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DISCUSSION PAPER SERIES

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ABSTRACT

What Happened When California Suspended Bail during COVID?*

The efficacy and fairness of cash bail in promoting public safety has been a prominent policy question in recent years, but it is difficult to rigorously estimate the effects of bail, particularly at the state level, because of a lack of exogenous variation. California responded to the COVID pandemic by setting bail at zero dollars for many misdemeanors and felonies, increasing the number of people who were immediately released after being arrested. We separately estimate the impact of the implementation and revocation of these zero-bail orders on rearrests using a triple difference framework that relies on the staggered timing across counties and uses offenses that did not qualify for zero bail as a control group. The implementation of emergency bail orders significantly increased the likelihood and number of rearrests within 30 days of the initial arrest. The increase in rearrests was driven by felony offenses, but we find no evidence of an increase for violent felonies, a concern raised by some observers. For the counties that had an emergency bail order for at least a year, there was a statistically significant increase on rearrests initially, but the effect diminished over time. The average effect over the first year of implementation in these counties was not statistically significant. Notably, the rise in felony rearrests did not subside for these counties that extended an emergency order past 2020. Though the initiation of emergency bail orders led to increases in rearrests, lifting these orders had no significant effect on rearrests, regardless of offense type.

JEL Classification: K42, K14, I18, D73, H70

Keywords: bail, pretrial, COVID-19, rearrest, felony, misdemeanor, crime, violent, incapacitation

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1 Introduction

Concerns about the impact of cash bail on lower-income defendants and worries that changing the monetary bail system could lead to rising crime feature prominently in debates about reforming bail and pretrial detention. However, it is difficult to assess and estimate the effects of bail reform, particularly at the state level, because of a lack of exogenous variation. As states like California experienced increases in some crimes in 2020 and 2021 (Lofstrom and Martin 2021), some news publications, law enforcement officials, and prosecutors posited that changes to bail during COVID contributed to the increases, as these policies may have led the pretrial release of suspects at high risk of committing additional crimes (Rynor 2021; Salahieh, Kang, and Cheng 2021; Yolo County District Attorney's Office 2023). However, the monetary bail system has been criticized as unfair to those who cannot afford to post bail. Bail amounts regularly reach tens of thousands of dollars—the median amount in California is $50,000, five times the national median (Tafoya 2015). Those who cannot afford to post bail, an estimated 60 percent of defendants nationwide, remain in jail (Back et al. 2017; Tafoya et al. 2017; U.S. Commission on Civil Rights 2022). In recent years, several states and jurisdictions have aimed to reform the bail system in recent years by eliminating or reducing cash bail's outsized impact on low-income detainees, often with a focus on providing increased resources for supervised release or individualized case-by-case judicial assessment. Understanding the consequences of changes to bail is a vital part of creating a more equitable and effective justice system that operates based on public safety rather than a suspect's wealth (Back et al. 2017).[1]

This paper provides novel evidence on this question from a natural experiment in California that led to the suspension of bail for the vast majority of offenses during COVID. Using a triple difference framework, we estimate how the staggered implementation and revocation of these emergency bail orders across counties impact rearrests. We use detailed individual-level data on the universe of arrests (around 5 million) from the California Department of Justice, and set offenses not eligible for "zero bail" as a control group. Understanding the impact of setting bail at zero dollars for a broad range of offenses in a large and diverse state like California can help guide the ongoing policy debates on bail reform and offer insight into the design of pretrial detention policy.

In the early months of the COVID-19 pandemic, the Judicial Council of California implemented

1. This disproportionate impact has prompted lawsuits regarding the constitutionality of cash bail (Cuéllar 2021).

an emergency bail policy to limit the number of individuals cycling through courts and jails to reduce viral transmission (Slough et al. 2020). The statewide order, in place from April 13, 2020, to June 19, 2020, set bail for most misdemeanors and felonies—including some more severe felonies at zero dollars. Previously, individuals arrested for these offenses needed to post bail to avoid being detained in jail while awaiting arraignment (a hearing in which defendants are informed of the charges against them and enter a plea), trial, or sentencing. The statewide emergency bail order resulted in an increase in the number of individuals released immediately after they were arrested. Individuals arrested for offenses that did not qualify for zero bail were detained in jail unless they posted bail.

There were seven county superior courts who implemented emergency bail schedules *before* the statewide order went into effect, and after the statewide mandate expired, 27 counties representing 84 percent of the state's population continued to set bail at zero dollars for many offenses. As the pandemic waned, more counties returned to the monetary bail system. But until July 2022, most Californians lived in counties that still had an emergency bail order in place. These changes temporarily restructured California's bail system and coincided with a significant and persistent decrease in jail populations.[2]

Emergency bail orders increased the likelihood and number of rearrests within 30 days of the initial arrest. The likelihood of rearrest went up by 8.2 percentage points (p.p.) in the 10 weeks following implementation of emergency bail orders, notably higher than the average share of 14.6 percent of individuals rearrested prior to implementation. The increase in rearrests was driven by felony offenses, but we find no evidence of an increase for violent felonies, a concern raised by some observers. We also find that the highest risk for rearrest was concentrated in the first six days after an arrest.

For the 27 counties that had an emergency bail order in place past 2020, there was a statistically significant increase on rearrests initially, but the effect diminished over time. Over the first year of implementation, the average effect was no longer statistically significant. However, the rise in *felony rearrests* did not subside for the counties that extended an emergency order past 2020; in the first year of implementation, there was a 10 p.p. increase in the likelihood of a felony rearrest

2. Most individuals in jail are awaiting arraignment, trial, or sentencing. This non-sentenced population comprised on average 74 percent of those incarcerated in jails from 2018 to 2023, according to authors' calculation using the Board of State and Community Corrections Jail Profile Survey (Monthly File), January 2018 to December 2023.

when the initial arrest was of any offense type, much higher than the average share of 5.1 percent of individuals rearrested before implementation.

Though emergency bail orders led to increases in rearrests, lifting these orders had no significant effect on rearrests, regardless of offense type. The disruptive nature of the pandemic was likely a key factor in the temporary increase in overall rearrests when emergency bail orders were in place and the lack of effects when they were revoked. Notably, increases in felony rearrests did not subside over time or when emergency orders were revoked. Because felony rearrests experienced enduring increases after the implementation of emergency bail orders and were unaffected after orders were revoked, they remained slightly elevated through 2023. While our data do not allow us to determine why this was the case, arrests, bookings, and jail populations have stayed well below pre-pandemic levels, suggesting the possibility that some pandemic-era practices may have persisted and possibly affected felony rearrest rates.

Because their goal was to protect public health, emergency bail orders set a unilateral policy of detention or release based on the accused offenses—a marked difference from broader bail reform efforts that have implemented tools such as assessing arrested individuals' risk to public safety and not appearing in court, as well as monitoring and/or providing pretrial services to the accused if they are released pretrial. Our findings suggest that pretrial detention policy may benefit from a more holistic measure than the arresting offense when assessing public safety risk, and pretrial risk assessments could be a promising approach (Kleinberg et al. 2018; Skog and Lacoe 2021).

Perhaps because these emergency bail orders had a unique motivation and application, the findings of the paper differentiate themselves from a growing literature evaluating recent bail reform efforts, which find minimal impacts on public safety. Evaluations of automatic-release programs, similar in style to these emergency bail orders but limited to misdemeanors, find that they do not result in increases in pretrial rearrests or recidivism (Albright 2022; Heaton 2022). Studies have also found that reductions in monetary and/or supervisory conditions (Ouss and Stevenson 2023; Lacoe, Skog, and Bird 2024), additional support for defendants (Heaton 2021), and electronic monitoring in lieu of detention (Rivera 2022) have limited effects on public safety and may even reduce recidivism in some cases.

This paper offers the first causal analysis of these emergency bail orders, leveraging their broad implementation across California. The uniform application of these policies in a state with pre-

viously diverse bail practices presents a valuable natural experiment. Additionally, examining a bail reform initiative in the nation's most populous state enhances the study's generalizability and complements prior research, which has largely focused on individual municipalities. The remainder of the paper is organized as follows: Section 2 provides background on California's bail system and the use of emergency bail orders during the pandemic, as well as a more detailed discussion of the research literature, including recent evaluations of bail reform in differing contexts. Next, Section 3 describes the main datasets used in the analysis, and Section 4 examine trends in rearrests and jail bookings under emergency bail orders. Then, Section 5 details the empirical specification and Section 6 isolates the impact of implementing and revoking emergency bail orders on rearrests generally and for specific offense types. Section 6 also examines effect heterogeneity by the timing of rearrests increases, helping discern potential mechanisms. Finally, Section 7 recaps the main findings and discusses policy considerations regarding bail and public safety.

2 Background

2.1 California's Bail System before and during COVID

California's monetary bail system typically governs who is released from jail prior to their arraignment or trial. When someone is accused of a criminal offense, the county's bail schedule suggests a bail amount for that offense. In California, each county superior court develops its own bail schedule, resulting in a wide variation of bail amounts for the same offense across counties (Tafoya 2013). Bail is ultimately set by the judge after considering concerns about public safety and whether the arrestee is likely to appear in court. The accused person must pay the specified amount as a deposit to the court—known as posting bail—to be released from jail while their judicial proceedings continue. After the accused person satisfies all court requirements, most of the bail amount is refunded, with a portion withheld for court fees.

Because bail amounts regularly reach tens of thousands of dollars—the median amount in California is $50,000, five times the national median—accused people sometimes engage the services of bail bond companies to post bail (Tafoya 2015). In exchange for a non-refundable fee, typically about 10 percent of the entire bail amount, bail bond companies pay the entire bail deposit on behalf of the detained person, which is refundable to the business assuming the defendant appears in court.

Those who cannot afford to post bail—an estimated 60 percent of defendants nationwide—remain in jail (Back et al. 2017; U.S. Commission on Civil Rights 2022). A 2017 PPIC analysis found that about 60 percent of individuals booked on misdemeanors or felonies in California remained in jail during their pretrial period (Tafoya et al. 2017). The disproportionate impact of cash bail on low-income defendants has been the primary motivation for several recent bail reform efforts across the state. For example, Proposition 25, which California voters rejected in the November 2020 election, would have ended monetary bail and replaced it with a pretrial risk assessment tool to provide information for judges about the defendant's risk of not appearing in court and the risk to public safety. Some of the votes against the measure were based on concerns that racial disparities would not necessarily improve, depending on how it was implemented (Harris and Lofstrom 2020). (We recount these key events in Table D.1.)

To reduce viral transmission in courts and jails during the pandemic, the Judicial Council's statewide emergency bail order, in place from April 13, 2020, to June 19, 2020, set bail for most misdemeanors and felonies at zero dollars. Individuals arrested for zero-bail (ZB) offenses, which comprised 59 percent of all arrests during the statewide order, were released immediately after being booked unless law enforcement or the district attorney petitioned a judge to set a different bail amount in the interest of public safety. While law enforcement could petition a judge for a higher bail amount, it is unclear to what extent law enforcement agencies and prosecutors pursued this ad-hoc option, and the data do not allow us to identify those events. However, given the public health concerns that motivated the reduction in jail population, it is likely that most arrests for ZB offenses led to an unrestricted pretrial release. In contrast, individuals arrested for offenses ineligible for zero bail were held in jail with a presumptive bail amount dictated by the county superior court's 2020 bail schedule.

Offenses eligible for ZB under emergency bail orders used to result in pretrial detention most of the time. From 2011 to 2015, about two-thirds of people in California booked into jail for lower-level felonies were detained pretrial, while about half of those booked on misdemeanors were detained (Tafoya 2015). By reducing bail to zero for a broad and uniform range of offenses across the state, the Judicial Council's order significantly altered the existing pretrial detention process. Some of the most common offenses eligible for ZB were possession of drug paraphernalia, possession of a controlled substance, obstructing a police officer, and use of a controlled substance (see Table D.2

to Table D.7 for more of the most common eligible and ineligible offenses). Notably, the bail order excluded the penal code definitions of serious, sexual, and violent crimes, as well as some domestic-violence, assault, weapons, and driving-under-the-influence offenses (Figure D.1).

To preemptively respond to public health concerns, seven counties that comprise 44% of the state population start ZB early, ranging from one to three weeks before the Judicial Council order (Figure 1). After the statewide policy expired on June 20, 2020, the Judicial Council granted county superior courts the authority to continue emergency bail orders (Balassone 2020). At that time, 27 county superior courts representing 84 percent of the state's population continued implementing emergency or temporary measures that maintained some form of ZB (Figure 1). (Figure D.2 provides a breakdown of which counties extended emergency bail orders and when.) Many counties modified the statewide order—for example, Los Angeles disqualified individuals from being released on zero bail if they were arrested while still on release for a different ZB offense (Los Angeles Superior Court 2020).[3] At the start of 2022, 22 county superior courts serving 75 percent of the state's population still had emergency bail schedules. The majority of California's population was affected by emergency bail orders until July 2022. By February 2024—the last full month of our data—there were three counties with some form of emergency bail order still in place: Glenn, Sacramento, and San Bernardino.[4] In Figure 1, the uptick in the share of California's population affected by emergency bail orders from May to September 2023 is due to the *Urquidi* court decision in Los Angeles County that reinstated ZB offenses for the Los Angeles Police Department and the Los Angeles County Sheriff's Department. See Appendix A for more details.

2.2 Research on Bail and Pretrial Detention

Several other states and jurisdictions have reformed the bail system in recent years. Although certain policies that reduce or eliminate monetary bail are conflated with terms such as "no-cash bail" or "zero bail," the Judicial Council's emergency bail order greatly differed from other bail reform efforts and legislative proposals in their motivation and application. (Appendix B summarizes key pretrial reforms in other states.Appendix A provides additional information on recent

3. Other modifications included allowing for bookings of misdemeanor offenses in the context of protests (e.g., unlawful assembly and failure to disperse) (Wigglesworth 2020).

4. After the statewide order expired in June 2020, San Bernardino and Glenn Counties modified their bail schedules to make all felony offenses ineligible for zero bail. However, these two counties extended ZB eligibility for most misdemeanors through the end of our sample period in March 2024.

pretrial and bail reform efforts in California, particularly in San Francisco and Los Angeles Counties.) While many bail reform efforts replace monetary conditions with pretrial risk assessments, the statewide emergency bail order—and similar county-level measures—mandated a blanket bail amount of zero dollars for a large class of arrest offenses without considering other factors (e.g., criminal history).[5] As such, the effects of pandemic-era emergency bail orders may differ from other bail reform efforts.

Across the country, a few jurisdictions have implemented routine pretrial releases for certain offenses without accompanying pretrial resources—making them somewhat similar to emergency bail orders in California. For example, Kentucky's Automatic Release program is an initiative that automatically released people arrested for low-level offenses (i.e., non-sexual, non-violent misdemeanors). An evaluation of that initiative found that while the program moderately increased court non-appearance, it greatly increased pretrial release with no effect on pretrial rearrests, including rearrests for violent offenses (Albright 2022). Albright (2022) suggests that cash bail may therefore have a limited deterrence effect on offending behavior but does increase court appearance, partially through people being detained. In Texas, a federal injunction in Harris County required the release of people charged with misdemeanors who were detained pretrial due to failure to post small amounts of cash bail. Heaton (2022) found that the reform reduced guilty pleas, conviction rates, and jail sentencing, while showing no evidence of an increase in future felony offending. It is important to note that the regimes in Kentucky and Texas focus on lower-level offenses. In contrast, the emergency bail orders in California had an expansive list of offenses eligible for zero bail, which included some felonies that we categorize as violent (Table D.7).

The literature has also examined other policies that affected pretrial release: A study of the Philadelphia District Attorney's "No-Cash-Bail" policy, meaning that the office would not seek monetary bail for a long list of misdemeanors and nonviolent felonies, found that while the policy reduced cash bail and pretrial supervision, it did not change pretrial detention rates (Ouss and Stevenson 2023). However, Ouss and Stevenson (2023) find no evidence that the policy increased failures to appear in court and pretrial crime, concluding that "monetary bail is not necessary to prevent misconduct for the large majority of those evaluated." Another study in Philadelphia of a pilot program in which bail advocates interviewed defendants shortly after arrest to collect

5. However, it did allow law enforcement to petition for exceptions in the interest of public safety.

individualized information found that although the program did not reduce pretrial detention rates, it reduced the defendants' likelihood of bail violation and future arrest (Heaton 2021). Rivera (2022)—using Cook County, Illinois data to assess pretrial electronic monitoring as an alternative to both pretrial detention and release—finds evidence to suggest that relative to pretrial detention, electronic monitoring reduces future recidivism by a small amount but generates significant cost savings. After a court case in San Francisco that held that judges must consider a defendant's ability to pay when setting bail, (Lacoe, Skog, and Bird 2024) found that a decreased reliance on cash bail and pretrial detention and an increased the use of pretrial supervision with no change in the likelihood of a rearrest or new conviction.[6]

Theoretically, the statewide and county emergency bail orders could have put upward or downward pressure—or both—on crime and arrest levels. Prior to the pandemic, most individuals arrested on ZB offenses would likely have been held in pretrial detention at least until their arraignment (Tafoya et al. 2017; Lofstrom, Martin, and Raphael 2020).[7] This detention physically prevented the crimes that some individuals might have committed if not detained, an effect known as incapacitation (Leslie and Pope 2017; Dobbie, Goldin, and Yang 2018). Additionally, during non-emergency periods, pretrial release was occasionally paired with conditions involving monitoring or case management that became less likely during the height of the pandemic. Therefore, by not detaining individuals or providing the typical pretrial resources, the emergency bail orders could have led to increased crime and rearrest levels, particularly in the short term.

On the other hand, sending fewer people to jail for pretrial detention could have put a downward pressure on offending and, consequently, rearrests. Research suggests pretrial detention may be criminogenic—that is, it may make detained individuals more likely to reoffend in the long term following release (Heaton, Mayson, and Stevenson 2017; Stevenson 2017; Dobbie, Goldin, and Yang 2018; Meitl and Morris 2019; Petrich et al. 2021). The relationship between pretrial detention and recidivism may be explained by negative effects on formal sector employment, receipt of public benefits, and preexisting family arrangements, as well as increased psychological strain on defendants who are incarcerated pretrial, diminished social ties, and reduced autonomy (Dobbie, Goldin, and Yang 2018; Toman, Cochran, and Cochran 2018; Meitl and Morris 2019; Wakefield and Andersen

6. See Appendix A for more information on the case.

7. Notably, San Francisco has limited ability to hold people pre-arraignment after the *Buffin* decision in February 2020. See Appendix A for more information.

2020).

Despite some studies finding that pretrial detention results in limited or decreased rates of reoffending in the short term, this reduction may ultimately be offset by the long-term criminogenic effect of pretrial detention (Leslie and Pope 2017; Dobbie, Goldin, and Yang 2018). By removing both the immediate incapacitation effect and also the long-term criminogenic effect of detention, emergency bail orders might have exerted countervailing pressures on crime and rearrests, each of which is experienced over different time spans.

3 Data Sources

Arrests: We use event-level data provided by the California Department of Justice on arrests from the Automated Criminal History System (ACHS) from January 1, 2018, to March 3, 2024. These data contain the universe of arrests in California and include information on the level of offense (infraction, misdemeanor, and felony), offense violation, law enforcement agency, date of event, and arrestee information such as gender, age, and race/ethnicity. That is roughly 5 million arrests, after cleaning the datasets as described in Appendix C. While ACHS data are detailed, they have some limitations. For example, they do not provide information about pretrial detention or release. Since booking status is not available, whether people were released with zero bail must be inferred from the offense for which they were booked. We also do not know how long people were detained pretrial, though we can identify if they were arrested again.

Emergency bail orders: Data on emergency bail orders contain the dates when the statewide and county-level orders were issued and rescinded, along with the offenses and/or offense categories that were covered by the orders. We obtained this information by locating court order documents and press releases on the Judicial Council and county superior court websites, and by contacting county superior courts directly when information could not be found online. We consulted various sources, including the Judicial Council of California and California's Committee on the Revision of the Penal Code, to resolve ambiguous cases.

