated institution and renormalizing the remaining weights. % pre mean divides the effect by Wells Fargo's pre-period mean. Rank values follow the inference conventions in Section B.

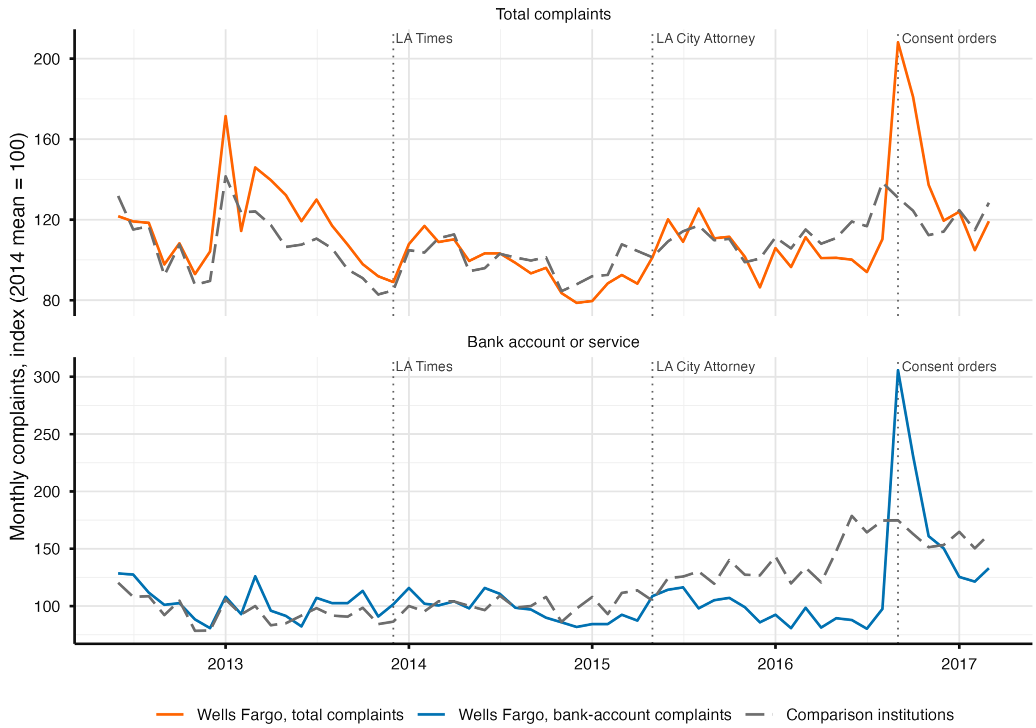
TABLE B.13. Fixed SDiD donor weights, CFPB-supervised comparison group

Rank	Donor	Weight	Rank	Donor	Weight
1	Bank of America Corp.	22.55	23	BMO Financial Group	0.53
2	JPMorgan Chase & Co.	16.37	24	HSBC North America Holdings Inc.	0.51
3	Capital One Financial Corp.	11.14	25	Banco Popular De Puerto Rico	0.49
4	American Express Co.	7.10	26	Zions Bancorp.	0.34
5	U.S. Bancorp	6.28	27	Hancock Whitney Corp.	0.28
6	Barclays Bank Delaware	5.82	28	Goldman Sachs Bank USA	0.27
7	Discover Financial Services	5.11	29	Firstbank	0.25
8	PNC Financial Services Group Inc.	4.09	30	BankUnited, National Association	0.23
9	Toronto-Dominion Bank	3.08	31	MidFirst Bank	0.21
10	Fifth Third Bancorp	1.97	32	KeyCorp	0.14
11	SunTrust Banks Inc.	1.80	33	Arvest Bank	0.11
12	BB&T Corp.	1.79	34	Flagstar Bank, FSB	0.11
13	Citizens Financial Group Inc.	1.49	35	Cullen/Frost Bankers Inc.	0.11
14	M&T Bank Corp.	1.29	36	E*TRADE Bank	0.09
15	CIT Bank, National Association	1.07	37	People's United Bank, National Association	0.07
16	State Farm Bank, FSB	0.83	38	Western Alliance Bancorp.	0.07
17	Synovus Bank	0.81	39	Cathay Bank	0.06
18	BBVA Compass Bancshares	0.80	40	Citigroup Inc.	0.05
19	First National Bank of Omaha	0.74	41	Everbank	0.04
20	Santander Bank, National Association	0.63	42	Bank of New York Mellon Corp.	0.04
21	First Citizens Bancshares Inc.	0.63	43	Huntington Bancshares Inc.	0.02
22	Webster Bank, National Association	0.56	44	City National Bank	0.02
	Reported positive weights	100.00			

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Donor weights are the positive unit weights from the total-complaints initial-window SDiD estimate and are reused for the fixed-weight estimates in Table B.12. Omitted CFPB-supervised comparison institutions receive zero weight. Reported positive weights sum to 100%.

B.2. Timing and Attribution

FIGURE B.3. Wells Fargo and comparison-group complaints around earlier public-information events



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database.
Note: Lines plot monthly complaints for Wells Fargo and the pooled CFPB-supervised comparison institutions, indexed so each series' 2014 calendar-year mean equals 100. Dotted vertical lines mark the December 2013 *Los Angeles Times* investigation, the May 2015 Los Angeles City Attorney lawsuit, and the September 2016 federal consent orders. Table 1 reports the event-window comparisons.

