

Analytic methods to understand consumers

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Regulatory Policy Institute, 24th September 2018

FCA research

I. Theory/ literature

[OP1](#): **Applying behavioural economics** at the Financial Conduct Authority

[OP26](#): Behavioural insights into the **advertising of financial products**

II. Field experiments

[OP2](#): Encouraging consumers to claim **redress**

[OP7](#): Reminding **savers** to act when rates decrease

[OP12](#): Encouraging consumers to act at renewal: **home and motor insurance**

[OP19](#): Attention, search and switching: disclosure in the **savings** market

[OP23](#): A round-up of FCA experimental research into **disclosure**

[OP38](#): Testing **retirement communications**

[OP40](#): A field experiment on **overdraft alerts**

[OP44](#): Consumer intentions, beliefs and actions to **pay down credit card debt**

[OP45](#): Nudging consumers to **pay down credit card debt**

III. Natural experiments

[CP14/10](#): **Payday loan** price cap analysis (published in Review of Financial Studies)

[OP10](#): Impact of annual summaries, text alerts and mobile apps on **consumer banking** behaviour

[OP20](#): Can we predict which **consumer credit** users will suffer financial distress?

[OP28](#): Preventing financial distress by predicting **unaffordable consumer credit**

[OP36](#): Impact of automatically enrolling consumers into **overdraft alerts**

Lab experiments

[OP3](#): How does selling **insurance as an add-on** affect consumer decisions?

[OP9](#): Evidence that investors overvalue **structured deposits**

[OP23](#): Round-up of FCA experimental research into **disclosure**

[OP32](#): drawing attention to charges in **asset management**

[OP42](#): Increasing **credit card payments** using choice architecture

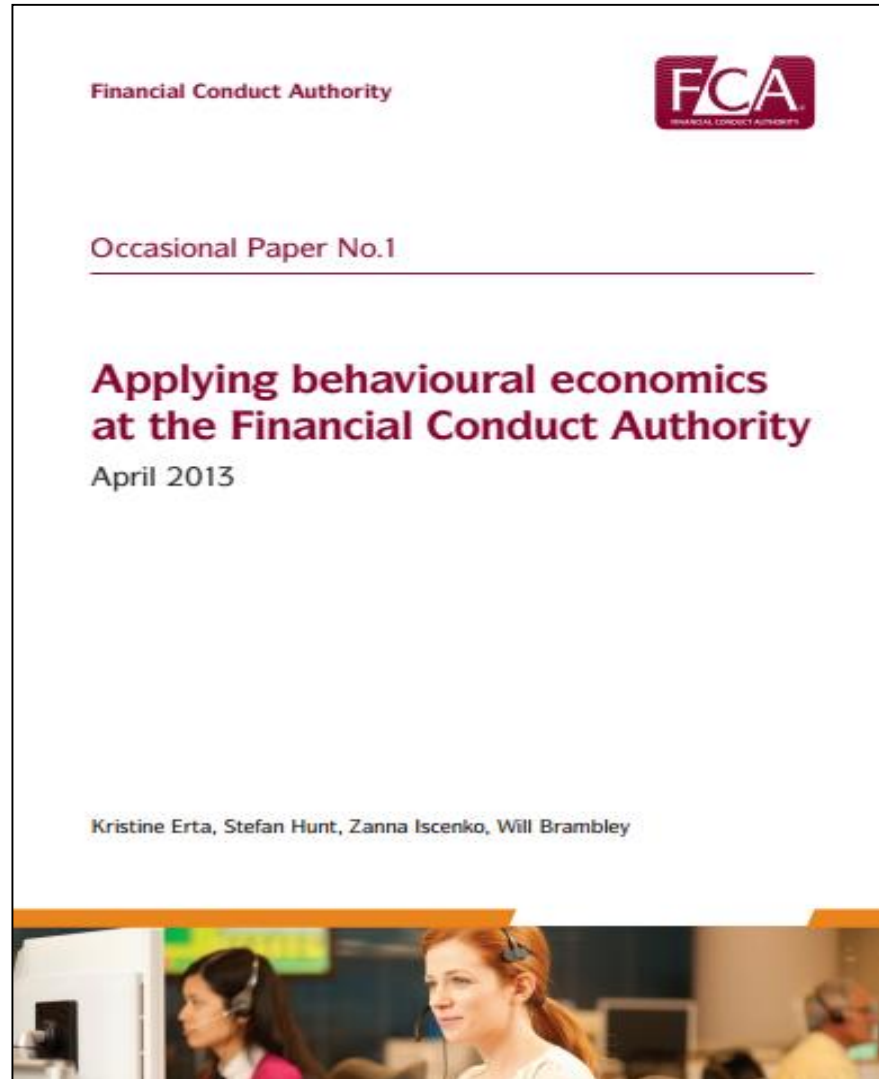
[OP43](#): Linking credit card experiment with survey responses and actual **credit card payment**

All views expressed here are mine

They should not be interpreted as reflecting the views of the Competition and Markets Authority or the Financial Conduct Authority