We discuss the data, its limitations, and the cleaning decisions in more detail in Appendix C.

4 Trends in Rearrests and Bookings

The COVID-induced shift in public life led to unprecedented changes within California's criminal justice system in the spring and summer of 2020. Alongside the Judicial Council's statewide emergency bail order in April 2020, local law enforcement agencies issued directives to avoid unnecessary contact with community members and mandated "cite and release" orders to non-custodial arrest suspects for some offenses early in the pandemic (Premkumar et al. 2023). County jails and state prisons released many inmates early. Most courts closed temporarily, and many reopened with remote hearings (Harris 2023). Civil unrest in the wake of the murder of George Floyd in May 2020 also aligned with temporary changes in arrests that differed by racial group (Premkumar et al. 2023). To understand the potential impact of emergency bail orders in California, we begin by examining descriptive trends for rearrests and bookings during this dynamic period.

4.1 Rearrests Experienced Significant and Enduring Declines

Widespread changes to the criminal justice system contributed to significant and enduring declines in arrests in California from the onset of the COVID pandemic through 2023, driven largely by decreases in misdemeanor arrests (Figure D.3).[8] The share of arrests that led to rearrests within 30 days—the main metric of interest—also decreased from about 15 percent to under 12 percent during this period, with a considerable drop in March 2020 then uptick in summer 2020 (Figure D.5).[9] Rearrests involving an initial and subsequent misdemeanor arrest followed trends similar to those for general rearrests but at a lower rate, declining from 13 to 10 percent of misdemeanor arrests. Felony rearrests, on the other hand, increased from around 7 percent before COVID to almost 10 percent in April 2020, then steadily decreased like other rearrest types starting in 2021. Violent felony rearrests exhibited less variation than other types, but still experienced a slight decrease overall during the sample period.

After considering ZB eligibility, we find that rearrest shares after a zero-bail release plunged for misdemeanors, but spiked for felonies, in March 2020 (Figure 2). Figure 2a shows that the share of weekly rearrests among those initially committing ZB misdemeanors (orange line) dropped

8. See Figure D.3 for arrest trends disaggregated by ZB eligibility. Misdemeanor arrests capture a large share of arrests eligible for zero bail.

9. See Figure D.4 for descriptive trends of the share of any 30-day rearrests disaggregated by ZB eligibility.

from just over 15 percent prior to the pandemic to under 13 percent by September 2023. The share of ZB misdemeanor rearrests reached a low of under 10 percent of weekly arrests in March 2020, coinciding with pandemic-induced shelter-in-place orders and reductions in public movement (Premkumar et al. 2023).

At the same time, the share of rearrests for ZB felonies (Figure 2b; orange line) increased from about 8 to 13 percent around the time of the Judicial Council's emergency bail order. Though the share of ZB felony rearrests did gradually decline to 9 percent by September 2023, it remained above pre-pandemic levels through at least 2023. These descriptive trends suggest that the overall drop in ZB rearrests was mainly made up of misdemeanor rearrests, which capture a significant portion of ZB offenses (Figure D.4).

Following the onset of the pandemic and the implementation of the statewide emergency order from April to June 2020, rearrests as a share of arrests for initial offenses that were not eligible for zero bail (i.e., non-ZB rearrests) increased slightly for both misdemeanors and felonies (Figure 2; blue lines). These numbers steadily returned to pre-pandemic levels (around 5% for misdemeanors and 6% for felonies) from July 2020 to April 2022, when 70 percent of the state's population was still under emergency bail orders.

To understand how quickly rearrests occur in the pre-COVID period (January 2018 to January 2020) and whether 30 days is an appropriate timespan to use when evaluating changes in rearrests, we model the likelihood an arrest is followed by a rearrest as a function of the number of days since the initial arrest. Figure D.6a demonstrates the contribution of each individual day to the risk of being rearrested of any offense type within 30 days. In addition to finding that the likelihood of rearrest is generally low each day since the initial arrest, we see that the first 10 days after an arrest—and especially the first few days—result in a higher likelihood of being rearrested. The risk of rearrest gradually decreases as days since the initial arrest increase. Figure D.6b provides the corresponding cumulative risk during this pre-COVID period. It shows the cumulative effect of each day, providing insight to the share of arrests that result in rearrests within a certain number of days (within 30 days). Before COVID, we find that the first 15 days after an arrest contribute just as much to the likelihood of being rearrested as the next 15. Within 30 days, a little less than 15 percent of people are rearrested for any offense, which corresponds to what is observed in Figure D.5.

4.2 Jail Bookings and Populations Dropped Early in the Pandemic

The main purpose of implementing the statewide emergency bail order was to reduce COVID transmission by limiting the number of people cycling through courts and jails, particularly those held for pretrial detention. Around the same time as the statewide emergency bail order, a COVID-induced dip in arrests coincided with a decrease in jail bookings in California (Premkumar et al. 2023).

Figure 3 shows the sharp drops in monthly bookings into county jails and the average daily population (ADP) in jails at the start of the pandemic. Jail bookings and populations dropped dramatically in March 2020, remaining below pre-pandemic levels through 2023. It also depicts the drop in the non-sentenced ADP awaiting arraignment, trial, or sentencing—a helpful proxy for the number of people in pretrial detention. Bookings dropped from about 70,000 in February 2020 to a low of roughly 30,000 in April 2020 as local law enforcement agencies attempted to reduce stops, arrests, bookings, and jail populations. Bookings drifted back above 50,000 by the end of summer 2020, but like arrests, they never returned to pre-pandemic levels. After another dip in late 2020, monthly jail bookings remained steady between 50,000 and 60,000 from March 2021 to December 2023, a drop of roughly 25 percent compared to February 2020.

5 Empirical Strategy

While many events contributed to changes in arrests and rearrests in the years during and after the pandemic, our analysis aims to precisely estimate the effects of emergency bail orders without incorporating effects from other pandemic-era policies and events. With the two time frames, we run a triple difference (DDD) staggered-timing model that measures the change in the likelihood (or number) of rearrests for ZB offenses when an emergency bail order was in place compared to when it was not, differencing out the trends from offenses not eligible for zero bail.

For the main results, we split the sample frame of January 2018 to September 2023 into two periods, January 2018 to June 2020 and April 2020 to September 2023. The split-sample estimation allows us to separately estimate the effects of emergency bail orders being implemented during the volatile first few months of COVID and then the effects of emergency orders being revoked, a significant number of which occurred after 2020. Figure D.2 demonstrates this staggered im-

plementation and revocation by county. For the first sample split (January 1, 2018 to June 19, 2020), we measure the staggered adoption of ZB orders. Seven counties that comprise 44% of the state population start ZB early, ranging from one to three weeks before the Judicial Council ZB order. Then the rest of the counties have emergency bail in place (given the mandatory statewide order). The second sample split (April 13, 2020 to September 30, 2023) allows us to measure the staggered exit of emergency bail orders expiring in a county—comprising the vast majority of the state's population and arrests.

With these two sample frames, we run a fully saturated, staggered-timing DDD model that measures effects over time (i.e., event study analysis), specified through the regression equation below. We control for county and week-year fixed effects that are interacted with whether the offense is ZB eligible.[10] We also interact county and week-year fixed effects. Additionally, we also control for offense category and the race of the arrestee, both of which we interact with offense is ZB eligible.

$$\begin{aligned} Y_{ijkt} = \beta_0 + \beta_1 ZBOff_{j(k,t)} + \sum_{w=a,w\neq -1}^{b} \beta_2^w ZBOrder_{kt}^w + \sum_{w=a,w\neq -1}^{b} \beta_3^w ZBOff * ZBOrder_{jkt}^w \\ + \gamma County * WeekYr_{kt} + \delta_1' County_k + \lambda_1' WeekYr_t + \delta_2' ZBOff * County_{jk} \\ + \lambda_2' ZBOff * WeekYr_{jt} + \mu_1' Race_i + \rho_1' OffCat_j + \mu_2' ZBOff * Race_{ij} \\ + \rho_2' ZBOff * OffCat_j + \epsilon_{ijkt} \end{aligned} \tag{1}$$

Y_{ijt} represents the two main outcomes, the likelihood of a rearrest and the number of rearrests within 30 days, for individual i arrested for offense j in county k on date t. These outcomes represent a test of the extensive margin and the intensive and extensive margin combined, respectively. $Race_i$ are fixed effects based on the race of the person arrested. $County_k$ represent county-fixed effects,

10. We identify and use the offenses that qualify for zero bail under the Judicial Council of California's order and, where relevant, the subsequent county orders for each respective period. For periods in which a county does not have an emergency bail order in place, the most proximate emergency bail order is assumed. That is, for pre-COVID periods, it would be the first emergency bail order issued, which is the statewide Judicial Council order for all but seven counties. In the periods that follow, it would be the last consecutive emergency bail order. There are two counties (Los Angeles and Monterey) in which there were periods in each an emergency bail order would end, there would be some hiatus, and then emergency bail would begin again. For those counties, we limit the sample frame to until their 2nd non-consecutive emergency bail order (e.g., Los Angeles has emergency bail reinstated in May 2023 after a court case, so the sample frame is narrowed to the week before the court ruling). See Figure D.2 for a breakdown of when an emergency bail order was in place by county.

controlling for time-invariant differences across counties. $WeekYr_t$ represent week-year fixed effects, which adjust for week-to-week changes in arrests, controlling for some of the confounding effects of COVID and its large fluctuations in arrests (Premkumar et al. 2023). $OffCat_j$ are offense-category (e.g., drugs or violent crime) fixed effects. ϵ_{ijkt} represents the residual term for the model. The standard errors are robust to heteroskedasticity and are clustered at the county level, which is the level of treatment.

The preferred specification uses these controls as it allows us to make comparisons between similar cases, measuring the effect of the emergency bail order on ZB offenses of similar type on individuals of the same race. The goal is for the analysis to compare roughly similar offenses, some of which happen to qualify for ZB while the others do not. In an idealized version, the felony violation of "69 PC- Obstructing or resisting an officer" is not eligible for ZB, while "148(A)(1) PC- Obstructing an officer" is a ZB offense. The actual rearrest comparisons use a much wider set of offenses, and it is important to consider what is being compared. Table D.2 to Table D.5 contain information on ZB and non-ZB eligible offenses per offense category.

The coefficients of interest in the regression β_3^w measures the change in likelihood (or number) of rearrest(s) for ZB offenses ($ZBOff_{j(k,t)}$) when an emergency bail order is in place ($ZBOrder_{kt}^w$) compared to when it is not, differencing out the trends from non-ZB offenses. These event study coefficients represent the difference in rearrests for that week (relative to a county's emergency bail order status) to a baseline of five weeks before the status changes.[11] We present the main findings both as an average effect ($\bar{\beta}_3$) over the weeks following the implementation or revocation of an emergency bail order and chart the effect over time relative to when the change was made (β_3^w).[12] In addition to examining whether rearrests increase in general, we explore different types of initial offenses and rearrest offenses to see if the overall effects are broadly distributed or particular to certain types of criminal behavior, with a special focus on more severe offenses at rearrest.

11. The coefficients are normalized to five weeks before emergency bail is implemented and/or revoked, because the outcome variable of rearrests within 30 days could start to impact results after that point, denoted by a dashed red line in the event study figures. Since the Judicial Council order was 68 days, the first sample split (January 1, 2018 to June 19, 2020) measures effects in the event window of 12 weeks before a ZB order is implemented to 10 weeks after, while second sample split (April 13, 2020 to September 30, 2023) measures the impact 10 weeks before a ZB order is revoked and 16 weeks after. These event windows allow us to refocus our results to the period around emergency bail orders being implemented or expiring, providing more credible estimates of the causal effect. We control for periods outside of the event window, before 8 weeks or after 10 (or 16) weeks, through binned indicators that are not explicitly shown in the regression. We also interact these indicators with whether an offense is ZB eligible or not.

12. Thus, the average effect of emergency bail being implemented is from 0 to 10 weeks, and the coefficient for emergency bail being revoked is averaged for 0 to 16 weeks.

The identification assumption is that ZB and non-ZB arrests trend similarly in counties that keep emergency bail orders in place shorter relative to those who keep it longer (Hoynes, Schanzenbach, and Almond 2016; Olden and Møen 2022). To assess whether the identification assumption holds, we examine whether the event study coefficients demonstrate statistically significant differences in the weeks preceding the 5th week before a change in a county's emergency bail status (i.e, looking at 12 to 6 weeks before emergency bail is implemented or 10 to 6 weeks before emergency bail is revoked). We also run a test on these pre-treatment trends to assess if they are jointly significant. In the coefficient plots that provide a summary of the average effects, we put an asterisk on outcomes that have jointly significant pre-treatment trends at the 10% level to be more conservative, which limits the ability to make causal claims on those estimates.

One limitation of the data used in the analysis is that it does not provide information on if or when individuals were released. Consequently, we estimate the short-term effect on rearrests, but we are unable to directly test for whether estimates are driven by individuals having more time in the community because of a ZB release or because a reduced deterrence effect increased the underlying propensity to reoffend (i.e., individuals committed more crimes because they presumed that they would be released immediately if arrested). Furthermore, this analysis does not measure the number of COVID cases averted because of a reduced jail population—a key objective in implementing these emergency bail orders—or the longer-term effect of these emergency orders. While the implementation of the statewide emergency bail order represented a significant criminal justice measure taken during a challenging pandemic period, the county directives lasted much longer. When counties continued emergency bail policies after the statewide mandate expired, many of them made modifications to the original policy because of concerns about public safety. The varying contexts and time spans of county orders may have resulted in differing effects that are being averaged together.

Finally, the marked reduction in arrests during this period may also affect our analysis (Figure D.3). One factor mitigating this concern is that we study changes in the share of arrests that are followed by rearrests, which has stayed relatively stable except at the beginning of the pandemic (Figure 2, Figure D.4, and Figure D.5). However, this change in arrests could contribute to an increase in rearrests or a short-term reduction.[13] For example, if in the aftermath of an emergency

13. We are measuring the likelihood of being rearrested within 30 days conditional on being arrested.

bail order, police pulled back enforcement of first-time offenders and focused on repeat offenders to mitigate viral transmission, that could have contributed to the uptick in the likelihood of rearrests since those who were arrested were a higher risk set of individuals. This would affect our results to the extent that any pullback in police enforcement was concentrated disproportionately among offenses that were eligible for zero bail (or vice versa). It is also possible to have a short-term decrease in rearrests if police generally reduced enforcement; this would have reduced the likelihood of rearrest, though the effect would only be temporary and would be apparent when we study rearrests over time.

6 Results

6.1 Effect of Implementation and Revocation of Emergency Bail Orders

First, we examine the effects of implementing an emergency bail order on the likelihood of a rearrest within 30 days. Implementation took place in late March to mid-April 2020, with seven counties initiating an emergency order before the Judicial Council's statewide mandate on April 13, 2020 (see Figure D.2 for timing).

In Figure 4a, the black dots (regression coefficients) show the week-by-week changes in the likelihood of rearrest before and after implementation of emergency bail orders. The black lines around the dots represent the 95 percent confidence interval of the estimate. The dashed red line indicates 30 days before the implementation of an emergency bail order, and the solid red line indicates the start of the emergency order. Thus, the dots to the right of the solid red line represent the weeks after implementation, while the dots in between the red dashed and solid lines represent weeks that could have potentially been affected (since we are focused on future rearrests within 30 days of an initial arrest, effects may appear prior to implementation). Figure 4b is similar but illustrates the effect of revocation from emergency bail orders.

There was no significant difference in the likelihood of rearrest for ZB and non-ZB offenses before emergency bail orders were in place, as seen by the flat trend of the black dots before implementation (to the left of the red dashed line) in Figure 4a. Then, as the first set of counties implemented emergency bail orders in late March to early April, we see a gradual increase in the likelihood of rearrest within 30 days for ZB offenses. This likelihood increases throughout the first 10 weeks

after implementation and becomes statistically significant after six weeks. On average, over the first 10 weeks following implementation, someone arrested for a ZB offense was 8.0 percentage points more likely to be rearrested within 30 days, a notable increase from the 14.6 percent of arrested individuals rearrested within 30 days prior to implementation.[14]

Figure 4b shows the impact of revoking the emergency bail orders on rearrests. These revocations occurred from late June 2020 to July 2023, though some counties still had emergency orders in place through at least March 2024.[15] There was no significant difference in the likelihood of rearrest for ZB and non-ZB offenses prior to revocation, as evidenced by the flat trend of the black dots before emergency orders were revoked (to the left of the red dashed line). If the retraction of these orders meant that arrest, booking, and pretrial detention decisions returned to pre-pandemic practices, then we may expect the revocation to lead to a decrease in rearrests, counteracting the estimated increase from the implementation of the emergency bail measures. But in contrast with the implementation of emergency bail orders, we do not find any significant effects of their revocation on rearrests. This asymmetry may be driven by the staggered timing of when orders expired; this process took place over multiple years, after the most disruptive effects of COVID had subsided. Further, Premkumar et al. (2023) show that some criminal justice outcomes impacted by COVID did not return to pre-pandemic levels.[16] The revocation of emergency bail orders occurred in a vastly different context than their implementation, which may explain the lack of impact on rearrests.

6.2 Heterogeneity in Effects by Rearrest Type

One policy question concerns whether the emergency bail order's effects on rearrests were concentrated among certain types of offenses, especially whether lower-level offenders who were released pretrial ended up committing more severe crimes. To explore this question, we examine the effects of emergency bail orders on the likelihood of a rearrest within 30 days across various rearrest types. When examining violent felonies, it is important to note that we consider both the California pe-

14. It is difficult to observe this effect in the descriptive Figure D.4, because seven counties—comprising 41 percent of the state's population—implemented an emergency bail order one to three weeks before the Judicial Council order and the state trends shown in the figure are being controlled for in the regression model we use.

15. Figure 1 provides a breakdown of the percentage of California population and counties that were under an emergency bail order. Figure D.2 provides the exact timing of emergency bail orders by county.

16. This fact can also be seen in Figure 2 and Figure 3, as well as in Figure D.3.

nal code definition of violent felony and a categorization of our own that is more expansive and occasionally contrasts with the penal code definition. For this paper, the PPIC definition of violent felony fully encapsulates the penal code definition but includes other violent offenses as well (see Table D.6 for the most common differences).

In Figure 5, the black dots show the average of the weekly effects measured from the week of either implementing (Figure 5a) or revoking (Figure 5b) an emergency bail order to week 10 (for implementation) or week 16 (for revocation). An asterisk indicates a significant pre-treatment difference between ZB and non-ZB arrests for this offense type *prior* to the change in bail procedures, limiting our ability to make any causal claims for that rearrest category.

The first category in Figure 5a and Figure 5b ("any arrest") shows the average effect on rearrests of any offense type; this is the same average of week-by-week changes discussed above in Figure 4. Next, we examine differences in the likelihood of rearrest for an initial arrest of any type that was followed by a rearrest for either a violent felony, any felony, or any misdemeanor. Then, we show results for rearrests for which the initial and subsequent arrests were of the same offense type to understand if the results are driven by people committing similar severity crimes: both violent felonies (PPIC definition), both felonies, and both misdemeanors.[17] When examining the effects on these rearrest outcomes, it is important to think of the counterfactual offenses for each category (see Table D.2–Table D.7 for information on ZB and non-ZB offenses per offense category). The felony category is where we see the most variation in which offenses qualified or did not qualify for zero bail (Table D.10, Table D.11); the most common ZB felonies were theft and drug-related offenses and the most common non-ZB felonies were domestic violence, assault with a deadly weapon, and robbery (Table D.3 and Table D.5, respectively). Finally, we examine three types of lower-level arrests that were followed by a violent felony rearrest: a non-violent, low-level gun offense; a non-violent, low-level offense (primarily drug, property, or disorder crimes); and a misdemeanor.