TABLE B.14. Daily complaint jumps at within-window events

Outcome	Event	7-day jump	Placebo-day jump SD	Placebo-day jump p90	% placebo days below
Total complaints	Enforcement disclosure (Sept. 8)	39.8	10.0	9.6	100.0
	Senate hearing (Sept. 20)	2.7	10.0	9.6	66.7
	CEO resignation (Oct. 12)	3.0	10.0	9.6	66.7
Bank account or service	Enforcement disclosure (Sept. 8)	18.5	5.9	5.6	100.0
	Senate hearing (Sept. 20)	-2.5	5.9	5.6	36.7
	CEO resignation (Oct. 12)	0.2	5.9	5.6	46.7

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: The jump statistic is the mean Wells Fargo-minus-weighted-comparison daily gap in the seven days from the event minus the mean gap in the seven preceding days. Placebo-day columns compute the same statistic at every other feasible day in the event window, excluding days within three days of the listed events. Donor weights are the initial-window total-complaints SDiD weights.

TABLE B.15. Event-timing rank construction robustness

Outcome	Configuration	Jump days	Excl. band	Candidate dates	Sept. 8 jump	Rank	Rank value
Total complaints	Exclusion band +/-2 days	7	2	Jun. 8–Nov. 24	39.8	1/156	0.006
Total complaints	Exclusion band +/-3 days	7	3	Jun. 8–Nov. 24	39.8	1/150	0.007
Total complaints	Exclusion band +/-5 days	7	5	Jun. 8–Nov. 24	39.8	1/138	0.007
Total complaints	Exclusion band +/-7 days	7	7	Jun. 8–Nov. 24	39.8	1/129	0.008
Total complaints	5-day pre/post jump	5	3	Jun. 8–Nov. 24	34.0	1/150	0.007
Total complaints	7-day pre/post jump	7	3	Jun. 8–Nov. 24	39.8	1/150	0.007
Total complaints	10-day pre/post jump	10	3	Jun. 8–Nov. 24	33.0	1/144	0.007
Total complaints	14-day pre/post jump	14	3	Jun. 8–Nov. 24	33.1	1/136	0.007
Total complaints	Narrow candidate window	7	3	Jul. 1–Nov. 15	39.8	1/118	0.008
Total complaints	Baseline candidate window	7	3	Jun. 8–Nov. 24	39.8	1/150	0.007
Total complaints	Wide candidate window	7	3	Jun. 1–Nov. 30	39.8	1/150	0.007
Bank account or service	Bank-account gap, total-complaint weights	7	3	Jun. 8–Nov. 24	18.5	1/150	0.007
Bank account or service	Bank-account gap, bank-account weights	7	3	Jun. 8–Nov. 24	18.8	1/150	0.007

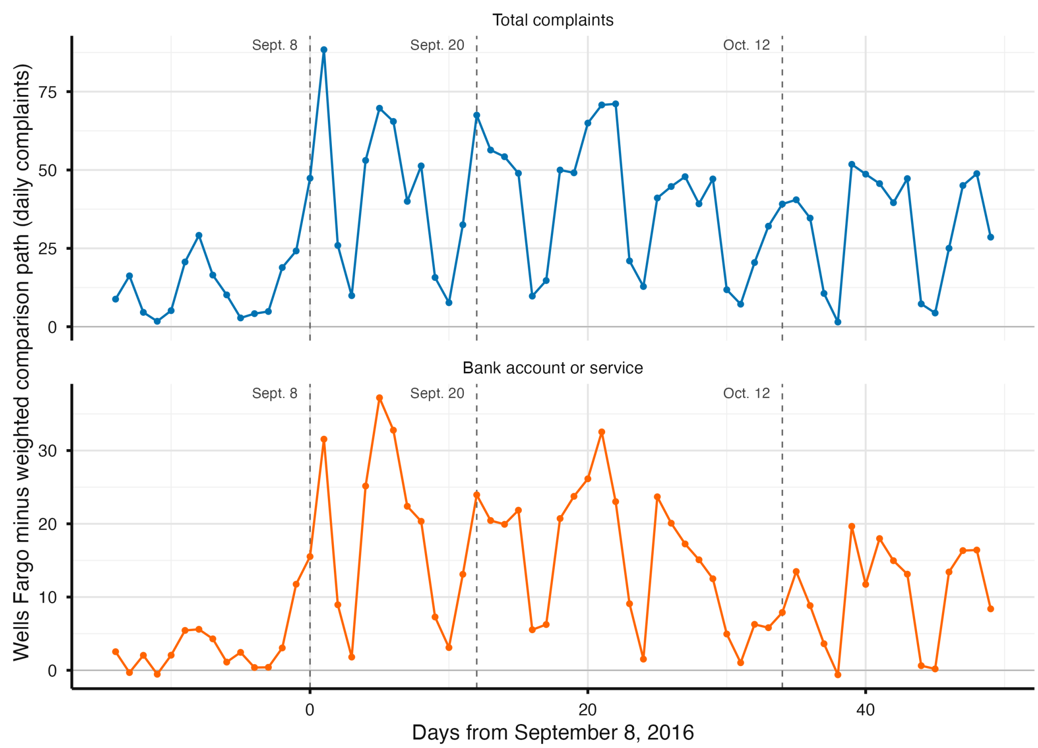
Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Rows re-rank the September 8 daily jump in the Wells Fargo-minus-weighted-comparison gap under alternative exclusion bands, jump-window lengths, candidate-date windows, and comparison-weight choices. These event-timing ranks compare candidate event dates, not institution reassignments. The rank gives the event's position among positive jumps; the rank value divides that position by the number of candidate dates.

