

The dynamics of overdraft fees and incidence

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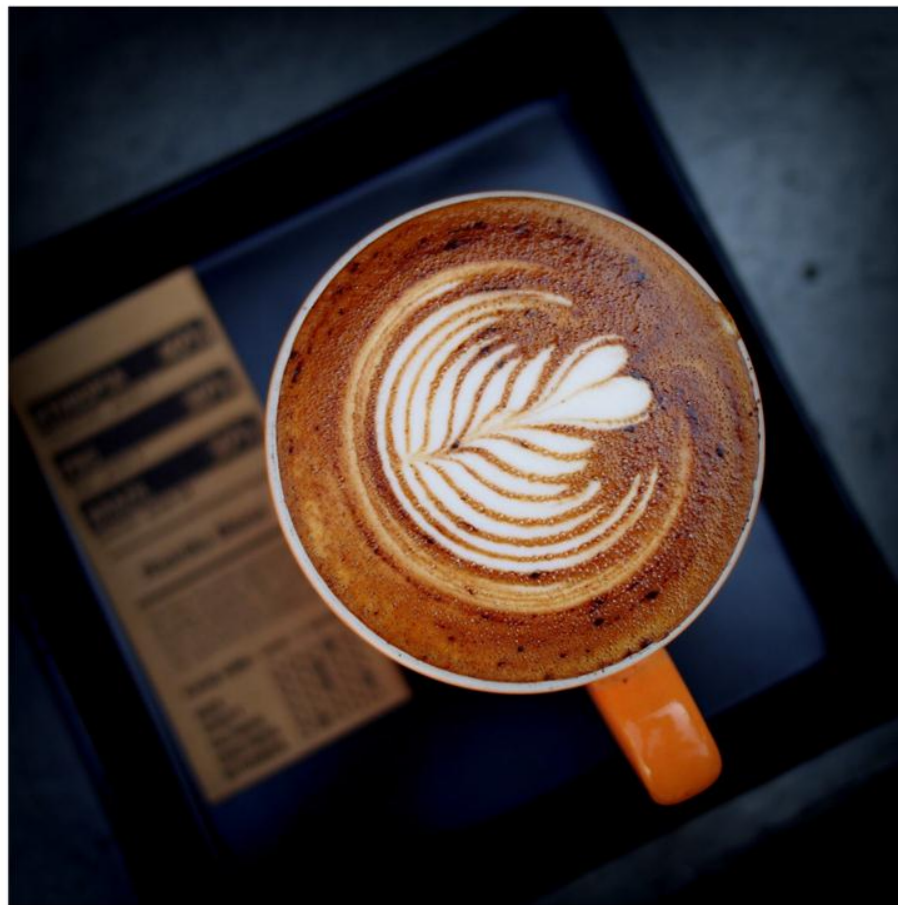
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The \$38 latte

The emergence of overdraft

- Scenario: Consumer attempts to spend or withdraw funds exceeding available funds in checking account.
- This used to result in denial and non-sufficient funds (NSF) fee.
- Over time, depository institutions (DIs) started covering such transactions on a manual courtesy basis, resulting in an overdraft with an overdraft fee (usually the same as the NSF fee).
- During the 2000s, overdraft programs became more automated, especially at larger DIs.

Overdraft today

- 70%+ of large DIs have automated programs.
- Median and modal overdraft fee today is \$35 among top 50 by consumer checking balances.
- Largest source of fees at DIs big and small.
- Consumer advocacy groups, such as CRL, argue that overdraft is abusive.
- Class action lawsuits and settlements regarding posting order and overdraft have proliferated.
- Limited adoption of more consumer-friendly policies like de minimis and posting order has occurred.

Regulation E change

- In mid-2010, the Federal Reserve Board prohibited DIs from charging overdraft fees unless account holder “opted into” overdraft.
- This applied to ATM and non-recurring point of sale debit card transactions, meaning “opted out” may still be charged overdraft fees on check, ACH, etc.