Figure 5a shows that the increase in the overall likelihood of rearrests was driven by rearrests for felonies; the initial arrest could either be for any type of offense or for a felony. For these rearrest categories, we see increases of 9.1 and 7.6 percentage points, respectively, in the likelihood of rearrest—sizable increases over their average of 5.2 and 2.6 percent of individuals rearrested

17. For this set of estimates, we are only able to use the PPIC definition of violent felony because the penal code definition was never eligible for zero bail, and we do not have a clear control group for comparison.

within 30 days prior to implementation. For felony rearrests that began with an arrest of any offense type, we see a flat pre-trend before implementation in Figure D.7a, validating the causal interpretation for this rearrest type, and a similar and steadily increasing impact in the weeks after implementation. We do not find statistically and meaningfully significant effects across any other rearrest type, including arrests for low-level offenses followed by violent felonies. Although it appears there are no confidence intervals for some of these rearrest types, it is only because they are so small that they cannot be seen.

Conversely, Figure 5b above shows that the revocation of emergency bail orders from June 2020 to July 2023 had no statistically significant impact on rearrests of any offense type (after factoring in which rearrests have flat pre-trends), which comports with the lack of general effects we found in Figure 4b. These estimates are precise enough to allow us to rule out even relatively small changes in the likelihood of rearrests for each offense type. Unlike general rearrests, the fact that the increase in felony rearrests did not subside in the first year of implementation and felony rearrests were unaffected after the revocation of emergency bail orders is one explanation for why ZB felony rearrests remained slightly higher than pre-pandemic levels into 2023 in the descriptive analysis (Figure 2).

6.3 Effects in Counties with Longer Bail Orders

To examine longer-term effects, we focus on the 27 counties that extended emergency bail orders past the Judicial Council mandate. This analysis allows us to examine changes in the effects a full year after implementation, through April 2021, which was right before the next county revoked its emergency order.

Figure 6a shows the impact on the likelihood of general rearrest (i.e., any ZB offense) by month relative to when the emergency bail order was implemented. Under emergency bail orders, differences in rearrests for zero-bail offenses began to subside after a few months. Like Figure 4, there are no significant differences between ZB and non-ZB rearrests in the months prior to the emergency bail measures. We then see an increase in rearrests that becomes statistically significant about two months after implementation. These effects are now relative to two months before emergency bail orders were implemented, rather than five weeks. The largest effects occur three months after implementation (a 12 percentage point increase). After four months, the effects start

to attenuate and are no longer statistically significant. The average effect over the first year of implementation, all while emergency bail orders were in place, is not statistically significant.

When we focus on the 27 counties that continued an emergency bail order past 2020, the implementation effects over the first year are only significant when rearrested for a felony (Figure D.8a), and revocation has no impact on rearrests (Figure D.8b). However, unlike other rearrest types, the rearrests that ended in a felony did not subside in the year after implementation. In the first year, there was, on average, a 11 percentage point increase in the likelihood of rearrest for a felony when the initial arrest was of any offense type, a notable increase over the average share of 5.1 percent of individuals rearrested prior to implementation (Figure 6b).

6.4 Robustness Tests

The effects of the emergency bail orders are similar if we look at the *number* of rearrests rather than the likelihood of rearrest (Figure D.9).[18] This similarity in effect size suggests that the effects of implementation were largely driven by an increase in the number of people who were rearrested within 30 days, rather than an increase in the frequency of offending from individuals who were rearrested multiple times within that period. Overall, the frequency of reoffending within a 30-day span seems relatively small, as judged by the similarity in the unadjusted averages between the likelihood and number of rearrests.

However, the estimated effects are not necessarily driven by using the relatively short rearrest time span of 30 days. When examining the impact on rearrests within 60 days, we find a similar pattern of results (i.e., impacts from implementation but not generally from revocation) with slightly larger point estimates (Figure D.10).[19] Once we expand the rearrest period beyond 60 days, the sample in which we estimate our effects from changes because we exclude the counties who only have emergency bail for the Judicial Council order period (68 days). However, after narrowing to the 27 counties that kept bail in place for at least year, the general results are similar for 180-day rearrests (Figure D.11). For these counties, implementation of an emergency order causes a nearly 20 p.p. increase in 180-day rearrests that end with a felony (Figure D.11a), but the effect on any rearrest is not statistically significant—similar to 30-day rearrests for this set of counties

18. To properly compare effect sizes, the likelihood effects need to be scaled down by 100.

19. For 60-day rearrests, the revocation of a ZB order causes small drop in rearrests of any offense type (1.3 p.p.), likely driven by misdemeanors rearrests (Figure D.10b).

(Figure D.8a.

6.5 Hazard and Failure Analysis

The previous findings illustrated that, as emergency bail orders were implemented, general rearrests and felony rearrests (for which the first arrest was of any offense type or was a felony) increased for ZB offenses, at least initially. To garner information on *when* this increase in rearrests occurred, we plotted the likelihood of rearrest for each day up to 30 days after the initial arrest took place. Here, we focus on the time frame around the implementation of emergency bail orders (between January 2018 and June 2020) because that is when we see a significant change in rearrests.

Figure 7a shows the cumulative likelihood of any rearrest occurring within 30 days of any initial arrest, as known as a failure curve (Rose 2021). The orange and blue curves (left vertical axis) represent the likelihood of being arrested within a certain amount of time from an initial arrest for ZB and non-ZB offenses, respectively. The differences between the curves combine to provide the estimate shown in black (right vertical axis). The black curve is similar to the DDD estimate reported in the previous section, but without the detailed set of controls. Because we do not have a detailed set of controls, we are more interested in the descriptive trend to understand when these differences in rearrests occurred relative to the initial arrest, rather than comparing the numbers from the right vertical axis to estimates in the previous section.

First, Figure 7a illustrates that ZB offenses (orange) have a higher share of general rearrests than non-ZB offenses (blue) from January 2018 to June 2020, regardless of whether an emergency bail order was in place (solid line) or not (dashed line). Within 30 days, almost 20 percent of ZB arrests had a subsequent rearrest, compared to 8.5 percent for non-ZB arrests (left vertical axis). For both types of arrests, we find that the likelihood of rearrest was higher across all days when an emergency bail order was in place. The black curve, which represents the difference in likelihood of rearrest for ZB offenses under an emergency bail order, exhibits a sharp increase over the first 12 days after arrest, peaking on day 14. The curve then gradually reduces by day 30 but stays positive. This indicates that the cumulative likelihood of rearrest was higher for ZB offenses that occurred after an emergency bail order was implemented.

While Figure 7a shows the cumulative likelihood of being rearrested, Figure 7b shows how each individual day contributed to the risk of being rearrested (hazard function). The orange and blue

lines (left vertical axis) show the likelihood of being rearrested on that specific day from an initial arrest and the differences between the curves combine to provide the estimate shown in black (right vertical axis). While this estimate varies from day to day, most days following an arrest contributed positively to the likelihood of rearrest, with each day generally producing less risk than the day before. Overall, individuals were most likely to be arrested during the first six days after the initial arrest; rearrests during this time period are driving the estimates of the impact of implementation.

We also investigated where the risk was concentrated for an initial arrest of any offense followed by a felony rearrest within 30 days, since they helped drive the effects on general rearrests. By definition, there was a lower likelihood of general-to-felony rearrests for both ZB and non-ZB eligible offenses when compared to general rearrests. While the risk of a felony rearrest is higher in the first few days relative to the remaining days, it is not as accentuated as it was for general rearrests; subsequently, the DDD estimates are relatively flatter throughout the 30 days (Figure D.12). In fact, when we look at rearrests for which the initial and subsequent arrests were felonies (Figure D.13), the effect of the implementation of these orders on ZB offenses remains even more constant over the course of the 30 days, excluding the first five. That may be a result of the comparison group being held in jail for longer because felonies are more severe, with the effects representing an incapacitation effect.[20] As mentioned above, it is important to keep in mind that these are short-term effects; the possible criminogenic benefits of less pretrial detention may not occur until later.

7 Discussion and Conclusion

Concerns about the impact of cash bail on lower-income defendants and worries that changing the monetary bail system could lead to rising crime feature prominently in debates about reforming bail and pretrial detention. During the pandemic, statewide and county-level emergency measures set bail at zero for a broad range of misdemeanors and felonies. While their goal was to protect public health by limiting COVID transmission, these emergency bail orders also provide an opportunity to address a significant question in public safety discussions by examining the relationship between pretrial release and future offending.

20. Somewhat counterintuitively, we also see that the DDD estimate of implementation is negative right after an initial arrest and that the non-ZB felony arrests have a higher risk of rearrest until the fifth day, regardless of whether an emergency bail order was in place.

This paper provides the first causal evaluation of these emergency orders. The significant nature of California's emergency bail orders and the uniformity in how they were applied across a diverse and large state with previously heterogeneous bail policies provide a valuable and rare natural experiment. Our findings rigorously evaluate the effects of the orders on the likelihood of rearrest for those who were arrested for a zero-bail eligible offense. Though it is outside the scope of this paper to evaluate the public health benefits accrued by curbing virus transmission in courts and jails, our findings can help inform broader discussions about pretrial detention across the state.

We find that during the early disruptive months of the COVID pandemic, implementation of emergency bail orders caused notable increases in both the likelihood and number of rearrests within 30 days. The initial implementation effects were driven by being rearrested for a felony. However, we find no evidence of an increase in rearrests for violent felonies; in particular, lower-level offenders released on zero bail were not more likely to be rearrested for violent felonies after implementation. For the nearly half of counties that kept their bail order in place for longer than the statewide mandate, the overall effect on rearrests began to wane about four months after implementation, past the most volatile period of the pandemic; in fact, the effect of implementation on general rearrests averaged over the first year was not statistically significant. However, the increase in felony rearrests was significant and did not subside in the year after implementation.

This paper also finds that the revocation of emergency bail orders, which took place from June 2020 to July 2023, did not affect rearrests, regardless of offense type. Because felony rearrests experienced enduring increases during the first year of implementation of emergency bail orders and were unaffected after orders were lifted, they remained slightly elevated until 2023. More research is needed to examine other possible contributing factors, including the extent to which counties returned to pre-pandemic arrest and pretrial detention practices that were implemented during the pandemic have reverted to pre-pandemic policies and approaches. If these practices continued after emergency bail orders ended, they may have contributed to rearrest rates not returning to pre-pandemic levels. Arrests, stops, and jail populations in California had not returned to pre-COVID levels, at least by 2022 (Premkumar et al. 2023).

Why did the implementation of an emergency bail schedule cause an increase in rearrests while revocation did not have an impact? These findings suggest that, during the first few months of the pandemic, the emergency bail order potentially removed the presence of a short-term inca-

pacitation and/or deterrence effect—that is, individuals were released and then rearrested when they would have previously been detained and prevented from committing any additional crimes, and/or individuals committed more crimes presuming that they would likely be released if arrested. These effects could have been especially salient in a disruptive societal state, which may be why the impact subsided four months after implementation.

From the hazard and survival analysis, we find that the rise in rearrests after the initiation of emergency bail orders was concentrated in the first six days after an initial arrest. These bail orders led to immediate release after people were arrested for zero-bail offenses; as time passed, those detained under arrests for non-zero-bail offenses could also be released from jail, likely reducing differences in rearrest patterns. In contrast, felony rearrests tended to occur over a longer time period compared to other rearrest types, likely because some of those held for their initial non-ZB felonies did not get released until later.

The difference in context between when orders were implemented and when they were revoked likely provide an explanation as well. It is possible that the difficulty connecting people in jail with pretrial services and case management during the most disruptive part of the pandemic played a role. It is also plausible that the reoffending risk of someone being released at the height of the pandemic was different than when society was functioning relatively normally, which may align with other unique crime trends during this period (Abrams 2021; Massenkoff and Chalfin 2022). As time went on, it is also possible that counties and law enforcement learned and adapted from previous experience, evidenced by the modification of the offenses considered eligible for zero bail. Efforts to evaluate the longer-term impacts emergency bail orders are critical because this analysis is unlikely to capture the potentially beneficial and offsetting effects of avoiding pretrial detention because they are less likely to materialize early on (Leslie and Pope 2017; Dobbie, Goldin, and Yang 2018).

Our findings highlight at least some short-term risks to implementing a blanket policy on pretrial detention. In particular, the effects of emergency bail orders in California suggest that, on its own, the offense for which someone is arrested may not always be an accurate indicator of future risk, particularly for felonies. Pretrial risk assessments could be a promising approach, as understanding individuals' previously committed offenses and their severity may be useful in determining whether they should be detained in jail or released to the community during the pretrial period (Kleinberg et

al. 2018; Skog and Lacoe 2021). The effects of risk scoring as a guide for a judge tend to depend on the setting, where places such as Kentucky (Stevenson 2018a) and Virginia (Stevenson and Doleac 2024) tend to find relatively muted effects, partially because judge's discretion determines how the tool is used. However, there is some preliminary evidence from a few settings in California that seem more encouraging (Skog and Lacoe 2021; Lacoe, Skog, and Bird 2024; Sloan et al. 2024). Future research in this area should consider several factors, including public safety risk, cost of pretrial detention, equity implications of bail reform including for racial inequities (Tafoya et al. 2017; Arnold, Dobbie, and Yang 2018; Arnold, Dobbie, and Hull 2022), and the economic burden of a cash bail system (Tafoya 2013, 2015; Back et al. 2017; Stevenson 2018b; U.S. Commission on Civil Rights 2022).

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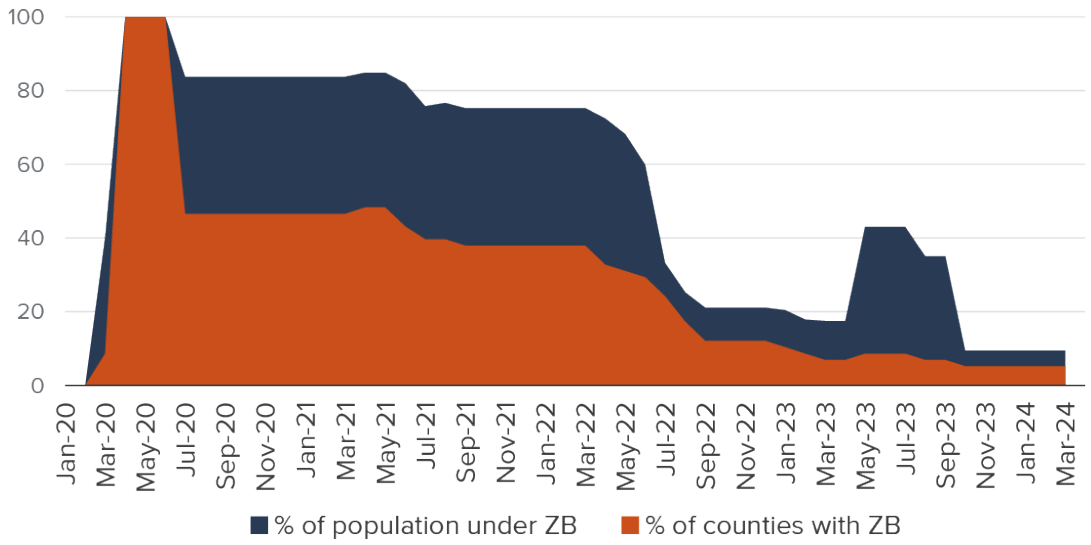
8 Figures

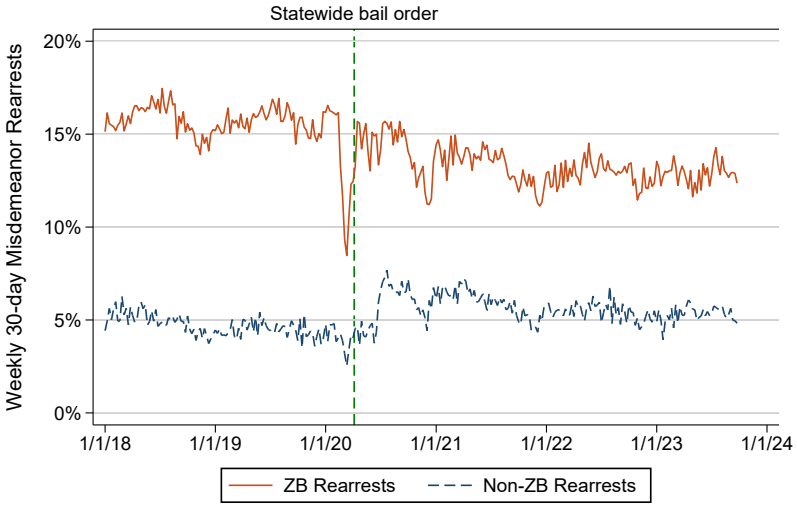
Figure 1: Percent of California's Population and Counties under Emergency Zero-Bail (ZB) Order



Data collected from Judicial Council of California and California county superior courts. If a county had an emergency bail order in place for any period during a month, we count it for that month. San Bernardino and Glenn Counties are counted as continuing their emergency bail schedules past June 2020 in this figure despite extending zero bail for misdemeanors only.

Figure 2: Rearrest Share by Offense Severity (2018–2023)

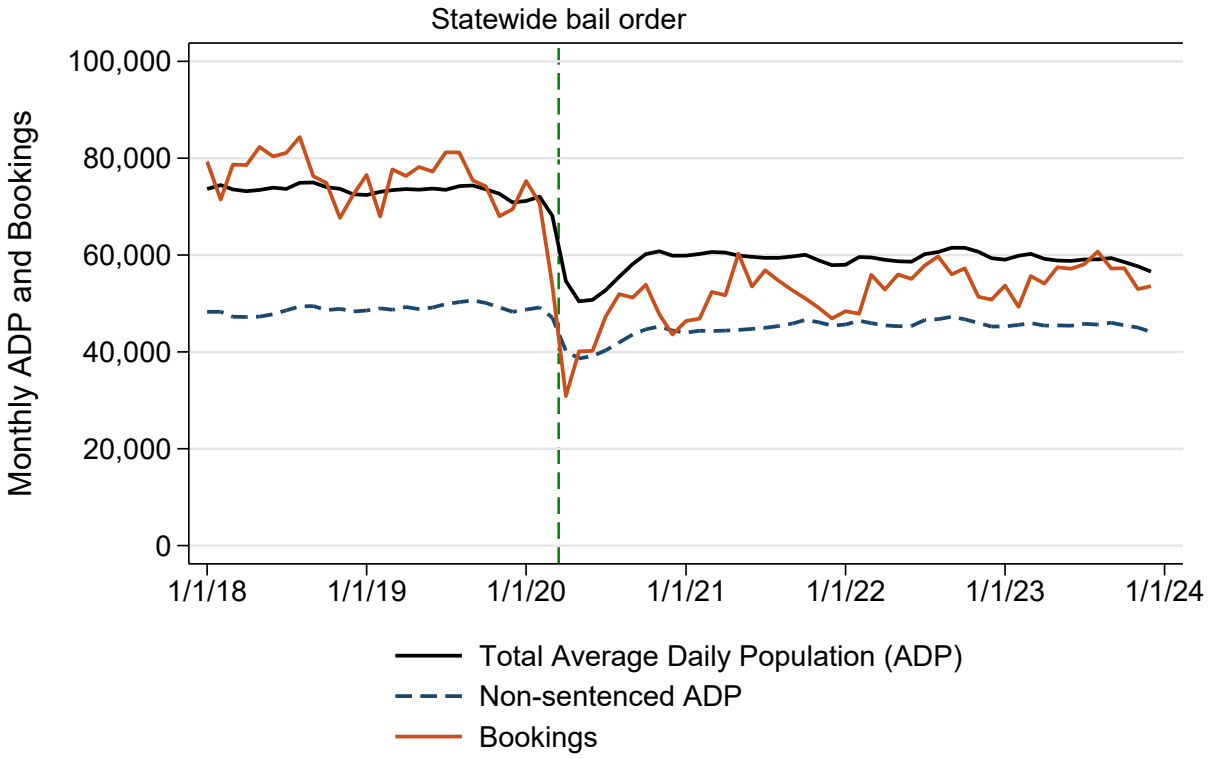
(a) Misdemeanor rearrest share



(b) Felony rearrest share

Figure 2a presents the share of 30-day weekly misdemeanor rearrests from January 2018 to September 2023; both the initial and subsequent arrests of the rearrest are misdemeanors. Figure 2b presents the share of 30-day weekly felony rearrests, where both the initial and subsequent arrests are felonies. The orange line in each panel denotes the share of zero-bail-eligible (ZB) rearrests. Offenses for the initial arrest of these misdemeanor and felony rearrests did not qualify for zero bail until the statewide order was issued in April 2020 (dashed green line). Following the implementation of the statewide order, the offenses for these initial arrests may have qualified for zero bail either under the statewide order (April to June 2020), or county-level orders (27 counties kept emergency orders in place after the statewide order expired in June 2020). In both panels, the dashed blue line represents the share of zero-bail-ineligible (non-ZB) rearrests—all of which had initial arrests for offenses that never qualified for zero bail even after the statewide emergency bail order was implemented.