TABLE B.16. Exact-date timing SDiD, CFPB-supervised comparison group

Outcome	Window	Effect	% pre mean	Rank	Rank value
Total complaints	Daily [-7,+6]	36.5	163.6	1/77	0.013
	Daily [-14,+13]	29.8	117.1	1/77	0.013
	Weekly [-2,+1]	235.6	132.4	1/77	0.013
	Weekly [-4,+3]	235.2	131.8	1/77	0.013
Bank account or service	Daily [-7,+6]	17.2	273.2	1/77	0.013
	Daily [-14,+13]	15.4	236.5	1/77	0.013
	Weekly [-2,+1]	118.6	260.7	1/77	0.013
	Weekly [-4,+3]	121.7	279.7	1/77	0.013

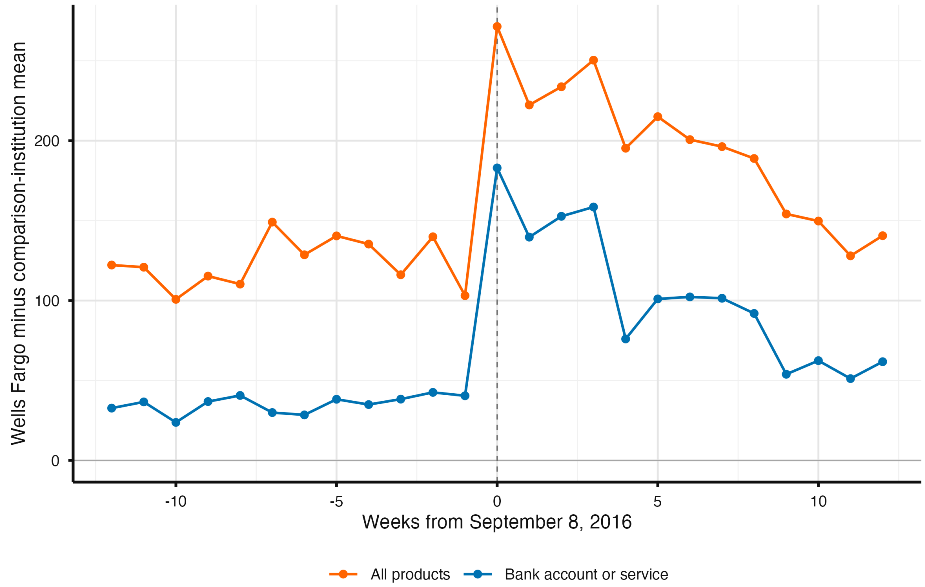
Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Effects are SDiD estimates on daily or weekly complaint panels centered on the September 8, 2016 public enforcement disclosure. Daily windows use event days before and after September 8; weekly windows use seven-day event weeks with week 0 beginning September 8. % pre mean divides the effect by Wells Fargo's pre-period mean within the listed timing window. Rank values follow the inference conventions in Section B.

FIGURE B.4. Daily complaint gap and the within-window event sequence



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Lines plot the daily gap between Wells Fargo and the weighted comparison path, using initial-window total-complaints SDiD donor weights. Dashed vertical lines mark the September 8 enforcement disclosure, the September 20 Senate hearing, and the October 12 CEO resignation. Table B.14 reports the jump statistics.

FIGURE B.5. Unweighted weekly complaint gap around public enforcement disclosure



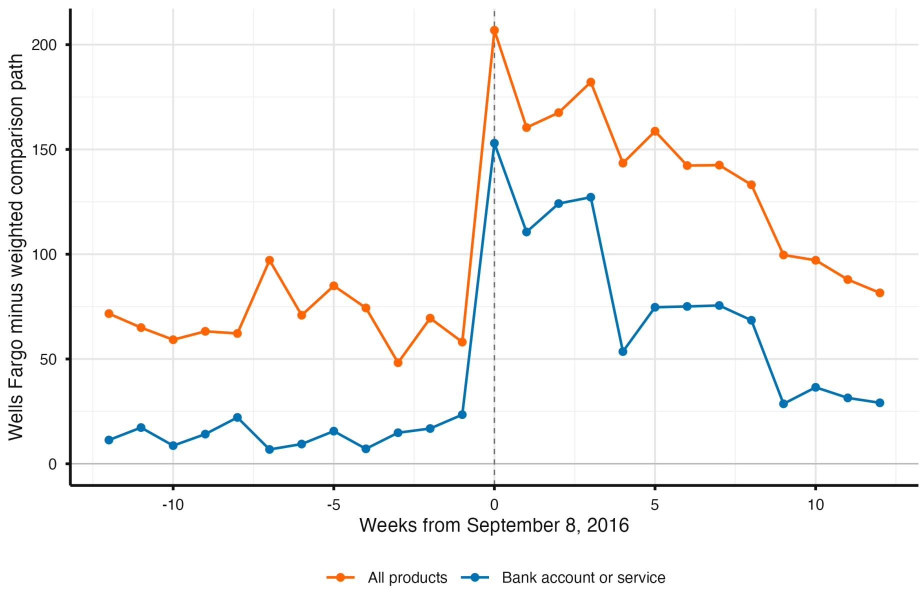
Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Lines plot the weekly gap between Wells Fargo and the unweighted mean comparison path for total complaints and *Bank account or service* complaints. Week 0 contains the public enforcement disclosure on September 8, 2016. Table B.16 reports weighted SDiD estimates for the same event window.