Motivation

- The nature and effect of bank policies on overdraft is starting to be understood (e.g., FDIC Overdraft Study, CFPB White Paper).
- The distribution of overdraft is known to be concentrated among few consumers, e.g., over 70% of fees from 8% (CFPB Data Point).
- There is little systematic study of how consumers use overdraft, including how this use changes over time.

Data source

- CFPB confidential supervisory information
- Several large banks with over 20 million checking accounts at the end of 2010
- Randomly sampled a fraction of the banks' account holders
- Transaction-level: January 2011–June 2012
- Account-level: January 2010–June 2012

Transaction data

- Every transaction
- Transaction date, time, amount, and type (e.g., check deposit, recurring debit card purchase, ATM withdrawal, etc.)
- Posting date, posting order
- Ledger balance
- Overdraft/NSF flag

Monthly account data

- Account activity
 - monthly total deposits (\$)
 - monthly debit card transactions (#)
 - monthly other debit transactions (#)
 - monthly overdraft/NSF fees (\$)
- Deposit balances and credit available in other accounts (linked and unlinked) at end of month
- Opt-in status
- Overdraft coverage availability
- Customer year of birth, singly or jointly-held account, zip code, account type
- Account open and close date, close reason

Sample construction

Accounts	Opted-in
Complete sample	152,930
AND tenure greater than 3 months and less than 10 years	111,681
AND with a positive overdraft limit	102,550
AND incurred some OD/NSF fees over the sample period	54,752
AND has corresponding average daily balance	54,523

Accounts	Opted-out
Complete sample	928,988
AND tenure greater than 3 months and less than 10 years	688,487
AND with a positive overdraft limit	640,430
AND incurred some OD/NSF fees over the sample period	183,065
AND has corresponding average daily balance	181,934

Accounts	Opt-status changers
Complete sample	18,248
AND tenure greater than 3 months and less than 10 years	15,437
AND with a positive overdraft limit	13,392
AND incurred some OD/NSF fees over the sample period	8,541
AND has corresponding average daily balance	8,533

Source: Sample banks' microdata, Jan. 2011 through June 2012.

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Model specification

- Weighted fixed-effects panel data OLS
- Dependent variables: OD/NSF fees (\$) and indicator for OD/NSF incidence in the month
- Overdraft limit, balance, and deposits are transformed by inverse hyperbolic sine function
- Average daily balance is Winsorized at 99%
- Separate runs for opted-in and opted-out accounts
- Identifying assumption: no tenure effect after 5 years

Summary statistics

	Mean
Opted-in accounts	
Indicator for incurring an OD/NSF fee	26.72%
Monthly OD/NSF fees	29.24
Opted-out accounts	
Indicator for incurring an OD/NSF fee	14.72%
Monthly OD/NSF fees	10.25

Source: Sample banks' microdata, Jan. 2011 through June 2012.

Sample: Accounts with tenure greater than 3 months but less than 20 years with a positive overdraft limit that incurred some OD/NSF fees over the sample period.