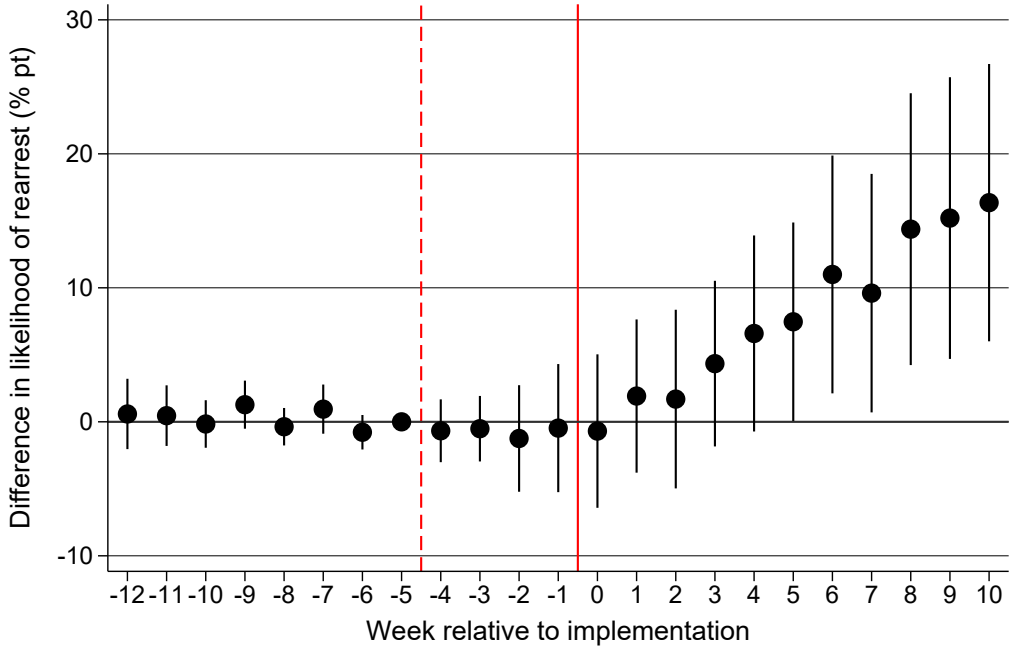
Figure 3: Jail Bookings and Population from 2018–2023



Data is from the Average Daily Population and Monthly Bookings in California Jails, California Board of State and Community Corrections (January 2018–December 2023).

Figure 4: Effect of Implementation and Revocation of Emergency Bail Order on Rearrest

(a) Difference in rearrest likelihood from implementation



(b) Difference in rearrest likelihood from revocation

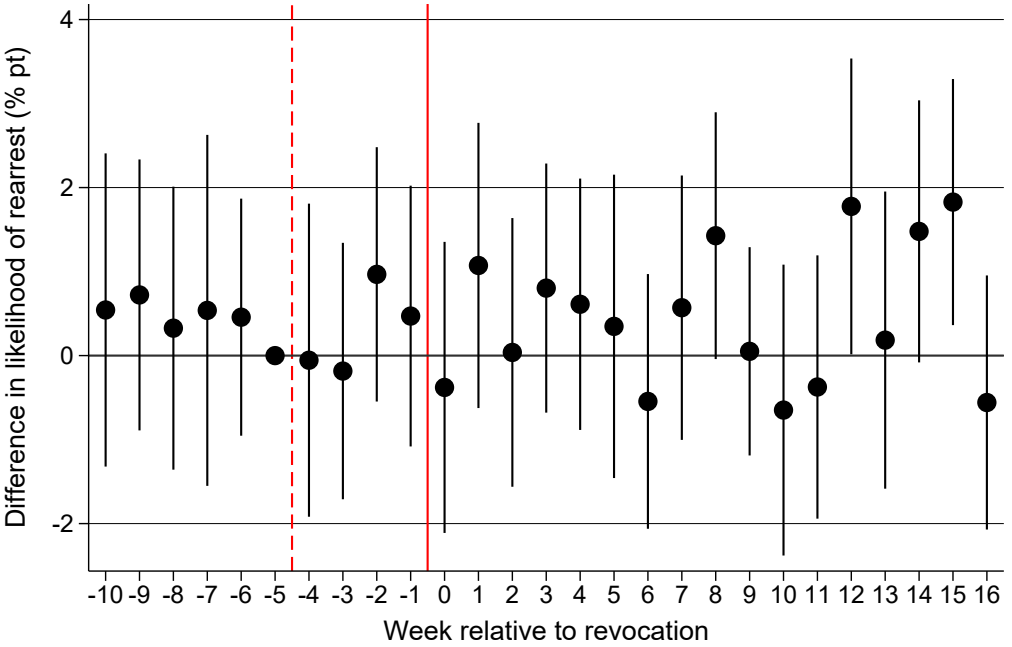
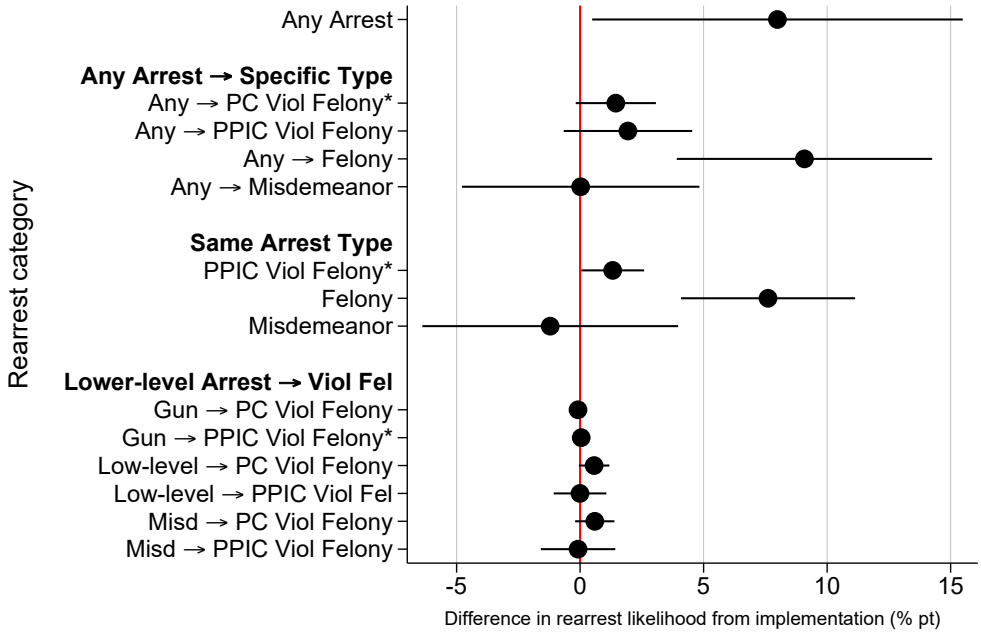


Figure 4a shows the difference in likelihood of any rearrest for zero-bail offenses from implementation using the first sample frame, January 2018 to June 2020 [Obs: 2,478,134; Pre-COVID Rearrest Mean: 14.6%]. Figure 4b shows the difference in likelihood of any rearrest for zero-bail offenses from revocation using the second sample frame, April 2020 to September 2023 [Obs: 2,539,574; Pre-Revocation Rearrest Mean: 14.9%]. The solid red line indicates a ZB order changing status. The dashed red line indicates 30 days before order change. Effects are relative to five weeks before order change. Because we calculate rearrests within 30 days of an initial arrest, effects may appear up to 30 days before implementation or before revocation.

Figure 5: Coefficient Plot of Effects of Implementation and Revocation by Rearrest Type

(a) Difference in rearrest likelihood after implementation



(b) Difference in rearrest likelihood after revocation

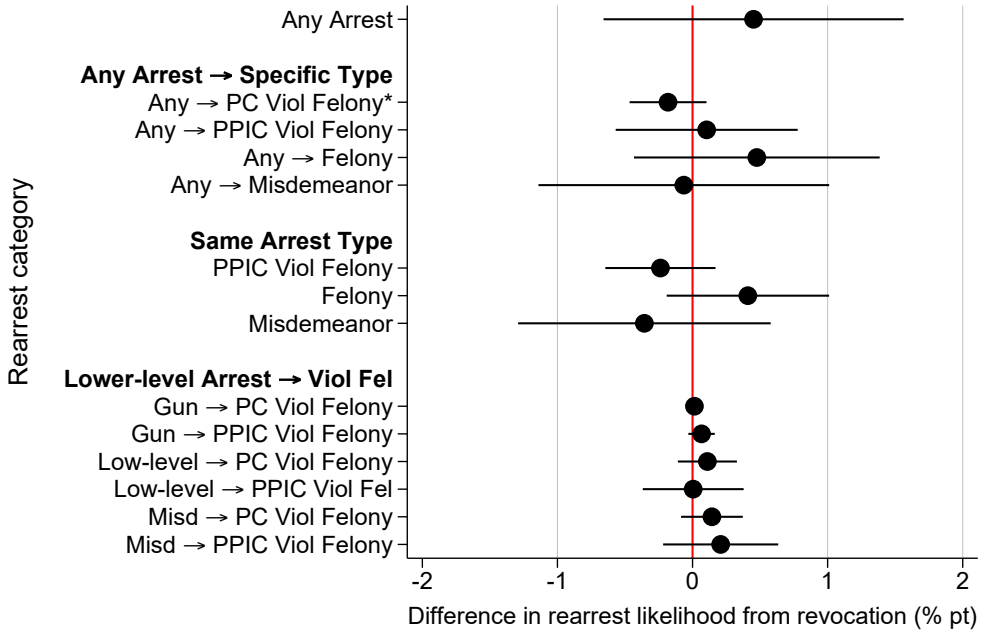
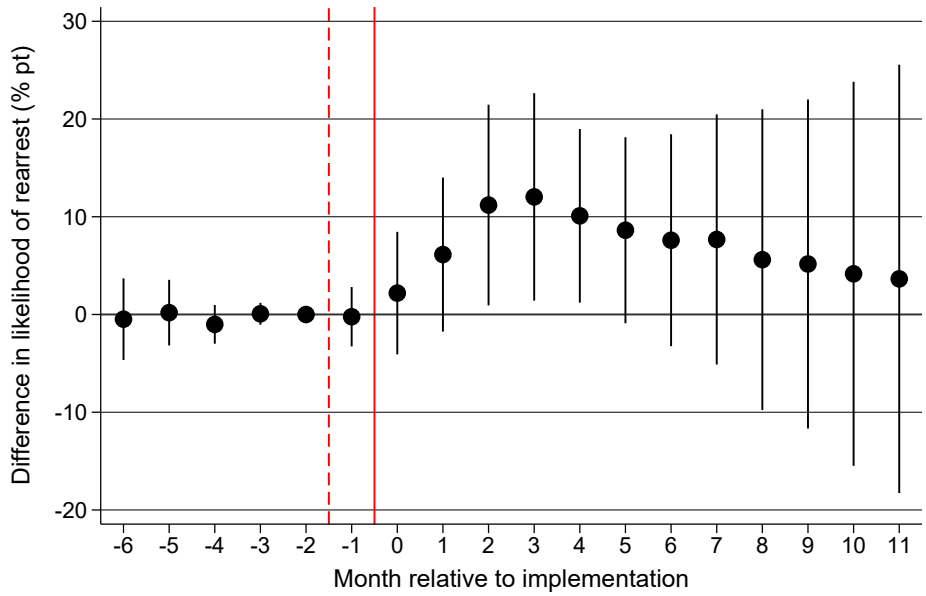


Figure 5a shows the average difference in likelihood of rearrest for zero-bail offenses from implementation by rearrest type using the first sample frame, January 2018 to June 2020 [Obs: 2,478,134]. Figure 5b shows the average difference in likelihood of rearrest for zero-bail offenses from revocation by rearrest type using the second sample frame, April 2020 to September 2023 [Obs: 2,539,574]. Each dot is derived from a separate regression and the bands reflect 95% confidence intervals. Effects are relative to five weeks before order change. "PC" refers to the California penal code. An asterisk by the rearrest type means that there are significant differences in ZB and non-ZB arrests prior to implementation or revocation, limiting causal interpretation.

Figure 6: Effect of Implementation for Counties with Longer Bail Orders

(a) Effect of implementation on general rearrests



(b) Effect of implementation on general-to-felony rearrests

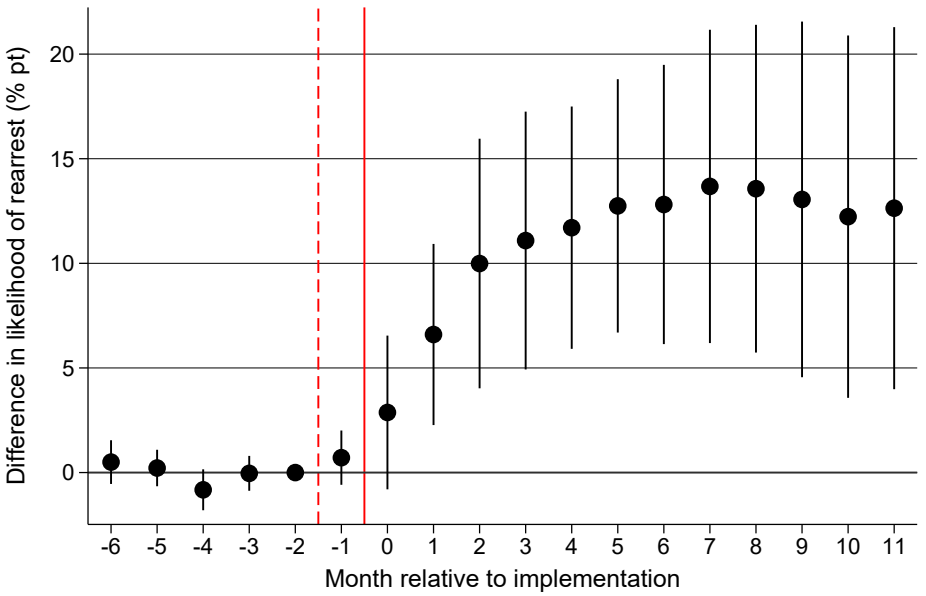
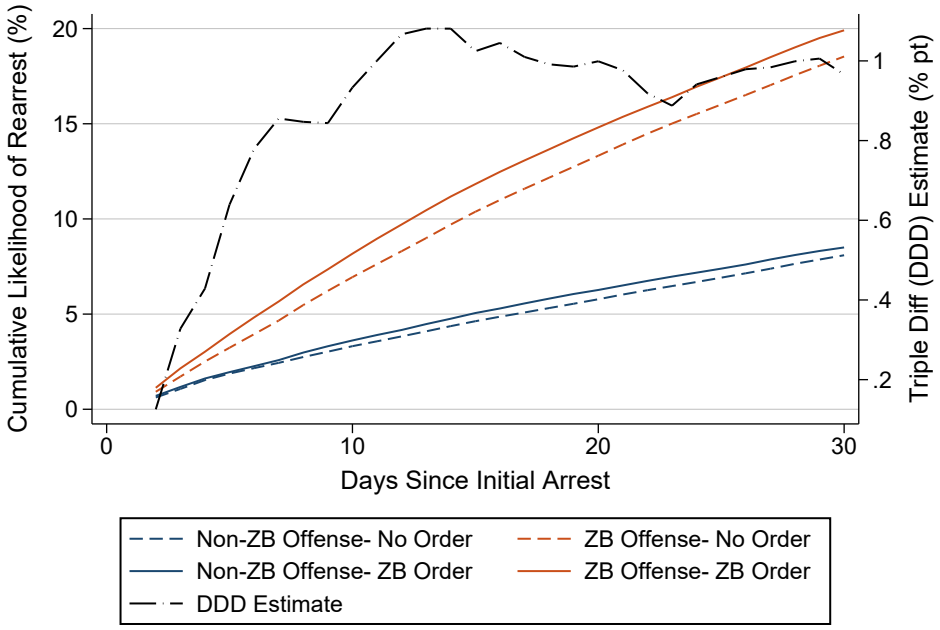


Figure 6a shows the difference in likelihood of any rearrest for ZB offenses using a sample frame of January 2018 to April 2021 with the set of 27 counties that extended emergency bail orders beyond 2020 [Obs: 2,527,580; Pre-COVID Rearrest Mean: 14.6%], while Figure 6b shows the difference in likelihood of being arrested for any ZB offense followed by a felony rearrest [Pre-COVID Rearrest Mean: 5.1%]. The horizontal axis is the number of months relative to the implementation of an emergency bail order, which occurred in March or April 2020 depending on the county. All of these counties keep their emergency order in place until at least April 2021 (11 months after implementation). The solid red line indicates the start of implementation. The dashed red line indicates 30 days before order change. Effects are relative to two months before order change. Because we calculate rearrests within 30 days of an initial arrest, effects may appear up to 30 days before implementation.

Figure 7: Risk of Being Rearrested for Any Offense by Day from Implementation (January 2018 to June 2020)

(a) Cumulative likelihood of any rearrest by day



(b) Likelihood of any rearrest by individual day

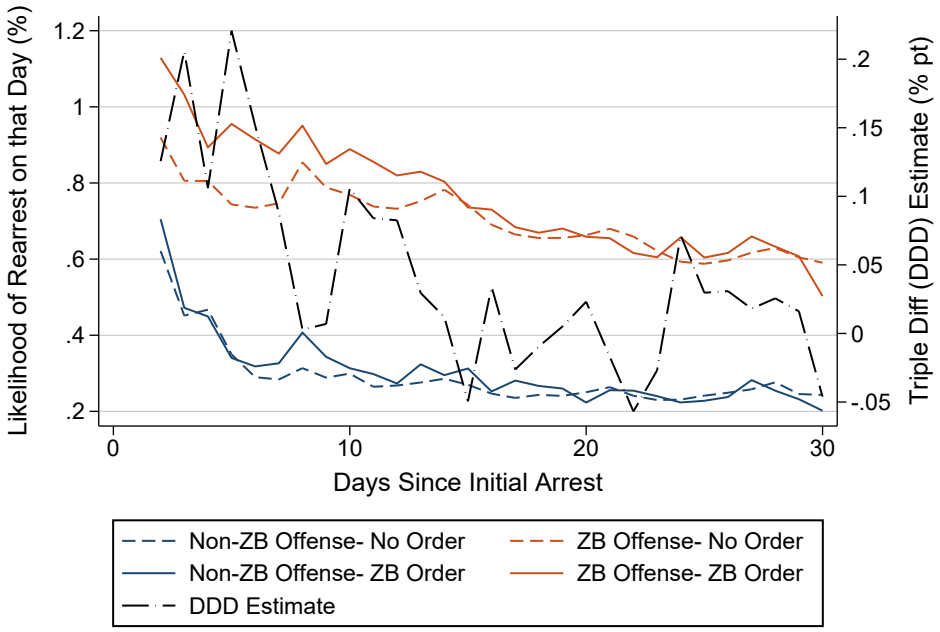


Figure 7a shows the cumulative likelihood of any rearrest from implementation in the first sample frame (January 2018 to June 2020). Figure 7b shows the rearrest risk of each individual day for the first 30 days after an initial arrest from implementation in the first sample frame (January 2018 to June 2020). Rearrests within 30 days of the start or end of an emergency bail order and in the 30 days leading up to the sample end date are excluded. "ZB order" indicates the period(s) in which an emergency bail order is in place in a county. Triple difference (DDD), shown in black, estimates the difference between the curves and illustrates the descriptive impact of an emergency bail order on ZB offenses. The DDD estimate and curves do not use any controls, unlike the previously discussed regression coefficients.