TABLE B.17. Monthly September-timing convention SDiD, CFPB-supervised comparison group

Outcome	Window	Convention	Effect	% pre mean
Total complaints	Initial	Post from Sept.	547.7	70.6
		Post from Oct.	435.3	56.1
	Full-post	Post from Sept.	299.0	37.5
		Post from Oct.	224.0	28.1
Bank account or service	Initial	Post from Sept.	265.9	152.5
		Post from Oct.	195.6	112.2
	Full-post	Post from Sept.	154.7	82.0
		Post from Oct.	111.8	59.2

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Effects are monthly SDiD point estimates. Initial compares June–August with September–November 2016. Full-post compares April 2015–August 2016 with September 2016–March 2017. It includes the initial period and does not measure the late period. Post from Sept. is the baseline convention that treats September 2016 as post; Post from Oct. removes September 2016 from the monthly panel and defines post as October 2016 onward. % pre mean divides the effect by Wells Fargo's pre-period mean under the listed convention. Table B.16 splits September directly using daily and weekly event windows.

FIGURE B.6. Weighted weekly complaint gap around public enforcement disclosure



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Lines plot the weekly gap between Wells Fargo and the weighted comparison path, using initial-window total-complaints SDiD donor weights; week 0 contains the September 8, 2016 disclosure. This is the weighted counterpart to the unweighted weekly timing figure.

B.3. Alternative Comparison Groups

TABLE B.18. Alternative comparison groups

Comparison group	Outcome	Estimator	Effect	% pre mean	Rank	Rank value
G-SIB comparison group	Total complaints	SDiD	550.9	71.1	1/8	0.125
			(123.8)			
		DiD	600.1	77.4	1/8	0.125
			(46.9)			
	Bank account or service	SDiD	272.2	156.1	1/8	0.125
			(67.2)			
		DiD	312.0	178.9	1/8	0.125
			(42.3)			
Fed stress-test comparison group	Total complaints	SDiD	545.3	70.3	1/30	0.033
			(48.7)			
		DiD	569.7	73.5	1/30	0.033
			(10.8)			
	Bank account or service	SDiD	266.1	152.6	1/30	0.033
			(33.0)			
		DiD	287.2	164.8	1/30	0.033
			(9.7)			

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database, Federal Reserve U.S. G-SIB source list, and Federal Reserve 2015 stress-test institutions.
Note: Effects are monthly complaint counts for Wells Fargo relative to the listed comparison group; post begins September 2016. For fixed-effect DiD rows, parenthetical standard errors are clustered by parent institution. For SDiD rows, parenthetical standard errors are placebo-based synthetic-control dispersion benchmarks. Because Wells Fargo is the single treated institution, inference comes from reference-distribution ranks rather than the parenthetical standard errors. Table reports the initial window only and orders SDiD before DiD. % pre mean divides the effect by Wells Fargo's pre-period mean. Rank values follow the inference conventions in Section B. The G-SIB pool has seven comparison institutions, so its minimum attainable rank value is 1/8 = 0.125; the stress-test pool has 29 matched comparison institutions, so its minimum is 1/30 = 0.033. Wells Fargo is the single most extreme unit in each pool (position 1 of 8 and 1 of 30); the 1/8 and 1/30 rank-value floors are set by pool size, not by Wells Fargo's placement, and the initial-window SDiD magnitudes stay within a few percent of the baseline CFPB-supervised estimates.

B.4. Product and Issue Persistence

TABLE B.19. Product allocation of the Wells Fargo complaint increase

	September–November				September–March average				
Product	Effect	% earlier mean	Rank	Rank value	Effect	% earlier mean	Rank	Rank value	Share of increase %
Bank account or service	276.2	158.4	1/77	0.013	146.7	77.7	1/77	0.013	50.2
Credit card	49.5	69.5	1/77	0.013	36.1	59.5	4/77	0.052	13.1
Mortgage	124.1	29.6	1/77	0.013	16.5	3.7	4/77	0.052	24.6

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Rows report triple-difference effects in additional monthly Wells Fargo complaints. The first period compares June–August with September–November 2016. The second compares April 2015–August 2016 with September 2016–March 2017. The bank-account comparison excludes credit card and mortgage; the other rows exclude bank account and the listed product. Share of increase uses the change in Wells Fargo's monthly mean from June–August to September–November 2016.

FIGURE B.7. Monthly product complaint increases after the disclosure

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Points are monthly all-other-products triple differences relative to April 2015–August 2016. The shaded region marks September–November 2016. The dashed line separates it from December 2016–March 2017.