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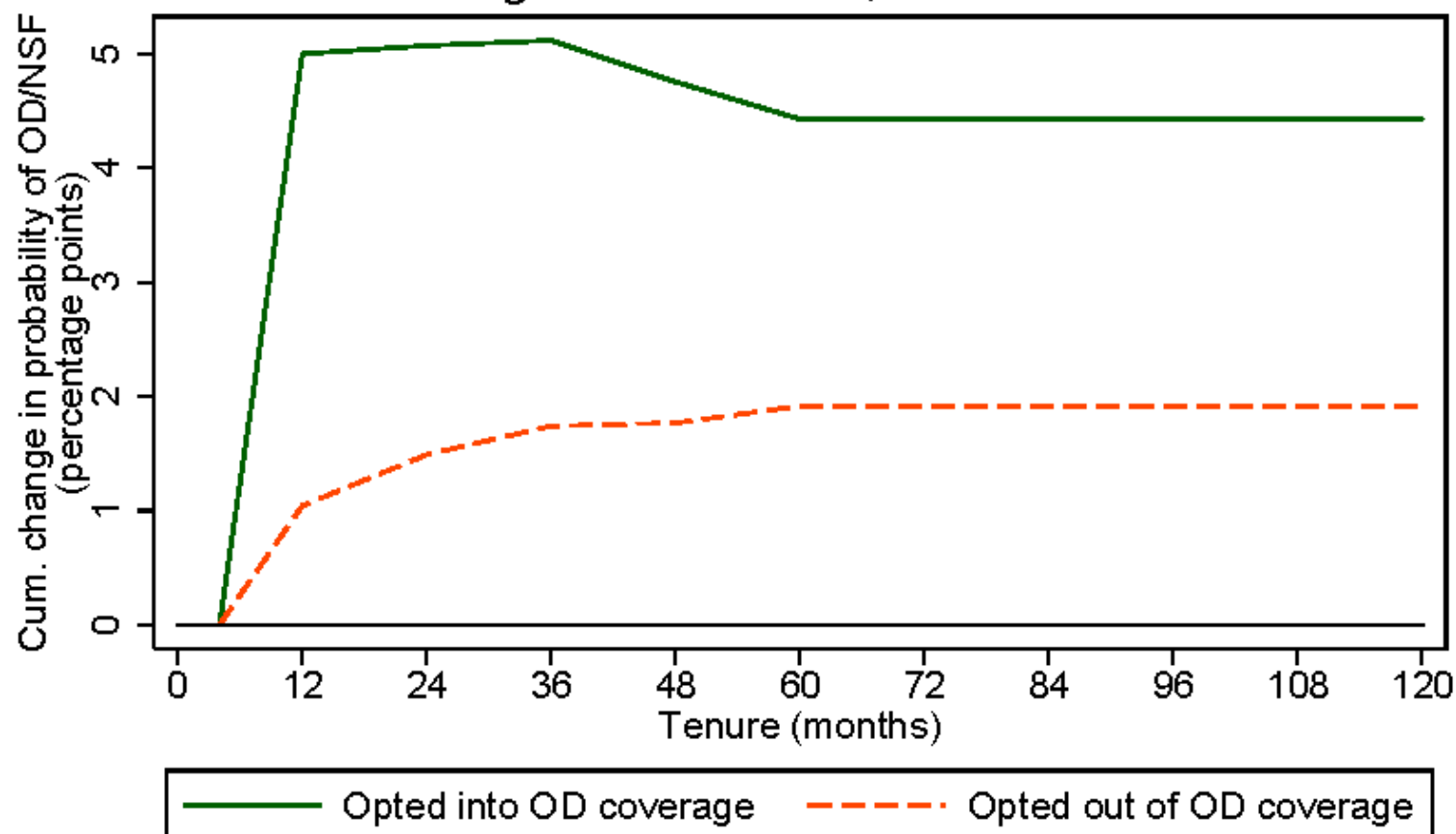