Appendices

A Appendix: Recent Changes to Bail in California (Supplementary to Section 2)

Prior to the pandemic, local and state court cases and reforms were already changing the pretrial release and bail landscape in California. In January 2018, a California appellate court's ruling in *In re Humphrey* held that judges must consider a defendant's ability to pay and other non-monetary alternatives when setting bail and release conditions.[21] San Francisco County, the jurisdiction in which the Humphrey case stemmed, adhered to the ruling, decreasing the County's reliance on cash bail and pretrial detention and increasing the use of pretrial supervision (Lacoe, Skog, and Bird 2024).[22] Additionally, in January 2020, San Francisco's newly elected District Attorney (DA) Chesa Boudin implemented a non-monetary pretrial framework that no longer requested cash bail as a condition for pretrial releases in criminal cases (Bastian 2020). This policy persisted until the end of the DA's tenure in July 2022, and was largely maintained, at least temporarily, by the new SF DA Brooke Jenkins.

While the *Humphrey* decision primarily impacted post-arraignment bail setting, the 2019 ruling in *Buffin v. San Francisco* changed the County's pre-arraignment release process.[23] The judge in *Buffin* ruled that the San Francisco Superior Court's bail schedule was unconstitutional. This forced the San Francisco Sheriff's Office to stop using the county's bail schedule on February 20, 2020, and instead increase releases on "own recognizance" (no conditions) within eight hours of booking as well as releases with pretrial supervision (San Francisco Sheriff's Office 2020).

As San Francisco County was engaged in pretrial release and bail reforms prior to the pandemic-induced statewide zero bail order, other counties began engaging in bail reforms amidst the implementation of zero-bail orders. For example, Los Angeles County's evolution of pretrial release policies also differs significantly from other counties in the state, some of which can be attributed to the California Supreme Court's ruling in the *Humphrey* case. LA County implemented a zero-bail policy on March 26, 2020, more than two weeks before the statewide zero-bail order took effect. When the statewide order ended on June 20, 2020, the Los Angeles Superior Court extended the county-wide zero bail policy, which lasted until June 30, 2022. Los Angeles County DA George Gascón implemented a non-monetary bail policy for all non-serious and non-violent offenses in December 2020 while the zero-bail policy was still in effect in Los Angeles County (Gascón 2020). Though this marked a change in LA County's pretrial release practices, this policy was less notable upon implementation as the County was still under a zero-bail order.

After LA County's zero-bail policy expired in June 2022, the Superior Court of LA reinstated the county-wide zero-bail policy under the *Urquidi v. Los Angeles* ruling in May 2023.[24] This decision ruled that pre-arraignment release conditions of the plaintiffs violated *Humphrey*, noting that cash bail kept them in jail not because they posed a greater risk to society, but rather they could not afford the bail amount. Shortly after the *Urquidi* ruling, the Superior Court of LA reverted to its pandemic-era zero-bail policy. However, instead of being applied county-wide, *Urquidi* only

21. In re Humphrey, 19 1006, 1017 (Cal.App.5th 2018)

22. A relative outlier, San Francisco County's pretrial release process differs notably from other California counties as the County has a long history of pretrial reform practices and diversion programs (Lacoe, Skog, and Bird 2024). Though San Francisco County adhered to the appellate court ruling in Humphrey in 2018, the California Supreme Court decided to review the appellate court's decision on its own motion. The California Supreme Court's decision impacted the entire state and was released on March 25, 2021.

23. Buffin v. City and County of San Francisco, 15-cv-04959-YGR (N.D. Cal. 2019)

24. Phillip Urquidi et al. vs. City of Los Angeles et al., 22STCP04044 (Cal. Super. Ct. 2022)

applied to people arrested by the Los Angeles Police Department or the Los Angeles County Sheriff's Department (Superior Court of California 2023).

In October 2023, the LA Superior Court announced new pre-arraignment release protocols (PARP) that implemented a risk assessment process and set new non-monetary standards for releases on certain offenses. Under this new protocol, those arrested for serious felonies, violent felonies, and/or domestic abuse are not eligible for non-monetary pre-arraignment release. Most of those who are arrested for non-violent, non-serious offenses are released either on location of arrest or after being booked at a precinct. For non-violent, non-serious offenses that still pose a public safety risk, arrestee are assessed by a magistrate judge to determine their release conditions based on both their risk to the public and their likelihood of appearing in court.

At the state level, reforms to pretrial release and bail were underway prior to implementation of the statewide emergency bail order as 49 of California's 58 counties used risk assessment tools alongside bail by the end of 2019 (Harris, Goss, and Gumbs 2019). However, California voters rejected Proposition 25 in November 2020, which would have implemented Senate Bill (SB) 10, ending monetary bail and replacing it with a pretrial risk assessment tool that provided judges with information about the risk of releasing a defendant before trial.[25] Proposition 25 would have additionally increased the number of people placed under supervision as a condition of their release from pretrial detention (Harris and Lofstrom 2020). Ultimately, the California Supreme Court reviewed the *Humphrey* case in 2021, deeming it unconstitutional to set bail at an amount a person is unable to afford and requiring the consideration of a defendant's affordability to pay when setting bail.[26] Senate Bill 262 intended to implement that 2021 ruling, but the legislation was ultimately tabled due to concerns of public backlash toward emergency bail orders (Sheeler and Wiley 2021).

Though these recent state and local decisions, including emergency bail orders, have reshaped California's bail environment, monetary bail has not been eliminated. For example, in San Francisco County during this period, it was unclear how often judges adhere to non-money bail requests from the district attorney, who instead desired to have detention based on risk of failure to appear and new criminal activity. Judges in San Francisco were still able to impose cash bail after considering a defendant's ability to pay. In some counties like San Francisco, changes to these local pretrial release processes were paired with monitoring and supervision rather than exclusively own recognizance (no condition) releases, a key difference from emergency bail orders (Lacoe, Skog, and Bird 2024). While Judicial Council's statewide order and the related county orders were emergency policies with a different design than recent legislative and judicial efforts to reform bail, public discourse has often blended the two.

B Appendix: Statewide Reforms to Pretrial Procedure (Supplementary to Section 2)

Over the past decade, several states have made significant changes to their laws surrounding cash bail and pretrial procedures. These changes often share common features, such as abolishing cash bail, that are intended to address aspects of the pretrial detention process that have been criticized for enhancing racial and economic disparities in the criminal justice system (Arnold,

25. The California legislature passed SB 10 in 2018, which Governor Jerry Brown signed into law on August 28, 2018. In an effort to prevent the elimination of the bail bond industry that SB 10 entailed, representatives of the industry filed Proposition 25 as a veto referendum to overturn SB 10. Due to this filing, the Judicial Council of California suspended implementation of SB 10 until after the November 2020 election. California's monetary bail system continued uninterrupted during this time (Courts 2019)

26. In re Kenneth Humphrey on Habeas Corpus, S247278 (Cal. 2021)

Dobbie, and Yang 2018; Arnold, Dobbie, and Hull 2022). Table B.1 provides a high-level overview of the characteristics that have been incorporated into the pretrial procedures of states that have had prominent changes in recent years. The following subsections provide additional detail on each of these state reforms.

Table B.1: Comparison of State Pretrial Procedures

Pretrial policy	California	Illinois	New Jersey	New York	Wisconsin
No cash bail*		✓	✓		
Ability to pay requirement	✓			✓	
"Least restrictive" provision		✓	✓		
Risk assessment					
Required			✓		
Allowed	✓	✓		✓	✓

*Cash bail is either prohibited or used in only a small number of cases.

B.1 Illinois

In 2021, the Illinois state legislature abolished the use of cash bail and made other changes to pretrial detention as part of a broad criminal justice reform package, but because of court challenges, it started implementation in September 2023. The reform represents a major overhaul of pretrial procedures that reduced the use of pretrial detention (Sims 2025).

The legislation, entitled the SAFE-T Act, abolishes cash bail and replaces it with statutory guidelines that judges must use when determining whether to detain a person accused of a crime. Risk assessments may be used as part of this process, but the legislation explicitly bars the results of a risk assessment from being the sole basis for a detention decision (Illinois General Assembly 2021; Freeman, Hu, and Jannetta 2021). The guidelines specify that judges must consider a variety of factors when making their decision, including the offense in question, prior criminal and psychiatric history, access to firearms, the risk that specific individuals will be in danger due to the accused person's release, along with other factors that are intended to inform the risk of harm to the community or likelihood of failure to appear. Judges may detain those accused of a crime from a specified list of serious and violent offenses. Finally, when issuing a detention decision, judges must state in writing why less restrictive measures, including various degrees of conditional release, would not ensure community safety and mitigate flight risk (Illinois General Assembly 2021).

B.2 New Jersey

In 2017, New Jersey implemented the Criminal Justice Reform Act (CJRA), state legislation (accompanied by a voter-approved constitutional amendment) that ended cash bail and replaced it with a risk assessment procedure for pretrial release determinations. This legislation has been credited with reducing the state's pretrial jail population by 20% between 2015 and 2022, as appearance rates have steadily climbed to 97% in 2022 (Arnold Ventures 2022).

The CJRA implements a risk assessment model for pretrial release decisions. Under this law, judges may not detain accused persons unless there is "clear and convincing evidence that no condition [of release] or combination of conditions [of release] can reasonably assure" the goals of public safety and appearance in court (Reimel III 2019). Within 48 hours of arrest, a pretrial services program completes a risk assessment analysis of the person accused and makes a detention or release recommendation to a judge, who then makes a final decision to either detain or release the person, with various options available for conditional release, including non-monetary and monetary (cash bail) conditions (Arnold Ventures 2022). While monetary conditions are available to judges, very few people held pretrial in New Jersey are held on cash bail. New Jersey uniformly uses the Public Safety Assessment (PSA), a risk assessment tool developed by the Arnold Foundation and used by dozens of local and state jurisdictions to inform pretrial release decisions (Criminal Justice 2023). Some have raised concerns about New Jersey's reliance on the PSA, based on general concerns that risk assessment methods such as this may inadvertently reinforce racial disparities in pretrial detention.

B.3 New York

In 2019, the New York state legislature passed a bail reform measure that drastically reduced the use of cash bail and replaced it with criteria specifying when and how judges could assess bail, require pretrial release conditions, or detain an accused person before trial. Since 2019, the state's pretrial jail population has decreased by 15%. The reform measure has been partially rolled back on three separate occasions in 2020, 2022, and 2023.

In its initial form, the legislation required judges to assess defendants on a case-by-cases basis and use the "least restrictive" means necessary to ensure that a person accused of a crime would return to court. Judges in New York are not allowed to consider public safety in pretrial release decisions. Ensuring a defendant's return to court is the primary criterion for detention and release decisions. For most offenses, judges could only employ non-monetary conditions of release; cash bail was reserved as an option for violent qualifying offenses. The list of qualifying offenses was expanded to include additional offenses in 2020 and in 2022, and individuals with time served for multiple felony convictions were also made eligible for cash bail. If judges did assess cash bail, they must consider "ability to post bail without posing undue hardship." Finally, though the bill did not contemplate a risk assessment regime, risk assessments may be used in the pretrial release process.

In 2023, the legislature and governor negotiated the most substantial revision to the bail law yet by removing the "least restrictive" requirement from the statute and replacing it with the provision that judges use any restriction "necessary to assure" return to court. This change gives judges greater discretion to use cash bail as they see fit.

B.4 Wisconsin

In April 2023, Wisconsin voters approved a pair of amendments to the state's constitution that make it easier for judges to impose cash bail, which will likely cause increases in both cash bail amounts and the number of people who must pay cash bail to secure their release prior to trial. The first amendment loosens the requirement that release conditions must be tailored to prevent harm against members of the community: previously, the harm in question was "serious bodily harm," whereas the amendment removes the word "bodily" and allows the state legislature to define "serious harm," which the state legislature has defined broadly in an effort to afford judges maximum discretion. The second amendment allows judges to consider public safety when setting cash bail amounts, whereas previously judges had only been allowed to consider the bail amount

necessary to prevent a person's failure to appear in court.

C Appendix: Data Details and Cleaning (Supplementary to Section 3)

As discussed in the main text, the arrest information is provided by the Department of Justice's Automated Criminal History System (ACHS). We should interpret this dataset as comprised of arrests that are accompanied by at least a fingerprinting, sometimes paired with being booked into jail or a holding cell for some period of time. Additional information captured by the ACHS not discussed in the main text is Criminal Justice Information Services offense code, penal code violation, and unique individual identifiers which allow us to determine whether and when an individual has previously been cited, arrested, convicted, incarcerated and/or on probation. Although our ACHS data runs through March 2024, we determined—after a handful of diagnostic tests—that the arrests are likely undercounted from October 2023 to March 2024. Thus, the main findings only focus on data through September 2023.

Since booking status is not available, determining whether people are released under emergency bail policies must be inferred from the offense on which they were booked. This means that whether an arrest event led to a release under zero bail cannot be directly identified, likely resulting in some number of cases where somebody set to be released under the zero-bail policy was actually not released, or vice-versa. We also cannot identify how long people are detained pretrial, but we do observe when they are arrested again.

In their emergency bail modifications after the statewide order, Los Angeles, Santa Clara, Alameda, Fresno, Tulare, San Luis Obispo, Santa Cruz, and Marin counties made reoffending during pre-arraignment release ineligible for zero bail regardless of the offenses committed. Because our data does not have information on pretrial release date or court date, we generate a proxy of the number of days (20) for this period based on conversations we had with county superior courts.

Relatedly, ACHS data do not regularly indicate whether an officer booked somebody into jail or cited and released them, and typically do not include cite-and-release events at all unless fingerprinting occurs. This means that law enforcement policies that encouraged citing and releasing suspects instead of booking them into jail during the pandemic cannot be reliably measured. Hence, we use these data only to measure arrests that involve a suspect being fingerprinted. Documented changes in law enforcement policies and possibly community crime reporting during this period potentially make our data less reliable for measuring crime or new offenses (Ang et al. 2021; Premkumar et al. 2023).

For the analysis, we exclude arrests for process offenses (around 620,000 observations)—such as arrests for warrants, violations of parole or probation, or failure to appear in court—because we are interested in whether these arrests represented new crimes.[27] For similar reasons, we exclude traffic offenses, the vast majority of which are violations related to driving with a suspended license or without a license (Table D.9).[28] However, we should not exactly equate changes in arrests with fluctuations in the commission of crime for many reasons, but especially during this period when policies determining whether to arrest an individual shifted dramatically.

We exclude arrests for crimes that take place in custodial settings (e.g., prisons and jail), because the focus of this study is on arrests that occur in non-carceral settings. We also limit the sample to

27. Because we drop these process offenses, we may miss cases in which the most serious offense is ZB eligible, but the individual is held in pretrial detention because of a violation of parole or probation. These cases were not relevant for the statewide Judicial Council emergency order but may be for the separate county ZB orders.

28. The main results are not sensitive to this decision.

arrests for felonies or misdemeanors, excluding infractions. In the ACHS, nearly 75% of burglaries are not delineated between first and second degree, which is the difference between whether an offense qualifies for zero bail or not, so we exclude all burglaries in the main results (Table D.8).[29] To avoid double-counting individual arrest incidents, we include only the most severe offense per arrest.

However, because of the way the ACHS data is processed, there are some duplicate records for the same arrest event. For example, an individual may have numerous arrest records for murder within a day, but with different law enforcement agencies, which we would interpret as potentially reflective of a transfer of custody and a duplicate record between two agencies. After speaking with staff at the California Department of Justice about these concerns, we created procedures to drop observations that we identified as likely duplicate arrests:

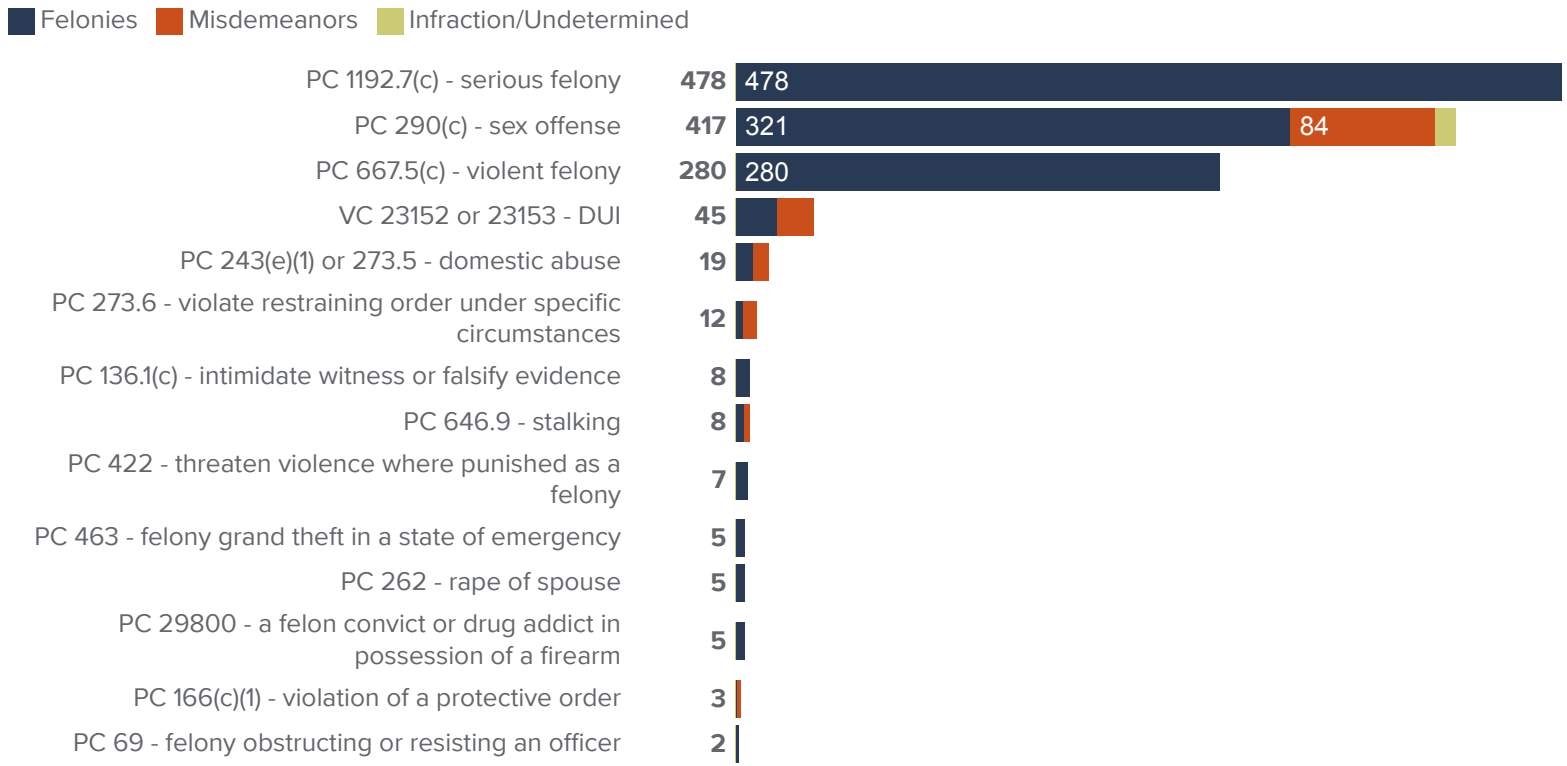
1. Drop all same and next calendar day rearrests, regardless of offense.
2. For rearrests that happen within 2-7 calendar days with the same offense category (i.e., Criminal Justice Information Services (CJIS) categories such as "homicide/manslaughter" or "stolen vehicle"), drop arrests with at least one of the following conditions:
   (a) Disposition codes that indicate matching records of the same arrest or a transfer of custody.
   (b) Offense qualifiers for a warrant, bench warrant, court remand, or re-booking.
   (c) Law enforcement agencies are different.