TABLE B.20. Single-product triple-difference estimates and reference-distribution ranks, CFPB-supervised comparison group

Product	Win.	Effect	WFC pre	% pre	Prod. rank	Inst. rank	Rank value
Bank account or service	Initial	256.7	174.3	147.2	1	2/77	0.026
	Full-post	140.8	188.8	74.6		1/77	0.013
Mortgage	Initial	97.2	419.3	23.2	2	1/77	0.013
	Full-post	2.2	447.8	0.5		62/77	0.805
Credit card	Initial	23.4	71.3	32.8	3	3/77	0.039
	Full-post	21.7	60.7	35.7		6/77	0.078

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Triple-difference effects compare Wells Fargo complaints in the listed product to all other products, relative to the comparison group. Because the comparison category pools all remaining products, the dominant bank-account increase sits in the comparison pool for the mortgage and credit-card contrasts; Table B.19 reports the exclusion contrasts that remove the mechanically affected categories. WFC pre mean is Wells Fargo's average monthly complaints in the listed product and pre-period window; % pre mean divides the triple-difference effect by that mean. With one treated institution, inference is placebo-based and conventional standard errors are omitted. Product rank orders initial-window single-product triple-difference estimates by effect size. Institution ranks reassign treatment to each CFPB-supervised comparison institution, with Wells Fargo excluded from the placebo comparison sample. Rank values follow the inference conventions in Section B. Full-post compares April 2015–August 2016 with September 2016–March 2017. It includes the initial period and does not measure the late period. The main text reports the late-only December 2016–March 2017 contrasts in Table 3.

TABLE B.21. Product-share decomposition of the Wells Fargo complaint increase

Product	Pre monthly	Post monthly	Change monthly	Share of increase %	Own % change
Bank account or service	174.3	458.0	283.7	50.2	162.7
Mortgage	419.3	558.7	139.3	24.6	33.2
Credit card	71.3	145.7	74.3	13.1	104.2
Consumer Loan	49.7	81.3	31.7	5.6	63.8
Student loan	16.7	46.0	29.3	5.2	176.0
Money transfers	3.0	6.7	3.7	0.6	122.2
Prepaid card	0.7	3.3	2.7	0.5	400.0
Other financial service	1.3	3.0	1.7	0.3	125.0

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database.
Note: Rows decompose Wells Fargo's initial-window complaint increase (September–November 2016 monthly mean minus June–August 2016 monthly mean) across CFPB product categories, ordered by the monthly change. Share of increase divides each product's change by the total change. Own % change divides each product's change by its own pre-period mean.

TABLE B.22. Product ranks, CFPB-supervised comparison group

Rank	Product	Effect
1	Bank account or service	256.7
2	Mortgage	97.2
3	Credit card	23.4
4	Consumer Loan	-22.1
5	Student loan	-24.3
6	Money transfers	-52.7
7	Prepaid card	-53.7
8	Other financial service	-54.8
9	Debt collection	-55.5
10	Payday loan	-56.3
11	Credit reporting	-57.8

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Rows rank all single-product triple-difference estimates by effect size in the initial window, June–November 2016. Each triple-difference estimate compares Wells Fargo complaints in the listed product to all other products, relative to the CFPB-supervised comparison group. The *Bank account or service* product is the direct account-service margin.

TABLE B.23. Single-product triple-difference estimates and reference-distribution ranks, G-SIB and stress-test comparison groups

Comparison group	Product	Window	Effect	Rank	Rank value
G-SIB comparison group	Bank account or service	Initial	283.1	1/8	0.125
		Full-post	129.6	1/8	0.125
	Mortgage	Initial	97.9	1/8	0.125
		Full-post	24.3	7/8	0.875
	Credit card	Initial	17.8	2/8	0.250
		Full-post	8.3	7/8	0.875
Fed stress-test comparison group	Bank account or service	Initial	259.0	2/30	0.067
		Full-post	136.4	1/30	0.033
	Mortgage	Initial	97.0	1/30	0.033
		Full-post	7.2	18/30	0.600
	Credit card	Initial	22.6	2/30	0.067
		Full-post	18.1	5/30	0.167

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database, Federal Reserve U.S. G-SIB source list, and Federal Reserve 2015 stress-test institutions.
Note: Triple-difference effects compare Wells Fargo complaints in the listed product to all other products, relative to the listed comparison group. Full-post includes the initial period and does not measure the late period. With one treated institution, inference is placebo-based and conventional standard errors are omitted. Rank values follow the inference conventions in Section B. The G-SIB pool has seven comparison institutions, so its minimum attainable rank value is 1/8 = 0.125; the stress-test pool has 29 matched comparison institutions, so its minimum is 1/30 = 0.033. First-place ranks in these small pools indicate consistent magnitudes rather than conventional significance.

TABLE B.24. Triple-difference product ranks, G-SIB and stress-test comparison groups

Comparison group	Rank	Product	Effect
G-SIB comparison group	1	Bank account or service	283.1
	2	Mortgage	97.9
	3	Credit card	17.8
	4	Consumer Loan	-25.8
	5	Student loan	-27.4
	6	Debt collection	-52.0
	7	Money transfers	-56.9
	8	Prepaid card	-57.9
	9	Other financial service	-58.0
	10	Payday loan	-59.5
Fed stress-test comparison group	1	Bank account or service	259.0
	2	Mortgage	97.0
	3	Credit card	22.6
	4	Consumer Loan	-22.9
	5	Student loan	-24.6
	6	Money transfers	-53.3
	7	Debt collection	-53.9
	8	Prepaid card	-54.0
	9	Other financial service	-55.2
	10	Payday loan	-56.6

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database, Federal Reserve U.S. G-SIB source list, and Federal Reserve 2015 stress-test institutions.
Note: Rows show the top single-product triple-difference estimates for each comparison group in the initial window, June–November 2016. Each triple-difference estimate compares Wells Fargo complaints in the listed product to all other products, relative to the listed comparison group. The *Bank account or service* product is the direct account-service margin.