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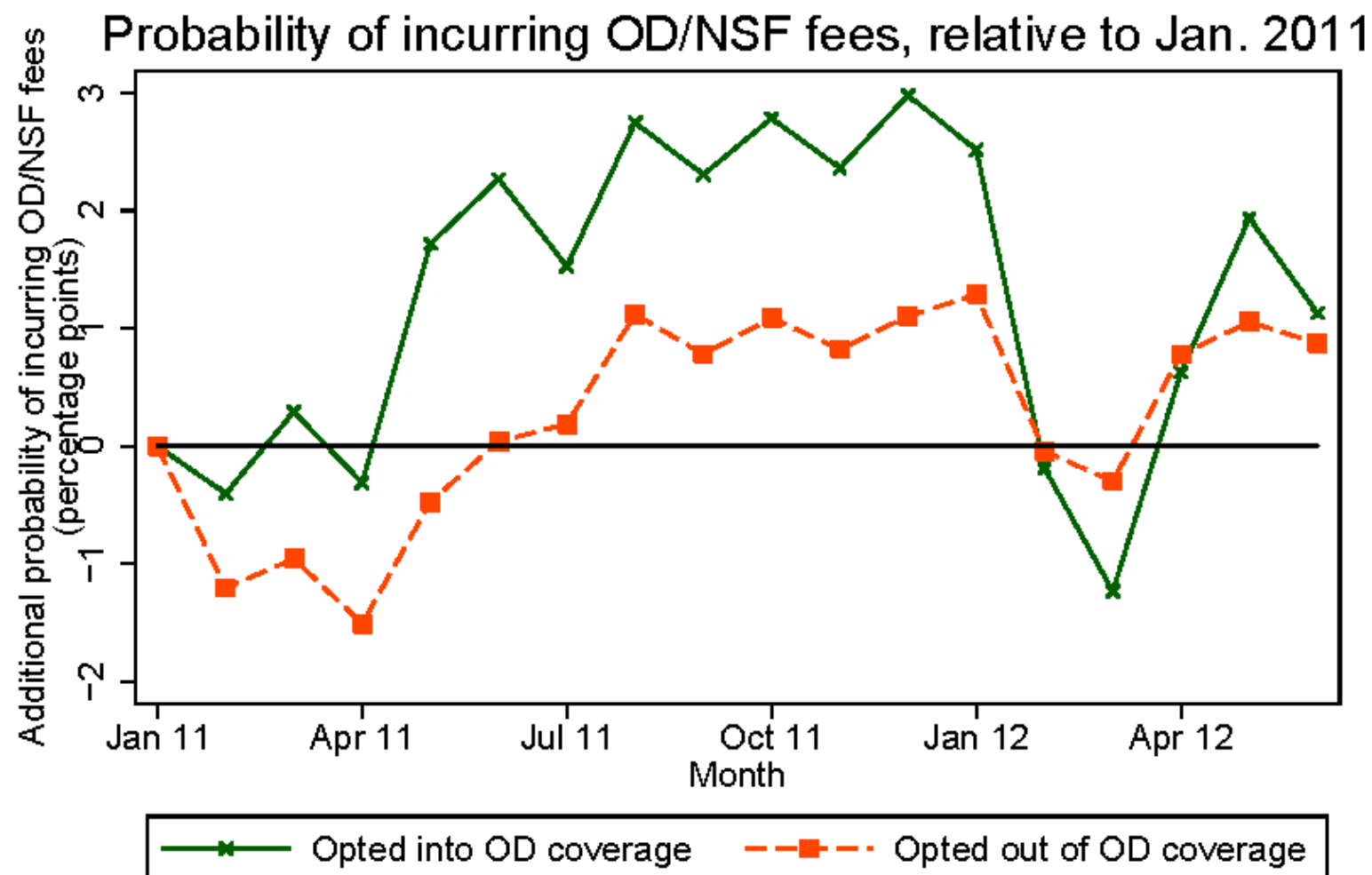
Implied path of incidence