The procedures are imperfect, but they alleviate some of the implausible counts of short-term rearrests that appear in the raw administrative data, particularly when examining more serious incidents. One issue with identifying duplicates, especially with Rule 2.c., is that the arresting agency variable is not always reported accurately, as there is an overrepresentation of booking agencies (i.e., in the ACHS, county sheriffs comprise top arresting agencies in the state). Thus, in our paper, geographic comparisons focus on differences at the county level.

29. First- and second-degree burglary both comprise about 13% of the share of burglaries (Penal Code 459). The results are qualitatively similar if we include the burglaries and code the unknown ones as second-degree (and hence zero-bail eligible), since a larger share are more likely to be second-degree.

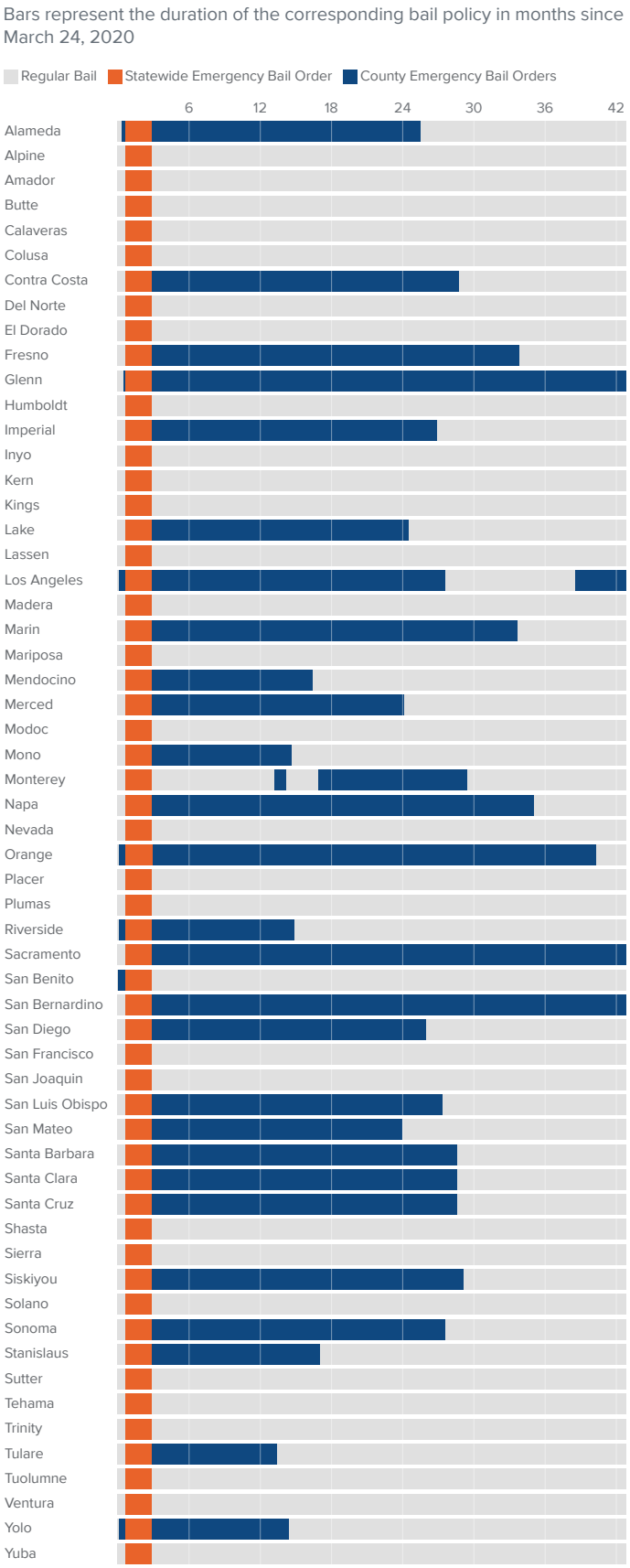
D Appendix: Figures and Tables

Figure D.1: Judicial Council's Statewide Emergency Bail Order: List of non-ZB Eligible Offenses in Each Category



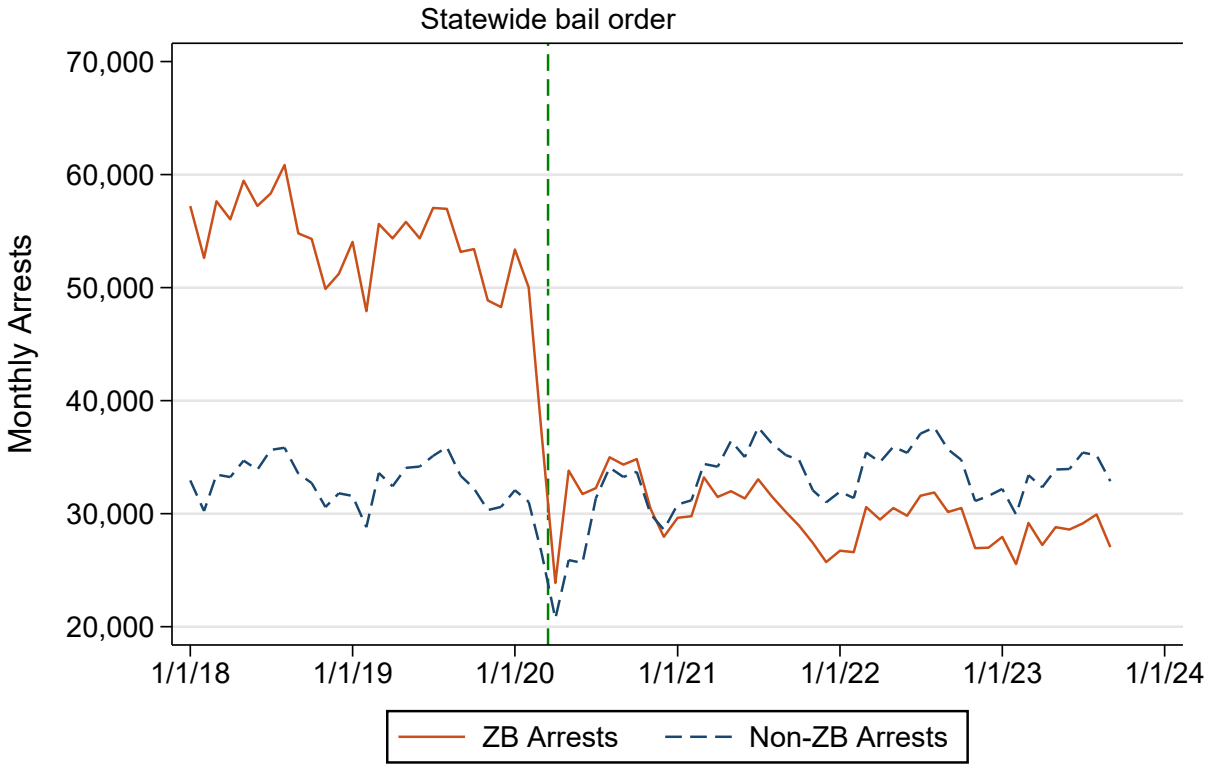
Calculations used the California Penal Code, California Vehicle Code, California Health and Safety Code, California Welfare and Institutions Code, California Family Code, and the California Department of Justice: Law Enforcement Code Tables. Many offenses are counted in multiple categories. For example, California Penal Code 187, murder, is both a serious and violent felony.

Figure D.2: County Bail Policies from March 24, 2020 to September 30, 2023



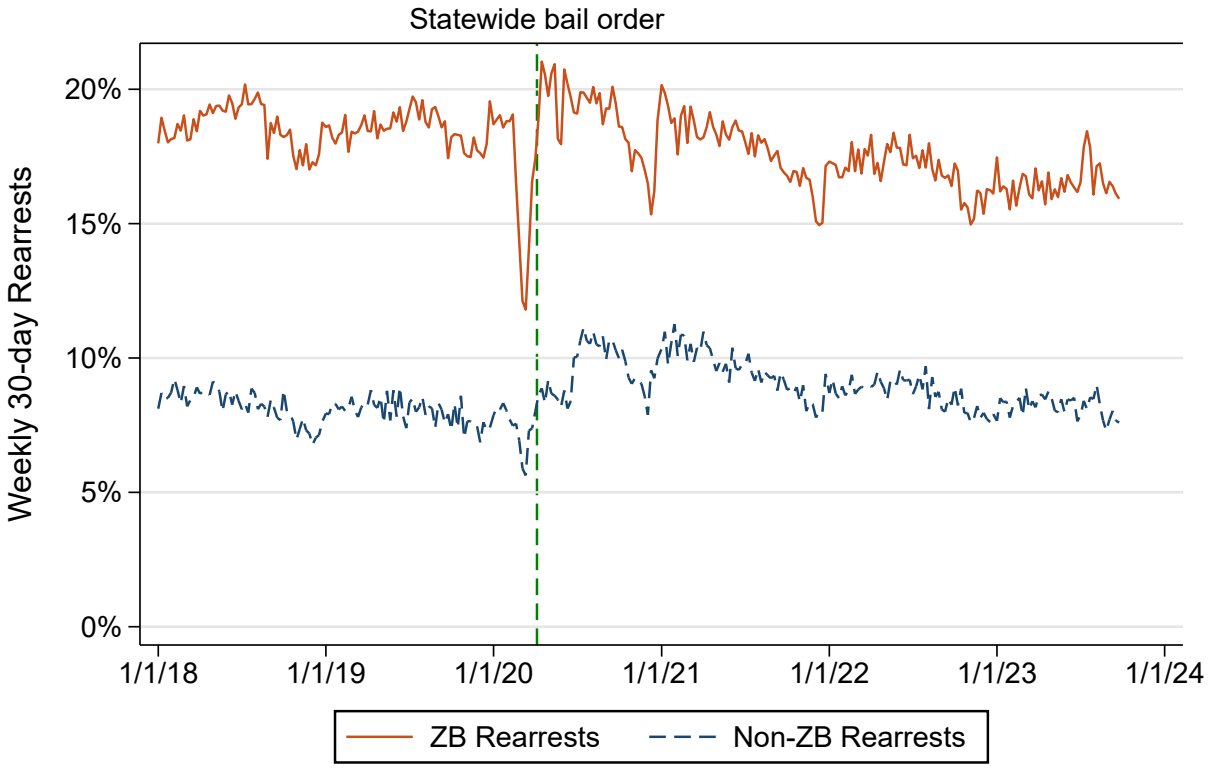
San Bernardino and Glenn Counties modified their bail schedules to make all felony offenses ineligible for zero bail. However, these two counties extended ZB eligibility for most misdemeanors through the end of our sample period in March 2024. LA County's most recent order applied only to the LAPD and the LASD.

Figure D.3: Trends in Arrest from January 2018 to September 2023



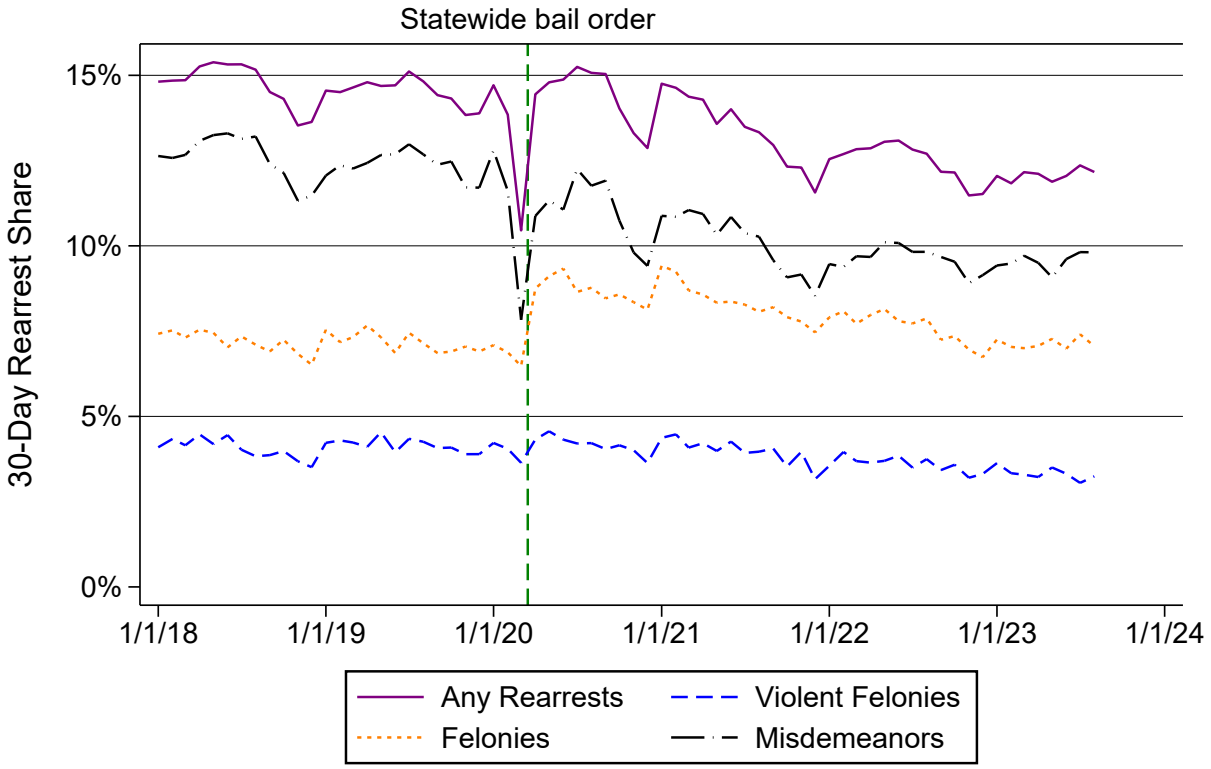
This figure presents arrest trends in monthly counts from January 2018 to September 2023. The orange line denotes ZB-eligible arrests. Offenses for these arrests did not qualify for ZB until the statewide order was issued in April 2020 (dashed green line). Following the implementation of the statewide ZB order, the offenses for these arrests may have qualified for zero-bail either under the statewide order (April to June 2020), or in county-level orders (27 counties kept zero-bail orders in place after the statewide order expired in June 2020). The dashed blue line represents non-ZB arrests—all of which are for offenses that never qualified for ZB after a county implemented a ZB order.

Figure D.4: Rearrest Share from January 2018 to September 2023



This figure presents the share of any 30-day weekly rearrests from January 2018 to September 2023. The orange line denotes the share of zero-bail-eligible (ZB) rearrests. Offenses for the initial arrest of these rearrests did not qualify for ZB until the statewide order was issued in April 2020 (dashed green line). Following the implementation of the statewide ZB order, the offenses for these initial arrests may have qualified for ZB either under the statewide order (April to June 2020), or in county-level orders (27 counties kept ZB orders in place after the statewide order expired in June 2020). The dashed blue line represents the share of non-ZB rearrests—all of which had initial arrests for offenses that never qualified for zero bail even after the statewide ZB order was implemented.

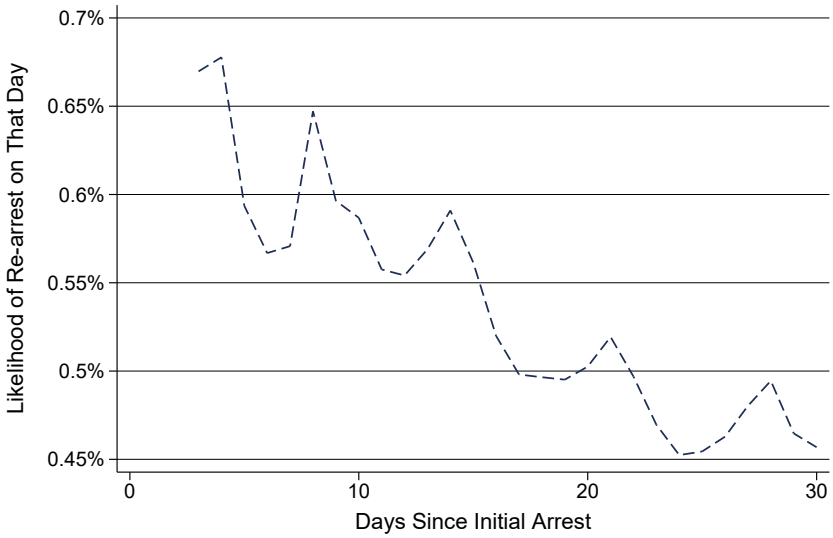
Figure D.5: Rearrest Share by Rearrest Type (January 2018 to September 2023)



The figure presents the share of arrests that are rearrests within 30 days by offense type of the initial and subsequent arrest in monthly counts from January 2018 to September 2023.

Figure D.6: Pre-COVID Risk of Rearrest by Day (January 2018 to January 2020)

(a) Likelihood of general rearrests on each day



(b) Cumulative likelihood of general rearrests by day

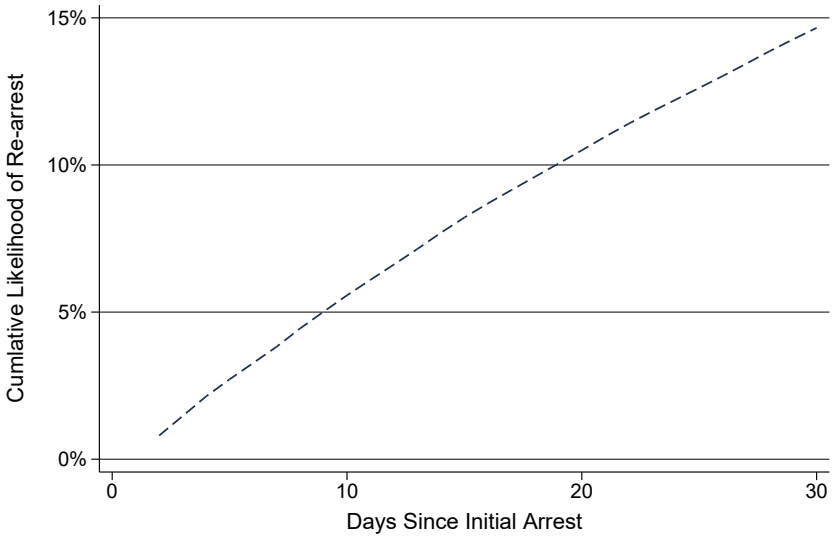
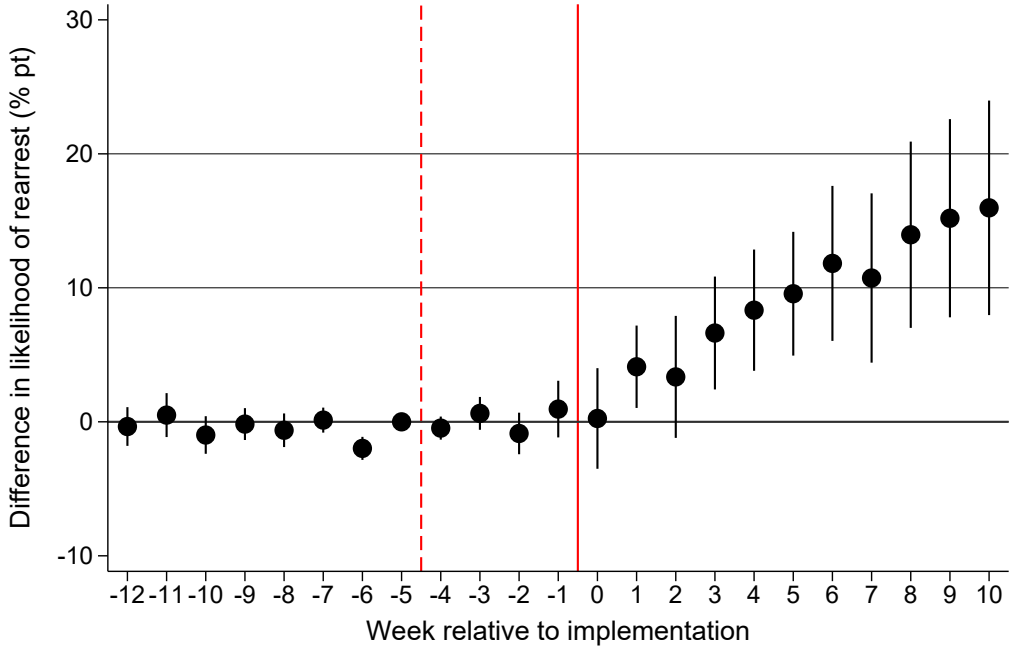


Figure D.6a models the likelihood that an arrest of any offense type is followed by a rearrest of any offense type as a function of the number of days since the initial arrest during the pre-COVID period (January 2018 to January 2020). Figure D.6b provides the corresponding cumulative risk of rearrest by day during this pre-COVID period.

