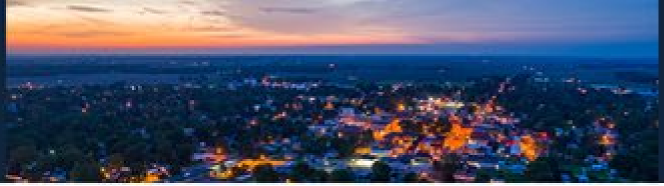

# The Life Cycle of a Bank Enforcement Action and Its Impact on Minority Lending

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# Motivation

- Mortgage lending is a large consumer finance market
  - Outstanding loan amounts of around $10 trillion in 2019 [NYFRB, 2020]
- Homeownership conveys important social and economic benefits
  - Homeownership tied to intergenerational wealth transfers, explains wealth gap between whites and minorities [Blau Graham(1990); Collins Margo(2001); Di et al. (2007); Newman Holupka (2016); Shapiro (2006); Wainer Zabel (2020)]
  - Children of homeowners have higher educational attainment, lower likelihood of incarceration [Aaronson (2000); Green et al. (1997)]

# Motivation

- Despite over 50 years of legislative initiatives, mortgage lending discrimination remains an important issue and the subject of ongoing research and policy considerations
- Although algorithmic lenders have reduced disparity, the issue of discrimination in mortgage lending remains [Bartlett et al.,(2019)]
- We aim to understand the special role that bank regulators and supervisors play in shaping banks' lending decisions with respect to minority borrowers

# Research Question

- How does the supervisory enforcement process affect banks' borrower base in residential mortgage lending, specifically with respect to minority borrowers?

- What mechanisms drive the change?

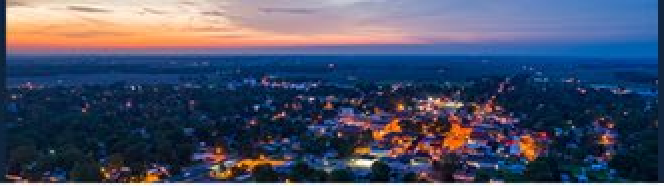
# Bank Enforcement Actions

- Enforcement decisions and orders (EDOs) have been issued by bank regulators since 1966 (FISA)

- Disclosed since August 9, 1989 (FIRREA)
  - Measure of last resort
  - Force banks to take corrective actions
  - We focus on the most severe types: Cease and Desist (C&D), Formal or Supervisory Agreements, Consent Orders, Prompt Corrective Actions (PCA)

# Enforcement Actions are Disruptive for Banks

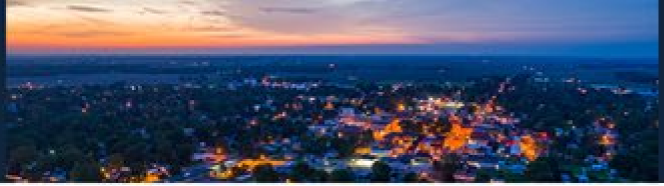
- EDOs force banks to cut risky lending, change management, increase capital and provisions, and improve internal control systems
- We find that deposits and deposit market shares decline during an EDO, revert thereafter
  - Sample banks rely heavily on deposit funding (loan to deposit ratio of 0.79)
- We find a corresponding decline in total loans and commercial loans
  - Surprisingly, we find <u>no significant decline in residential mortgages</u>



# EDO Banks Increase Lending to Minorities

| | Average number of distinct counties where EDO banks are active | Average number of distinct counties where EDO banks lend to minorities | Of which: minority population greater than 50% of county population |
|---|---|---|---|
| | (1) | (2) | (3) |
| Pre EDO (year -3) | 22 | 6 | 3 |
| Pre EDO (year -2) | 22 | 7 | 3 |
| Pre EDO (year -1) | 22 | 7 | 3 |
| During EDO (annualized, on average) | 21 | 6 | 3 |
| Post EDO (year 1) | 25 | 8 | 3 |
| Post EDO (year 2) | 27 | 9 | 3 |
| Post EDO (year 3) | 29 | 9 | 4 |
| Post EDO (year 4) | 31 | 10 | 4 |
| Post EDO (year 5) | 31 | 11 | 4 |

- Expand geographic footprint in lending to minorities (defined as non-white borrowers)
  - Increase in minority lending is not driven by expansion into majority-minority counties



# EDO Banks Increase Lending to Minorities

| | Portfolio shares of residential mortgage loans to minorities | Market shares of residential mortgage loans to minorities |
|---|---|---|
| | (1) | (2) |
| During EDO | -1.380** | -0.074 |
| | (-2.269) | (-1.612) |
| Post EDO (year 1) | 1.010 | 0.916*** |
| | (1.222) | (14.342) |
| Post EDO (year 2) | 2.474*** | 0.947*** |
| | (3.050) | (15.085) |
| Post EDO (year 3) | 1.177 | 0.869*** |
| | (1.477) | (13.958) |
| Post EDO (year 4) | 4.423*** | 1.133*** |
| | (5.476) | (18.202) |
| Post EDO (year 5) | 6.046*** | 1.413*** |
| | (7.334) | (21.971) |
| Observations | 162,769 | 497,594 |
| Wald $\chi^2$ | 414*** | 8873*** |
| Estimation method | RE Tobit | RE Tobit |
| Controls | Yes | Yes |
| Year, County, Bank RE | Yes | Yes |
| Years | 1994–2018 | 1994–2018 |

- Portfolio share of lending to minorities increases by 2.5%–6.0% (mean: 6.5%)
- County-level market share in mortgage lending to minorities increases by 0.87%–1.41% (mean: 0.41%)