TABLE B.25. Issue composition, CFPB-supervised comparison group

Issue	WFC pre %	WFC post %	Comparison pre %	Comparison post %	DD pp	WFC Δ
Account opening, closing, or management	41.4	51.9	53.3	44.9	18.9	455
Problems caused by my funds being low	13.1	12.6	11.2	13.5	-2.7	94
Using a debit or ATM card	6.3	5.0	6.6	9.8	-4.6	30
Making/receiving payments, sending money	10.1	8.0	6.4	9.2	-4.8	49
Deposits and withdrawals	29.1	22.6	22.5	22.7	-6.7	135

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database issue field.
Note: Rows use bank-account-product complaints in the initial window. Issue labels are CFPB administrative fields selected by consumers and should be read as broad complaint categories, not audited legal determinations. WFC and comparison columns report each issue's share of bank-account-product issue counts within the listed group and period. DD pp is the Wells Fargo post-minus-pre share change minus the corresponding comparison-group share change, in percentage points. WFC Δ is Wells Fargo's raw post-minus-pre count change for the issue.

TABLE B.26. Credit-card-adjacent complaint categories around disclosure

Category	WFC pre monthly	WFC post monthly	WFC % change	Comparison % change
Credit-card non-identity issues	60.9	130.4	114.3	9.4
Credit-reporting product	1.2	0.4	-70.5	17.9
Credit-card identity theft/fraud issue	9.2	22.8	147.5	6.9

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database.
Note: Rows report day-count-adjusted monthly complaint flows in the June 1–November 30, 2016 window, with the pre/post split at September 8, for categories where unauthorized credit-card harms could be classified: the credit-card product, the credit-reporting product, and identity-theft or fraud issues within the credit-card product. A large increase across these categories would indicate that the small credit-card product effect reflects classification rather than a small increase.

B.5. Routes, Geography, Records, and Spillovers

TABLE B.27. Fuzzy duplicate threshold sensitivity

Threshold	Period	Narratives	Near-dup.	Near-dup. %	Pair count
0.80	Post	517	2	0.4	1
0.80	Pre	166	2	1.2	1
0.85	Post	517	0	0.0	0
0.85	Pre	166	2	1.2	1
0.90	Post	517	0	0.0	0
0.90	Pre	166	2	1.2	1
0.95	Post	517	0	0.0	0
0.95	Pre	166	2	1.2	1

Source: Consumer Financial Protection Bureau (CFPB)-published, consumer-consented narrative text from the Consumer Complaint Database.
Note: Near-duplicates are TF-IDF cosine-similar narrative pairs after lowercasing, digit and punctuation removal, whitespace normalization, tokenization, inverse-document-frequency weighting, and row normalization. Near-dup. counts narratives belonging to within-period pairs at or above the listed threshold; Pair count reports the number of those pairs.

TABLE B.28. State-level Wells Fargo exposure gradient

Outcome	Exposure measure	Post × exposure	SE	*p*
log(1 + WFC complaints)	WFC branch share, 2016 SOD	0.675	(0.724)	0.356
WFC share of state complaints	WFC branch share, 2016 SOD	0.094	(0.184)	0.612
log(1 + WFC complaints)	WFC deposit share, 2016 SOD	0.898	(0.531)	0.096
WFC share of state complaints	WFC deposit share, 2016 SOD	0.134	(0.131)	0.310

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database state field and FDIC Summary of Deposits, 2016.
Note: Each row is a state-by-month regression over June–November 2016 with state and month fixed effects; the reported coefficient is on the post-disclosure indicator interacted with Wells Fargo's 2016 branch or deposit share in the state. The share outcome divides Wells Fargo complaints by complaints filed against Wells Fargo and the comparison institutions in the state-month. Standard errors are clustered by state.

TABLE B.29. Complaint growth by state exposure quartile

Exposure quartile	Jurisdictions	Mean WFC branch share %	WFC % change	Comparison % change
Q1	15	0.0	54.4	-11.3
Q2	15	1.0	75.8	-3.5
Q3	15	8.4	81.0	-3.5
Q4	14	17.3	70.4	1.4

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database state field and FDIC Summary of Deposits, 2016.
Note: The 59 CFPB jurisdictions with complaint activity in the sample include states, the District of Columbia, and territories. They are grouped into quartiles of Wells Fargo's 2016 branch share (Q4 highest). Cells report the percentage change in monthly complaints from June–August to September–November 2016 for Wells Fargo and for comparison institutions in the same jurisdictions.

TABLE B.30. Comparison-institution trends and Citigroup exclusion

Panel A. Account-opening issue complaints at the largest comparison institutions

Institution	Pre monthly	Post monthly	Change	% change
Wells Fargo (treated)	72.0	236.3	164.3	228.2
Citigroup Inc.	348.0	80.7	-267.3	-76.8
Bank of America Corp.	115.3	124.7	9.3	8.1
JPMorgan Chase & Co.	73.3	103.0	29.7	40.5
Capital One Financial Corp.	19.3	25.7	6.3	32.8
Synchrony Financial	15.7	13.0	-2.7	-17.0
U.S. Bancorp	34.0	41.3	7.3	21.6
American Express Co.	5.3	4.3	-1.0	-18.8
PNC Financial Services Group Inc.	24.7	28.7	4.0	16.2
Discover Financial Services	9.7	7.0	-2.7	-27.6
SunTrust Banks Inc.	20.0	26.3	6.3	31.7
All 76 comparison institutions (pooled)	856.3	679.3	-177.0	-20.7