Figure D.7: Effects of Implementation and Revocation on General-to-Felony Rearrests

(a) Difference in general-to-felony rearrest likelihood after implementation



(b) Difference in general-to-felony rearrest likelihood after revocation

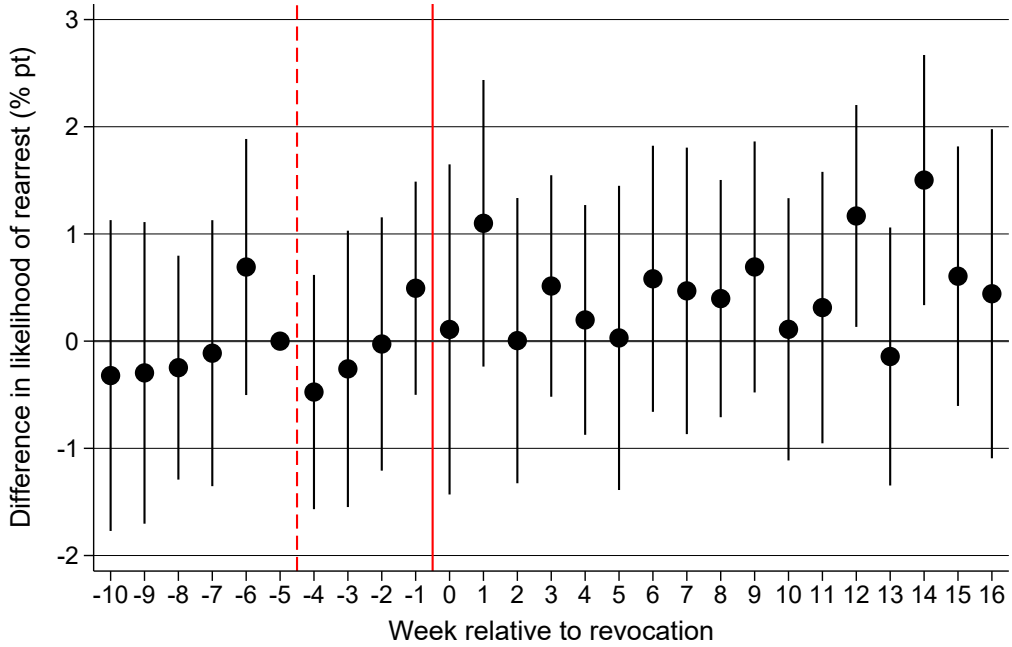
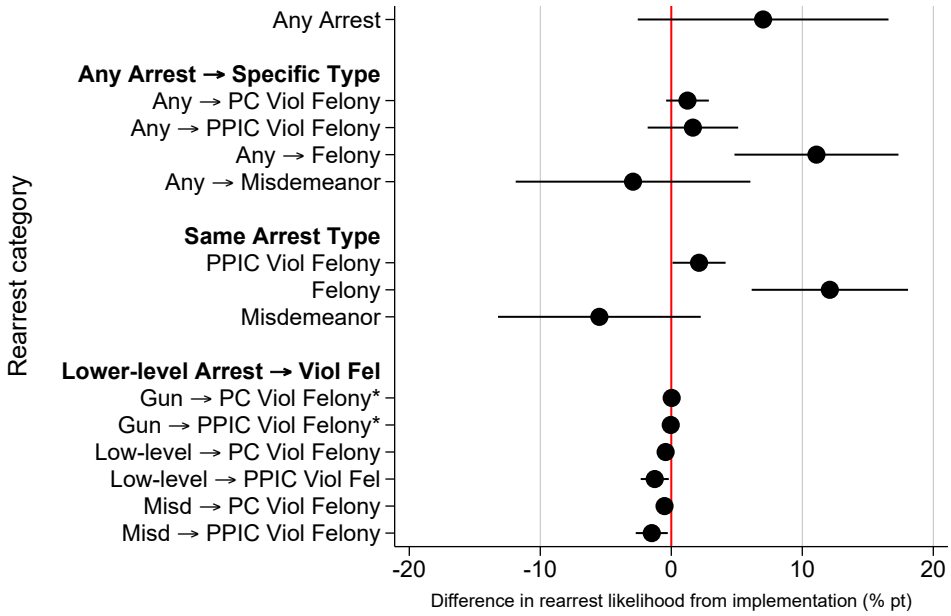


Figure D.7a shows the difference in likelihood of being arrested for any ZB offense and then rearrested for a felony within 30 days using the implementation sample frame, January 2018 to June 2020 [Obs: 2,478,134; Pre-COVID Rearrest Mean: 5.2%]. Figure D.8b shows the difference in likelihood using the revocation sample frame of April 2020 to September 2023 [Obs: 2,539,574; Pre-Revocation Rearrest Mean: 6.9%]. The solid red line indicates a ZB order change. The dashed red line indicates 30 days before the implementation or revocation of zero bail. Effects are relative to five weeks before order change. Because we calculate rearrests within 30 days of an initial arrest, effects may appear up to 30 days before ZB order change.

Figure D.8: Coefficient Plot of Effects of Implementation and Revocation for Counties with Longer Bail Orders

(a) Difference in rearrest likelihood after implementation



(b) Difference in rearrest likelihood after revocation

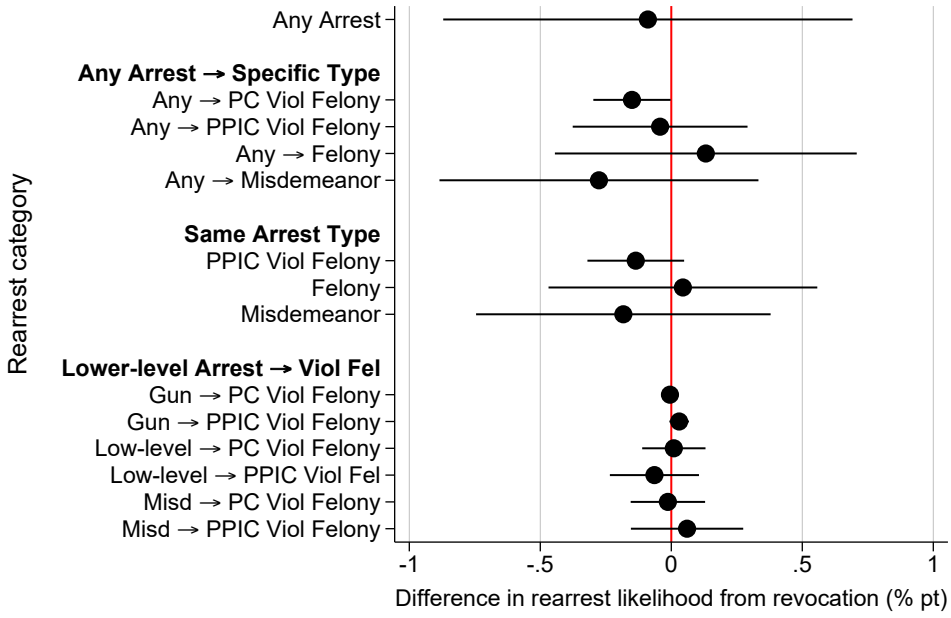
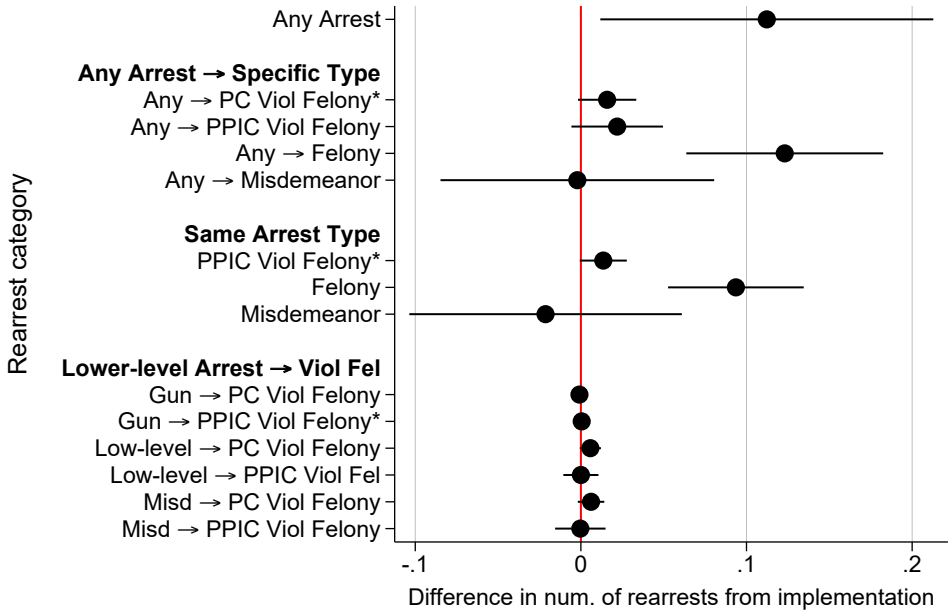


Figure D.8a shows the average difference in likelihood of rearrest for ZB offenses from implementation by rearrest type using a sample frame of January 2018 to April 2021 with the set of 27 counties that extended ZB beyond 2020 [Obs: 2,527,580]. Figure D.8b shows the average difference in likelihood of rearrest for ZB offenses from revocation using the second sample frame of April 2020 to September 2023 for the same set of counties [Obs: 2,041,579]. Each dot is derived from a separate regression and the bands reflect 95% confidence intervals. Effects are relative to two months before order change. "PC" refers to the California penal code. An asterisk by the rearrest type means that there are significant differences in ZB and non-ZB arrests prior to implementation or revocation, limiting causal interpretation.

Figure D.9: Coefficient Plot of Effects on the Number of Rearrests from Implementation and Revocation by Rearrest Type

(a) Difference in number of rearrests after implementation



(b) Difference in number of rearrests after revocation

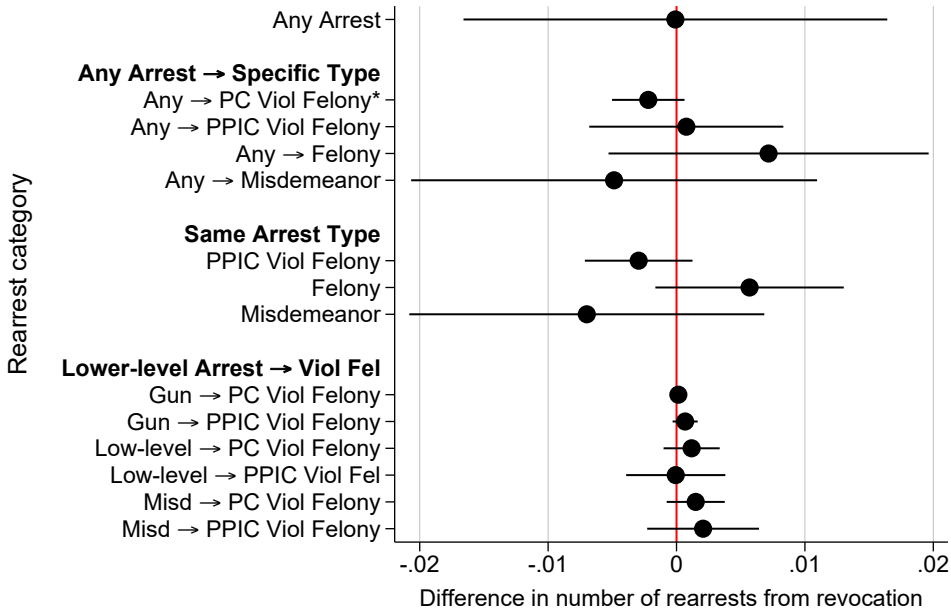
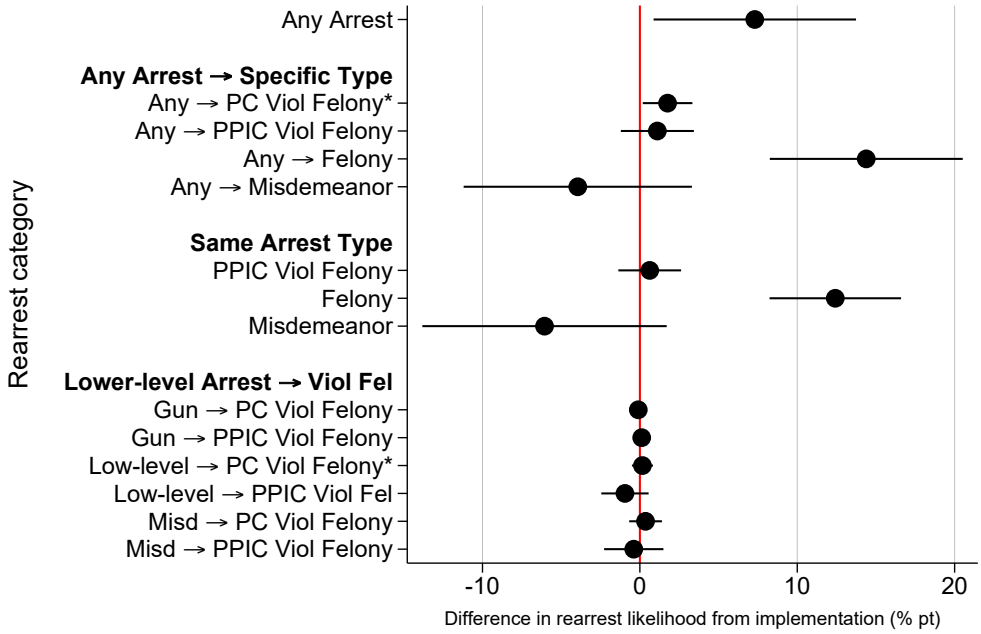


Figure D.9a shows the average difference in the number of 30-day rearrests for ZB offenses from implementation by rearrest type using the first sample frame, January 2018 to June 2020 [Obs: 2,478,134]. Figure D.9b shows the difference in the number of rearrests for ZB offenses from revocation by rearrest type using the second sample frame, April 2020 to September 2023 [Obs: 2,539,574]. Each dot is derived from a separate regression and the bands reflect 95% confidence intervals. Effects are relative to five weeks before order change. "PC" refers to the California penal code. An asterisk by the rearrest type means that there are significant differences in ZB and non-ZB arrests prior to implementation or revocation, limiting causal interpretation.

Figure D.10: Coefficient Plot of Effects on 60-day Rearrests by Rearrest Type

(a) Difference in rearrest likelihood after implementation



(b) Difference in rearrest likelihood after revocation

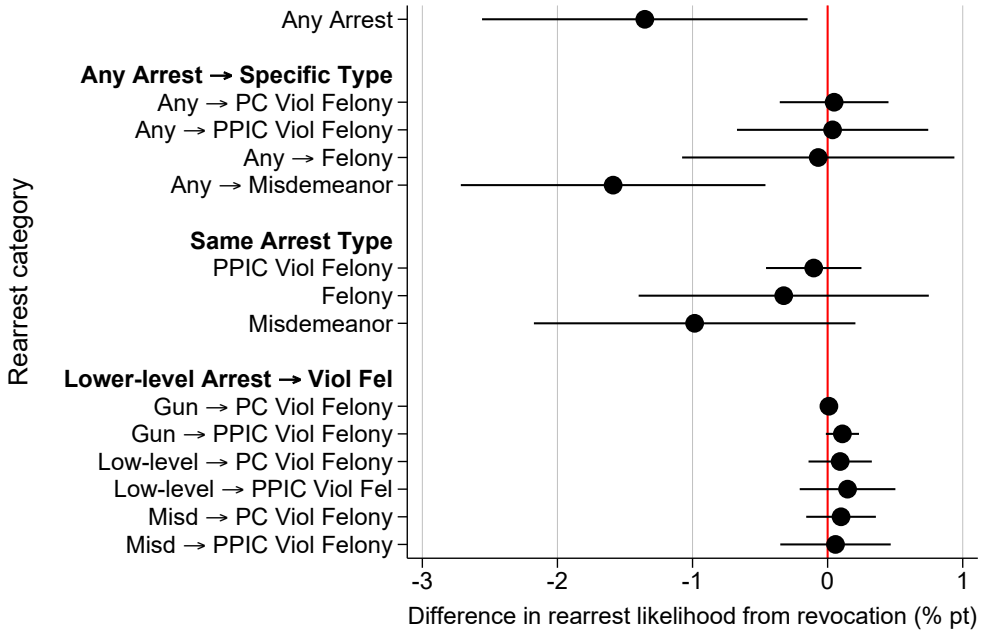
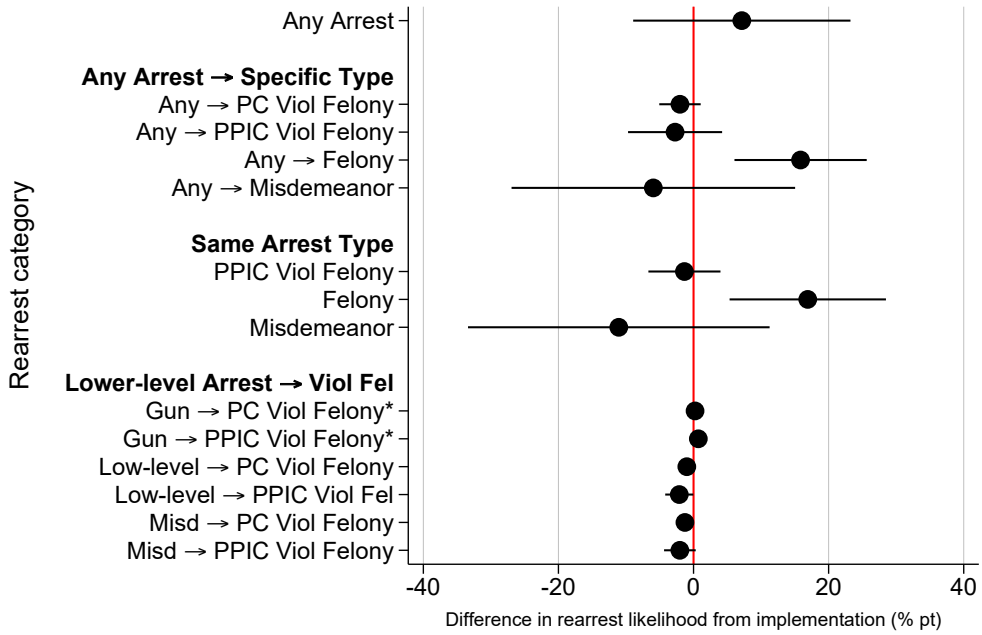


Figure D.10a shows the difference in likelihood of rearrest within 60 days for ZB offenses from implementation by rearrest type using the first sample frame, January 2018 to June 2020 [Obs: 2,478,134]. Figure D.10b shows the difference in likelihood of rearrest for ZB offenses from revocation by rearrest type using the second sample frame, April 2020 to September 2023 [Obs: 2,539,574]. Each dot is derived from a separate regression and the bands reflect 95% confidence intervals. Effects are relative to nine weeks before order change. "PC" refers to the California penal code. An asterisk by the rearrest type means that there are significant differences in ZB and non-ZB arrests prior to implementation or revocation, limiting causal interpretation.