Cumulative effect of tenure on probability of incurring OD/NSF fees, relative to month 4



Changes are zero after 60 months of tenure by construction

Time dummies for incidence



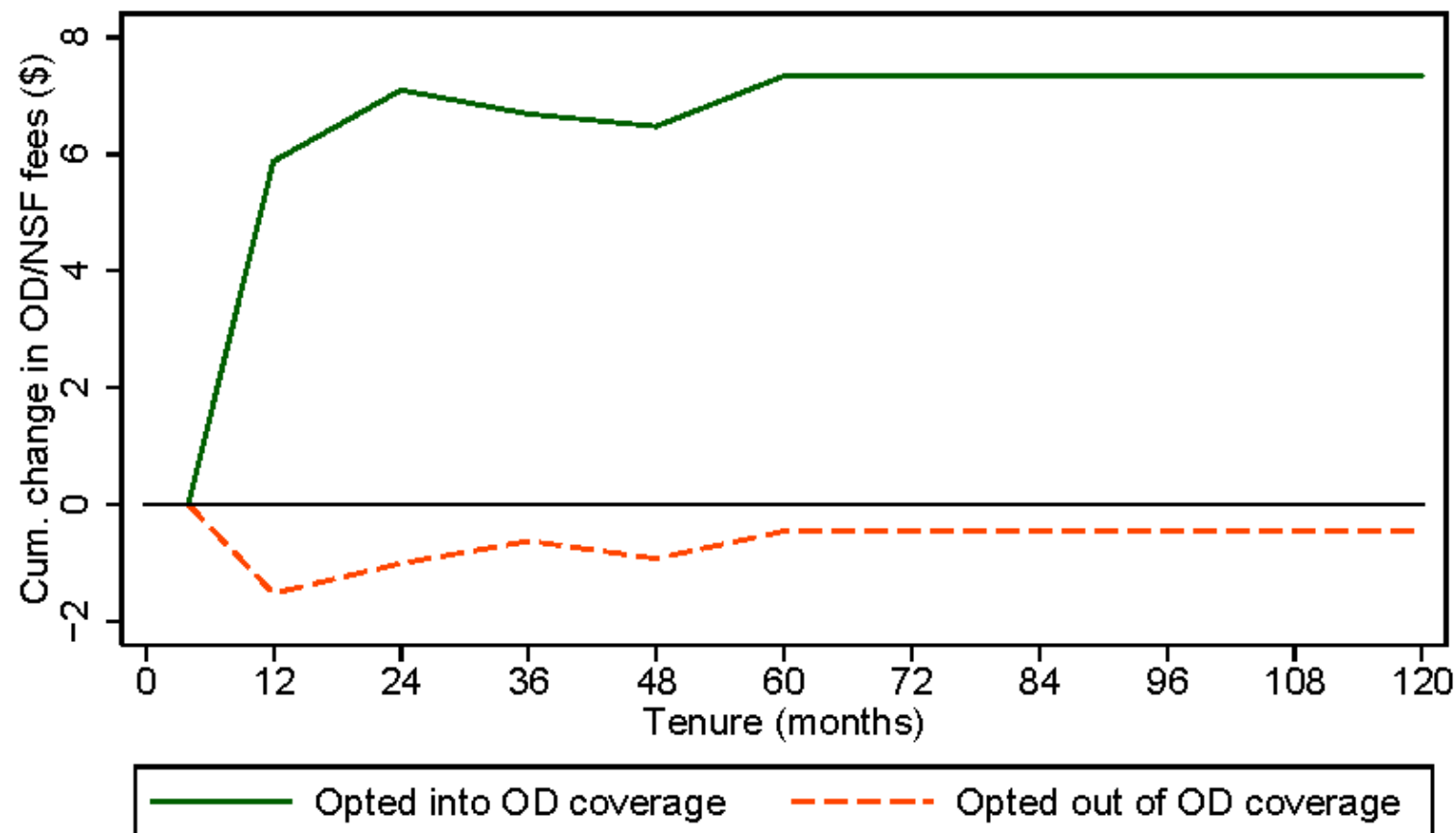
Estimated from accounts with 61–120 months of tenure

Robustness

- Top-coding all dollar variables has no appreciable impact
- Results for below-median and above-median accounts:
 - proportional effects similar
 - effects more pronounced for above-median accounts
 - explanatory power higher for above-median accounts
- Fee persistence month-to-month: 9%-14%

Implied path of fees

Cumulative effect of tenure on OD/NSF fees,
relative to month 4



Changes are zero after 60 months of tenure by construction

Possible explanations

- Increase in deliberate overdrafts and bounced checks in presence of financial distress — neoclassical model
- Declining attention paid to overdraft
 - account opening especially after Regulation E is shock to consumer attention, as in Stango and Zinman (2014)
 - salience declining with tenure
- Declining knowledge about overdraft policies or opt-in status, as in Frank and Smith (2011)

Future work

- Separately analyze OD and NSF fees using the transaction data
- Separately analyze by age
- Check robustness using more banks
- Develop theoretical model