Panel B. Sensitivity to excluding Citigroup

Estimate	Baseline	Citigroup excluded	Difference
Total complaints, weekly DiD	147.9	147.1	−0.8
Bank-account complaints, weekly DiD	70.9	70.2	−0.7
Bank-account product contrast, initial window	256.7	253.2	−3.5
Account-management contrast, initial window	162.6	159.1	−3.5

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Panel A reports monthly *account opening, closing, or management* complaints within the bank-account product, June–August 2016 (pre) versus September–November 2016 (post), for Wells Fargo, the ten largest comparison institutions by pre-period complaint volume, and all 76 comparison institutions pooled. Citigroup's account-opening series was already elevated by May 2016, before the September 8 disclosure, and then declined. Panel B re-estimates the retained 12-week complaint-flow and initial product-contrast specifications after excluding Citigroup. The results are nearly unchanged. Six of the other nine large comparison institutions show same-direction increases. Table B.31 excludes the five largest branch-network retail comparison institutions and produces slightly larger estimates.

TABLE B.31. SDiD estimates excluding comparison institutions with the greatest spillover exposure

Outcome	Comparison sample	Effect	% pre mean
Total complaints	All 76 comparison institutions	547.7	70.6
	Excluding five largest retail comparison institutions	566.9	73.1
Bank account or service	All 76 comparison institutions	265.9	152.5
	Excluding five largest retail comparison institutions	275.3	157.9

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: The leave-out rows re-estimate the initial-window SDiD specification after excluding the five largest branch-network retail depositories (Bank of America, JPMorgan Chase, Citigroup, U.S. Bancorp, PNC), the comparison institutions most plausibly exposed to cross-selling spillovers; the exclusion rule was fixed before estimation.

TABLE B.32. Submission routes and exact-record duplicate removal

Panel A: 12-week route contributions

Outcome	Submission route	Additional complaints per week	Share of total effect (%)
All products	Total	147.9	100.0
	Web	108.2	73.2
	Referral	15.9	10.8
	Phone	11.5	7.8
	Mail or other	12.2	8.2
Bank account or service	Total	70.9	100.0
	Web	53.5	75.5
	Referral	4.7	6.6
	Phone	7.3	10.4
	Mail or other	5.3	7.5

Panel B: Exact-record duplicate removal

Outcome	Records	Effect	% pre mean
Total complaints	All records	547.7	70.6
	Exact duplicates removed	551.4	71.9
Bank account or service	All records	265.9	152.5
	Exact duplicates removed	266.1	152.6

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Panel A reports descriptive Wells Fargo-minus-comparison changes in weekly complaint counts from the 12 weeks before to the 12 weeks after the disclosure, by submission route; shares are route contributions divided by the total effect within the outcome. Panel B re-estimates the initial-window SDiD specification after removing exact-duplicate complaint records. The complaint-count outcomes retain duplicates because the estimand is formal filing activity. Duplicates are records sharing parent unit, received date, product, sub-product, issue, sub-issue, state, ZIP, submission channel, and narrative text with an earlier record. In the initial window the duplicate share is 1.1% for Wells Fargo pre-disclosure, 0.4% for Wells Fargo post-disclosure, and 0.9% for comparison institutions post-disclosure.

B.6. Firm Response

TABLE B.33. Wells Fargo response-category composition

Response category	Period	Complaints	Share
Explanation	Pre	2128	85.7
Monetary relief	Pre	188	7.6
Non-monetary relief	Pre	139	5.6
Closed	Pre	27	1.1
Explanation	Post	3337	86.3
Monetary relief	Post	308	8.0
Non-monetary relief	Post	194	5.0
Closed	Post	27	0.7

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database.
Note: The table reports Wells Fargo complaints from June 1 through November 30, 2016. The denominator is all Wells Fargo complaints within each period. The fields are descriptive company-response categories and report counts rather than dollars of relief.

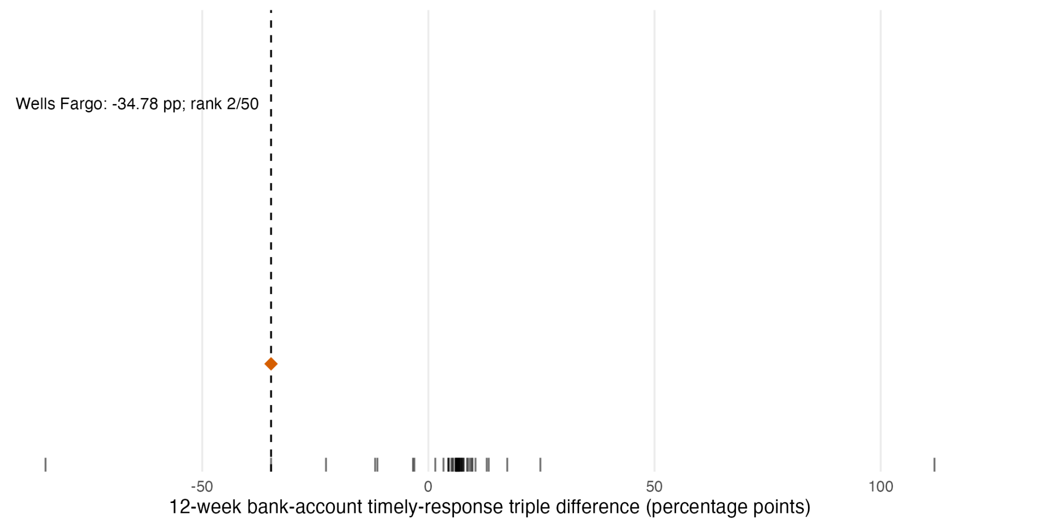
Post-event response standardization uses inverse-odds reweighting from a binomial logit of the post indicator on issue, sub-issue, sub-product, submission route, state, weekday, and narrative availability. The target is the pre-event distribution of observed complaint characteristics. Post-event weights equal the estimated odds of pre-event rather than post-event membership, capped at 50 before normalization. They are normalized to sum to the 473 pre-event complaints. Under that normalization, effective sample size is 960.0 and the maximum stabilized weight is 2.73.