Figure D.11: Coefficient Plot of Effects on 180-day Rearrests by Rearrest Type for Counties with Longer Bail Orders

(a) Difference in rearrest likelihood after implementation



(b) Difference in rearrest likelihood after revocation

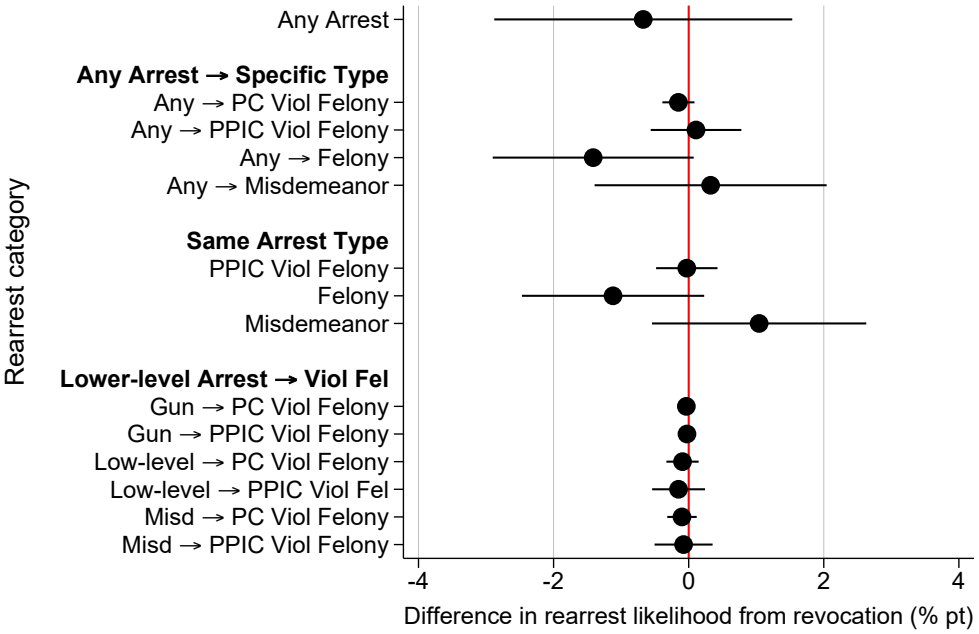
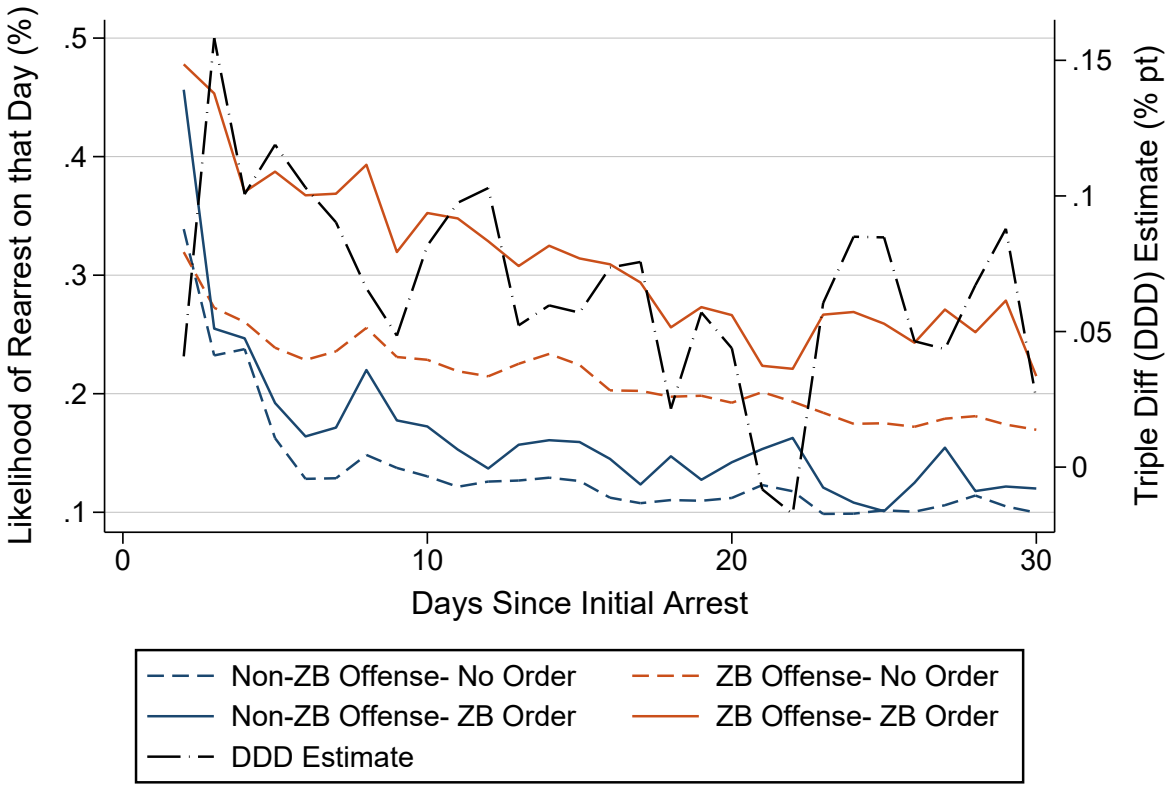


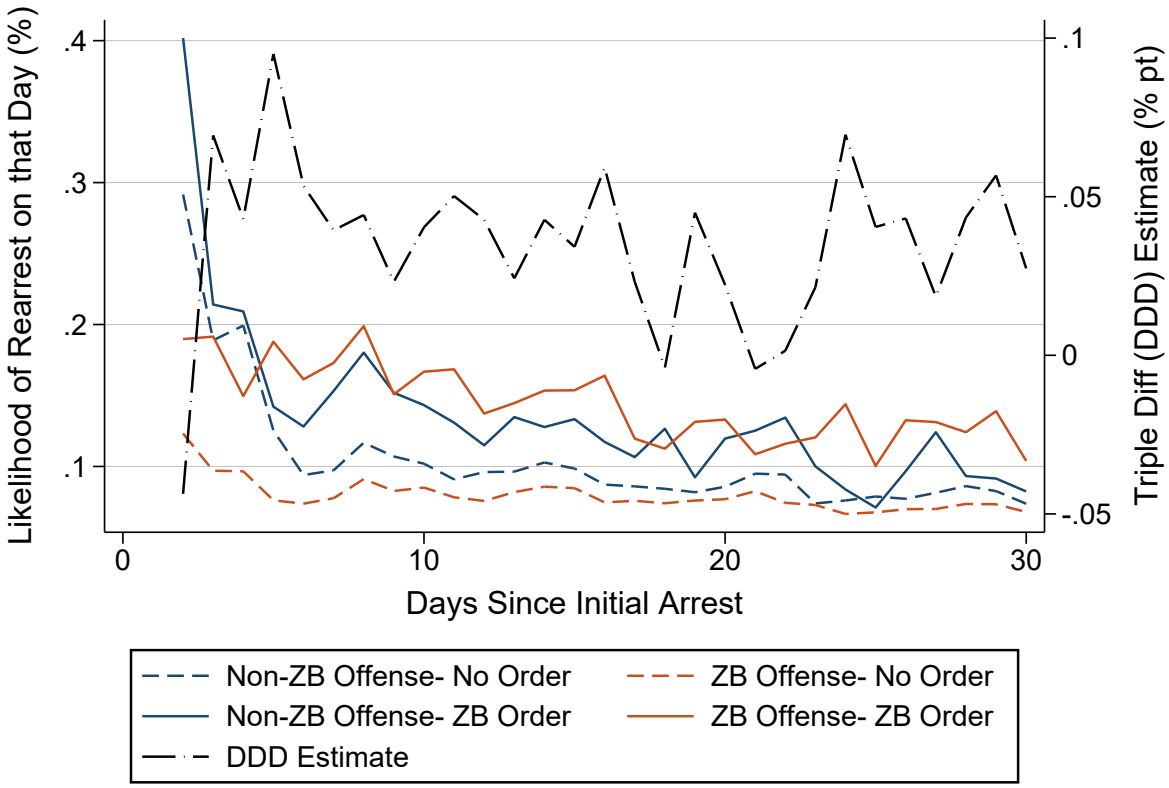
Figure D.11a shows the difference in likelihood of rearrest within 180 days for ZB offenses from implementation by rearrest type using a sample frame of January 2018 to April 2021 with the set of 27 counties that extended ZB beyond 2020 [Obs: 2,527,580]. Figure D.11b shows the difference in likelihood of rearrest using the same set of counties for the revocation sample frame, April 2020 to September 2023 [Obs: 2,041,579]. Each dot is derived from a separate regression and the bands reflect 95% confidence intervals. Effects are relative to seven months before order change. "PC" refers to the California penal code. An asterisk by the rearrest type means that there are significant differences in ZB and non-ZB arrests prior to implementation or revocation, limiting causal interpretation.

Figure D.12: Risk of General-to-Felony Rearrest by Day from Implementation (January 2018 to June 2020)



This figure shows the individual daily risk of a felony rearrest following any arrest for the first 30 days after arrest, using the implementation sample frame (January 2018 to June 2020). Rearrests within 30 days of the start or end of a ZB order and in the 30 days leading to the sample end date are excluded. "ZB order" indicates the period(s) in which a ZB order is in place in a county. Triple difference (DDD), shown in black, estimates the impact of a ZB order on ZB offenses. The DDD estimate and curves do not use any controls, unlike the previously discussed regression coefficients.

Figure D.13: Risk of Felony-to-Felony Rearrest by Day from Implementation (January 2018 to June 2020)



This chart shows the individual daily risk of a felony rearrest following a felony arrest for the first 30 days after arrest, using the implementation sample frame (January 2018 to June 2020). Rearrests within 30 days of the start or end of a zero-bail order and in the 30 days leading to the sample end date are excluded. "ZB order" indicates the period(s) in which a ZB order is in place in a county. Triple difference (DDD), shown in black, estimates the impact of a ZB order on ZB offenses. The DDD estimate and curves do not use any controls, unlike the previously discussed regression coefficients.

Table D.1: Timeline of Bail Policies and Criminal Justice Events in California (2018-2023)

Date	Event
January 25, 2018	San Francisco Superior Court implements ability-to-pay bail requirements
August 28, 2018	Governor Brown signs Senate Bill 10, reforming monetary bail in California
January 16, 2019	Proposition 25 qualifies for the 2020 ballot and the Judicial Council of California pauses the implementation of SB 10
February 10, 2020	San Francisco District Attorney implements non-monetary bail policy
March 4, 2020	Governor Newsom declares a state of emergency in California because of COVID-19
March 26, 2020	LA County Superior Court adopts temporary zero-bail order
April 13, 2020	**Judicial Council zero-bail rule takes effect**
June 20, 2020	**Judicial Council zero-bail rule expires; 27 counties keep zero bail in place**
November 6, 2020	California voters reject Proposition 25, nullifying the bail reform passed under SB 10
March 25, 2021	California Supreme Court deems the state's monetary bail practices unconstitutional in the *Humphrey* case
January 2022	19 counties continue using emergency zero-bail schedules, covering roughly 70 percent of the state's population
January 2023	5 counties continue using emergency zero-bail schedules
May 24, 2023	*Urquidi* decision blocks use of pre-arraignment cash bail in Los Angeles County; LA County reverts to zero-bail schedule

Table D.2: Most Common ZB-eligible Misdemeanors during Emergency Bail Order

Offense	Frequency	Percent
Possession of drug paraphernalia	129,247	24.88
Possession of a controlled substance	61,573	11.85
Obstructing a police officer	34,517	6.65
Use of a controlled substance	34,444	6.63
Disorderly conduct: under the influence of drugs or alcohol in public	27,614	5.32
Violation of a restraining order	15,230	2.93
Battery	14,631	2.82
Local ordinance violation	9,499	1.83
Willful disobedience of the terms of a court order, including orders pending trial	7,555	1.45
DUI	7,516	1.45

This table shows the most common misdemeanor offenses that were eligible for zero bail from March 24, 2020, through September 30, 2023. This includes both the California Judicial Council's statewide order and county superior court emergency bail extensions. Calculations were made using only the most serious offense associated with each arrest. Most emergency bail orders made second-degree burglary eligible for zero bail and first-degree burglary ineligible for zero bail. Because our dataset does not have enough information to distinguish between first- and second-degree burglary, all burglary offenses were dropped from this table's calculations.

Table D.3: Most Common ZB-eligible Felonies during Emergency Bail Order

Offense	Frequency	Percent
Vehicle theft	30,409	12.45
Grand theft (theft of property valued at over $950)	23,854	9.77
Possession of a stolen vehicle	22,292	9.13
Possession of controlled substance for sale	19,927	8.16
Vandalism: damage over $400	13,496	5.52
Possession of a controlled substance	12,539	5.13
Transportation of controlled substances for sale	12,052	4.93
Carrying a concealed dirk or dagger	5,939	2.43
Possession of a controlled substance while armed	5,615	2.30
Identity theft for obtaining someone else's credit, goods, services, property, or medical information	4,984	2.04

This table shows the most common felony offenses that were eligible for zero bail from March 24, 2020, through September 30, 2023. This includes both the California Judicial Council's statewide order and county superior court emergency bail extensions. Calculations were made using only the most serious offense associated with each arrest. Most emergency bail orders made second-degree burglary eligible for zero bail and first-degree burglary ineligible for zero bail. Because our dataset does not have enough information to distinguish between first- and second-degree burglary, all burglary offenses were dropped from this table's calculations.

Table D.4: Most Common Non-ZB Misdemeanors during Emergency Bail Order

Offense	Frequency	Percent
DUI	189,635	64.29
Domestic violence: battery	59,724	20.25
Violation of a court restraining order issued for domestic violence, elder abuse, sexual abuse involving a minor, or inflicting corporal injury	7,504	2.54
Violation of a restraining order	6,372	2.16
Domestic violence: inflict corporal injury	5,379	1.82
Battery	2,496	0.85
Willful disobedience of the terms of a court order, including orders pending trial	2,418	0.82
Exhibiting a deadly weapon other than a firearm	1,859	0.63
Indecent exposure	1,507	0.51
Battery against a police officer or emergency personnel	1,264	0.43

This table shows the most common misdemeanor offenses that were not eligible for zero bail from March 24, 2020 through September 30, 2023. This includes both the California Judicial Council's statewide order and county superior court emergency bail extensions. Calculations were made using only the most serious offense associated with each arrest. Most emergency bail orders made second-degree burglary eligible for zero bail and first-degree burglary ineligible for zero bail. Because our dataset does not have enough information to distinguish between first- and second-degree burglary, all burglary offenses were dropped from this table's calculations.

Table D.5: Most Common Non-ZB Felonies during Emergency Bail Order

Offense	Frequency	Percent
Domestic violence: inflict corporal injury	92,834	23.38
Assault with a deadly weapon other than a firearm	48,777	12.28
Robbery	28,728	7.23
Person who has been convicted of a felony or who is addicted to narcotics in possession of a firearm	23,180	5.84
Threatening to commit a crime that would result in death or great bodily injury	19,687	4.96
DUI	13,201	3.32
Child cruelty likely to produce great bodily harm or death	12,091	3.04
Obstructing a police officer	10,735	2.70
Murder	9,618	2.42
Possession of a stolen vehicle	7,263	1.83

This table shows the most common felony offenses that were not eligible for zero bail from March 24, 2020 through September 30, 2023. This includes both the California Judicial Council's statewide order and county superior court emergency bail extensions. Calculations were made using only the most serious offense associated with each arrest. Most emergency bail orders made second-degree burglary eligible for zero bail and first-degree burglary ineligible for zero bail. Because our dataset does not have enough information to distinguish between first- and second-degree burglary, all burglary offenses were dropped from this table's calculations.

Table D.6: Most Common Felonies Categorized as Violent by PPIC But Not Defined as "Violent Felony" by the California Penal Code 667.5(c)

Offense	Frequency	Percent
Domestic violence: inflict corporal injury	275,044	42.40
Assault with a deadly weapon other than a firearm	136,768	21.08
Threatening to commit a crime that would result in death or great bodily injury	59,286	9.14
Child cruelty likely to produce great bodily harm or death	39,495	6.09
DUI resulting in injury	32,085	4.95

This table shows the most common offenses that we define as violent felony but the state of California does not from January 1, 2018 through September 30, 2023. Calculations were made using only the most serious offense associated with each arrest.

Table D.7: Most Common Violent Felonies (PPIC Definition) Eligible for ZB

Offense	Frequency	Percent
False imprisonment	1,765	16.17
Hit and run resulting in injury	1,289	11.81
Evade a police officer while operating a vehicle with a disregard for public safety	1,057	9.69
DUI resulting in injury	972	8.91
Battery	674	6.18

This table shows the most common offenses that we define as violent felony and were eligible for zero bail from March 24, 2020, through September 30, 2023. This includes both the California Judicial Council's statewide order and county superior court ZB extensions.

Table D.8: Burglary Offenses Excluded from Analysis

Offense	Frequency	Percent
Burglary: Penal Code 459	120,601	73.01
First-degree burglary: Penal Code 459	22,608	13.69
Second-degree burglary: Penal Code 459	21,972	13.30

Most zero bail orders made second-degree burglary eligible for zero bail and first-degree burglary ineligible for zero bail. Because our dataset does not have enough information to distinguish between first- and second-degree burglary for the vast majority of burglary offenses captured, we drop all burglary charges for our main analysis. This table shows a breakdown of how burglary offenses are categorized in our data.

Table D.9: Most Common Traffic Offenses Excluded from Analysis

Offense	Frequency	Percent
Driving with a suspended license	115,477	31.45
Driving without a license	109,198	29.74
Driving with a license that has been suspended for a DUI	84,733	23.08
Reckless driving	29,022	7.90
Engaging, aiding, or abetting in an illegal vehicle speed contest	8,876	2.42

This table shows the most common traffic offenses that were removed from our main analysis.

Table D.10: ZB Offenses by Offense Severity

Offense Level	ZB Ineligible	ZB Eligible	Total:
Felony	397,080	244,275	641,355
Misdemeanor	294,969	519,399	814,368
Total:	692,049	763,674	1,455,723

This table shows the most common offenses that were eligible for zero bail from March 24, 2020, through September 30, 2023. This includes both the California Judicial Council's statewide order and county superior court ZB extensions. Calculations were made using only the most serious offense associated with each arrest. Most zero bail orders made second-degree burglary eligible for zero bail and first-degree burglary ineligible for zero bail.

Table D.11: Unique Offenses by Offense Severity and ZB Eligibility during the Judicial Council's Emergency Bail Order

Offense Level	ZB Ineligible	ZB Eligible	Total:
Felony	677	2,092	2,769
Misdemeanor	127	3,729	3,856
Total:	804	5,821	6,625

This table shows the number of unique offense codes in our data by offense level and eligibility for zero bail under the Judicial Council's emergency bail order. We calculated this table using California Penal Code, California Vehicle Code, California Health and Safety Code, California Welfare and Institutions Code, California Family Code, and the California Department of Justice: Law Enforcement Code Tables.