# EDO Banks Increase Lending to Minorities

- Empirical challenge: EDOs are not randomly assigned
  - We study changes in <u>county-level market shares:</u> EDO banks expand lending to minorities relative to all banks in a county
  - EDOs are staggered in time and vary by geography
  - Controls for bank characteristics, county-level employment growth, year and bank effects
  - Robustness: Control samples of non-EDO banks matched on bank characteristics, and non-EDO banks randomly selected by year and geography

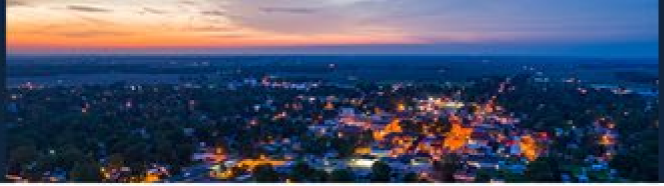
# EDO Banks Increase Lending to Minorities

- Decline in loan application denials
  - Pre-EDO: minority borrowers are 11% more likely to be denied a mortgage relative to white borrowers
  - Post-EDO: denials for minorities falls by half
  - Decline in denials driven by less risky refinancing and home equity loans
    - Drop in denials unlikely to translate to a corresponding increase in homeownership

- Less reliance on nonprice terms
  - Nonprice terms used by banks to ration credit
  - Minorities more likely to be constrained by such terms
  - Post-EDO: minorities are 0.86% less likely to be rejected for a mortgage due to their credit history

# No Increase in Portfolio Risk Post-EDO Termination

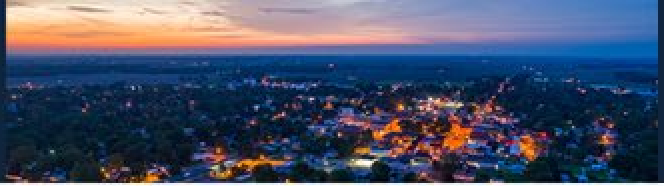
- Decline in total nonperforming assets
- Decline in nonperforming residential mortgage loans
- No change in share of risky loans in total residential mortgage loans at the county-level
  - Risky loans are higher-priced closed-end mortgages



# Our Findings Thus Far…

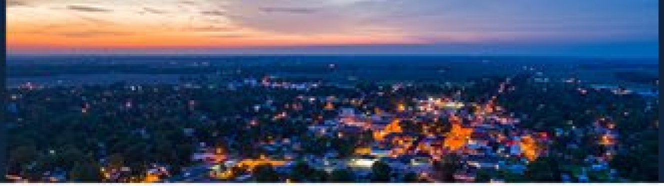
- EDO banks face disruptions in deposit-generating and lending abilities

- The decline in loans does not extend to EDO banks’ residential mortgage portfolio
  - Portfolio and county-level market shares of loans to minorities increase
  - Decline in denials of mortgage applications from minorities
    - Driven by less risky refinancing and home equity loans
  - Less reliance on nonprice terms
  - No increase in riskiness of loans



# Why Do Banks Increase Lending to Minority Borrowers Post EDO Termination?

1. Improvements at the bank: remedy issues
   - E.g., violation of fair lending laws
   - Review and update risk assessment procedures (e.g., use additional sources of information)
2. Manage Capital Ratios: residential mortgages have lower risk weights
3. Cater to regulators to gain future leniency
   - EDO banks lose credibility with their regulators: invite greater scrutiny in the future
   - Regulators may exercise forbearance towards banks that lend to minorities
4. Increase in competition from non-EDO banks may cause expansion to previously underserved borrowers



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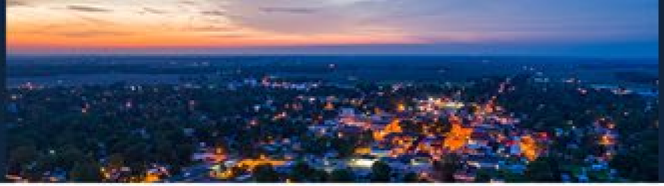
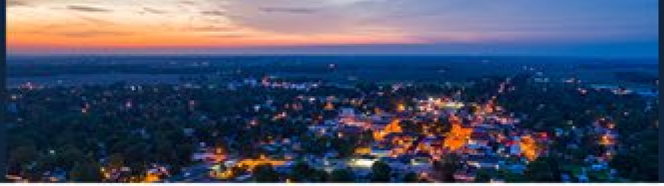


# Evidence: Improvements due to the Enforcement Process

- Banks less likely to deny credit based on nonprice terms following EDO termination suggests changes in credit assessment procedures
- No increase in riskiness of loans post EDO termination
- EDO banks that are more likely to witness greater improvements increase lending to minorities more
  - Banks in states with stricter regulators
  - Banks that received more severe EDOs (length of time to exit the EDO)

# Evidence: Catering to Regulators

- Banks with stricter regulators and more severe EDOs also have greater incentives to cater
- Banks with low CRA ratings in the pre-EDO period increase lending to minorities more
  - The Community Reinvestment Act was enacted by Congress in 1977 to encourage credit availability in low and moderate-income areas
  - Banks need to maintain a satisfactory CRA rating if they plan to expand or make any substantial changes to their operations



# Summary and Conclusions

- Explore the impact of supervision and enforcement on bank borrower base
  - EDO banks increase lending to minority communities following EDO termination
  - Evidence consistent with improvements due to the enforcement process, and banks' catering to regulators
- Increase in lending driven by less risky refinancing and home equity loans
  - Unlikely to lead to a corresponding rise in homeownership among minority communities