TABLE B.34. Response-standardization diagnostics

Diagnostic	Value
Unweighted post-event complaints	1,335
Effective sample size	960.0
Maximum stabilized weight	2.73

Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database.
Note: The table reports diagnostics for the weights used to standardize post-event Wells Fargo bank-account complaints to the pre-event distribution of issue, sub-issue, sub-product, submission route, state, weekday, and narrative availability. Post-event weights are normalized to sum to the 473 pre-event complaints. Effective sample size equals the squared sum of weights divided by the sum of squared weights.

FIGURE B.8. Receipt-dated reference distribution for the bank-account response contrast



Source: Consumer Financial Protection Bureau (CFPB) Consumer Complaint Database and CFPB-supervised large-depository comparison group.
Note: Points report the receipt-dated 12-week bank-account timely-response triple difference after assigning treatment to each eligible institution in turn. The statistic compares timely response for the treated institution's bank-account complaints with its other products, net of the corresponding product change at the remaining institutions. The diamond and dashed line identify the Wells Fargo estimate.

Appendix C. Other CFPB actions and diagnostics

C.1. Action inventory and sample construction

The action census covers CFPB actions filed from January 1, 2013 through January 30, 2017 against depository parents in the fixed comparison universe. Each action must name conduct that maps directly to at least one legacy CFPB complaint product. Same-day actions against the same parent are combined, and the product mapping is fixed from the action description rather than from the complaint outcomes. The end date ensures that a 12-week post-action window closes before the April 2017 change in CFPB product categories.

The census begins with 27 linked events. Under a rule applied without reference to outcomes, both actions in each of two overlapping same-parent episodes are excluded. One more event is excluded because the parent has fewer than 10 named-product complaints in the 12 pre-action weeks. This support rule uses only pre-action data. No action is selected using its post-action complaint count, estimated effect, precision, or pretrend. The resulting inventory contains the 22 actions in Table C.1. The first-action sample contains 18 treated parents and 58 parents that never appear in the action inventory.

TABLE C.1. CFPB action inventory and first-action sample

Action date	Parent	Named complaint product	First-action sample
2013-06-26	U.S. Bancorp	Consumer Loan	Included
2013-09-09	JPMorgan Chase & Co.	Credit card	Included
2013-12-10	Synchrony Financial	Credit card	Included
2013-12-20	Ally Financial Inc.	Consumer Loan	Included
2013-12-24	American Express Co.	Credit card	Included
2014-04-09	Bank of America Corp.	Credit card	Included
2014-06-17	SunTrust Banks Inc.	Mortgage	Included
2014-06-19	Synchrony Financial	Credit card	Later action
2014-09-25	U.S. Bancorp	Credit card	Later action
2014-09-29	Flagstar Bank, F.S.B.	Mortgage	Included
2014-10-09	M&T Bank Corp.	Bank account or service	Included
2015-01-22	Wells Fargo & Co.	Mortgage	Included
2015-04-28	Regions Financial Corp.	Bank account or service	Included
2015-07-21	Citigroup Inc.	Credit card	Included
2015-07-22	Discover Financial Services	Student loan	Included
2015-08-12	Citizens Financial Group Inc.	Bank account or service	Included
2015-09-28	Fifth Third Bancorp	Credit card; Consumer Loan	Included
2016-02-23	Citigroup Inc.	Credit card; Debt collection	Later action
2016-07-14	Santander Bank, N.A.	Bank account or service	Included
2016-08-25	First National Bank of Omaha	Credit card	Included
2017-01-19	TCF National Bank	Bank account or service	Included
2017-01-23	Citigroup Inc.	Mortgage	Later action

Source: Consumer Financial Protection Bureau enforcement-action inventory and official action pages.
Note: The first-action design uses the first eligible action for each of the 18 treated parents and omits four later actions at parents already treated. Multiple actions filed against the same parent on the same date are combined into one event and their named products are pooled.

C.2. Category-matched first-action design

The first-action design keeps the first eligible action for each of the 18 treated parents, producing 17 weekly treatment cohorts and six named-category sets. For each cohort and category set, treated parents are compared with the 58 never-treated parents in the same category. Effects are aggregated with equal weight across treated parents and normalized to event week −1. Inference uses 999 treated-parent and never-treated-parent cluster-bootstrap draws with seed 20260728 (Callaway and Sant'Anna 2021).

The mean effect over event weeks 0–3 is 39.6%, with a 95% normal interval of [15.5, 68.8]. The joint lead test has $p = 0.136$, and every pointwise lead interval covers zero. Treated-parent leave-one-out estimates range from 31.8% to 45.2%, never-treated-parent leave-one-out estimates range from 39.3% to 40.0%, and the Wells Fargo-exclusion estimate is 40.8%. Figure 5 displays the event-time path.

Complaints rise in the product categories named by first eligible CFPB actions. The result extends the Wells Fargo complaint-inflow finding to a broader action sample.