I am not stating or proposing policy

I. Theory/ literature (OP1)



II. Field experiments

Phase 1: beginning

[OP2](#): Encouraging consumers to claim **redress**

Phase 2: to policy

[OP7](#): Reminding **savers** to act when rates decrease

[OP12](#): Encouraging consumers to act at renewal: **home and motor insurance**

[OP19](#): Attention, search and switching: disclosure in the **savings** market

[OP23](#): A round-up of FCA experimental research into **disclosure**

[OP38](#): Testing **retirement communications**

Phase 3: integration

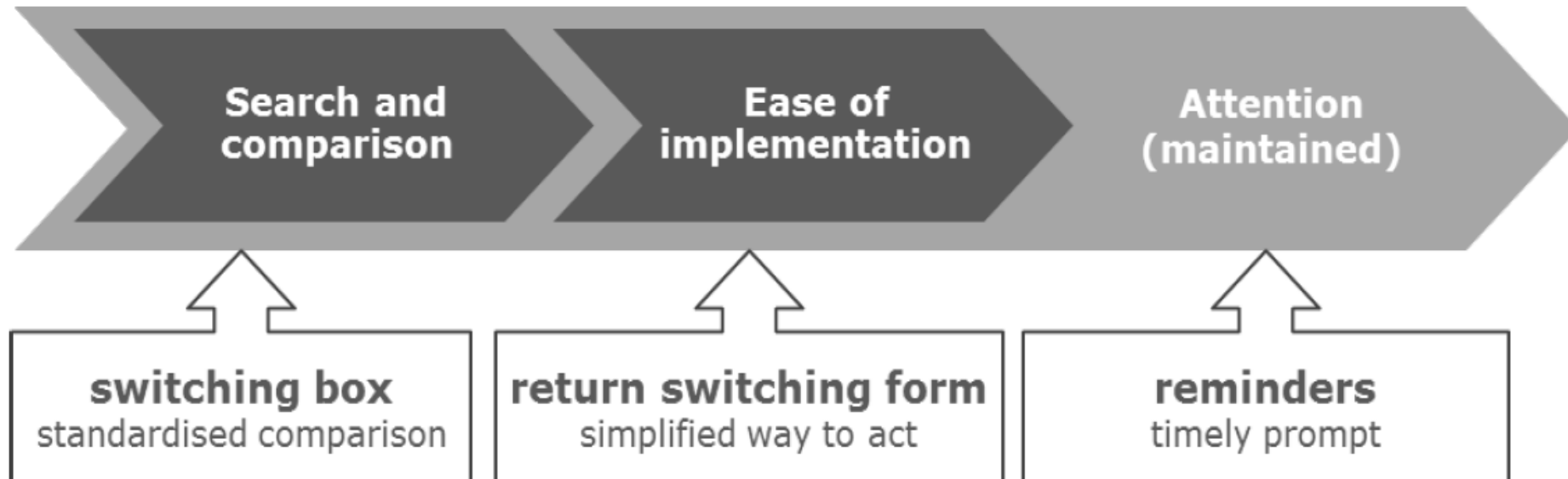
[OP40](#): A field experiment on **overdraft alerts**

[OP44](#): Consumer intentions, beliefs and actions to **pay down credit card debt**

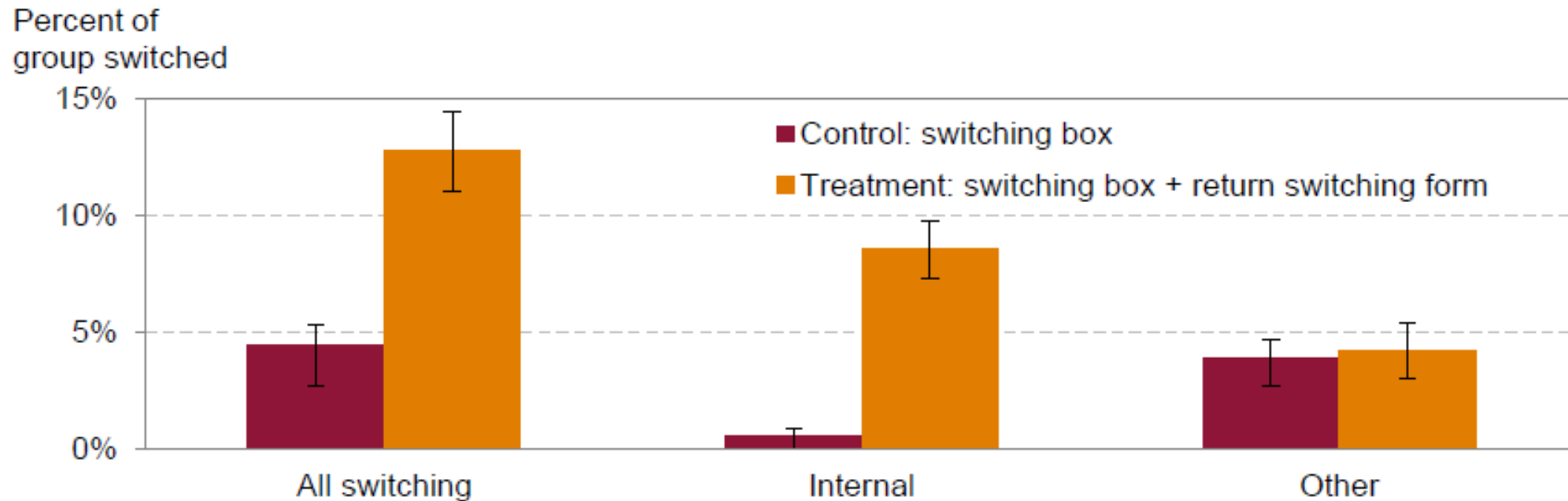
[OP45](#): Nudging consumers to **pay down credit card debt**

Phase 2: Cash savings field experiment (OP19)

- Encouraging results from an early experiment (OP7)
- Field experiment with 5 firms, 130,000 customers
- Testing 12 treatments in 3 types of intervention/disclosure



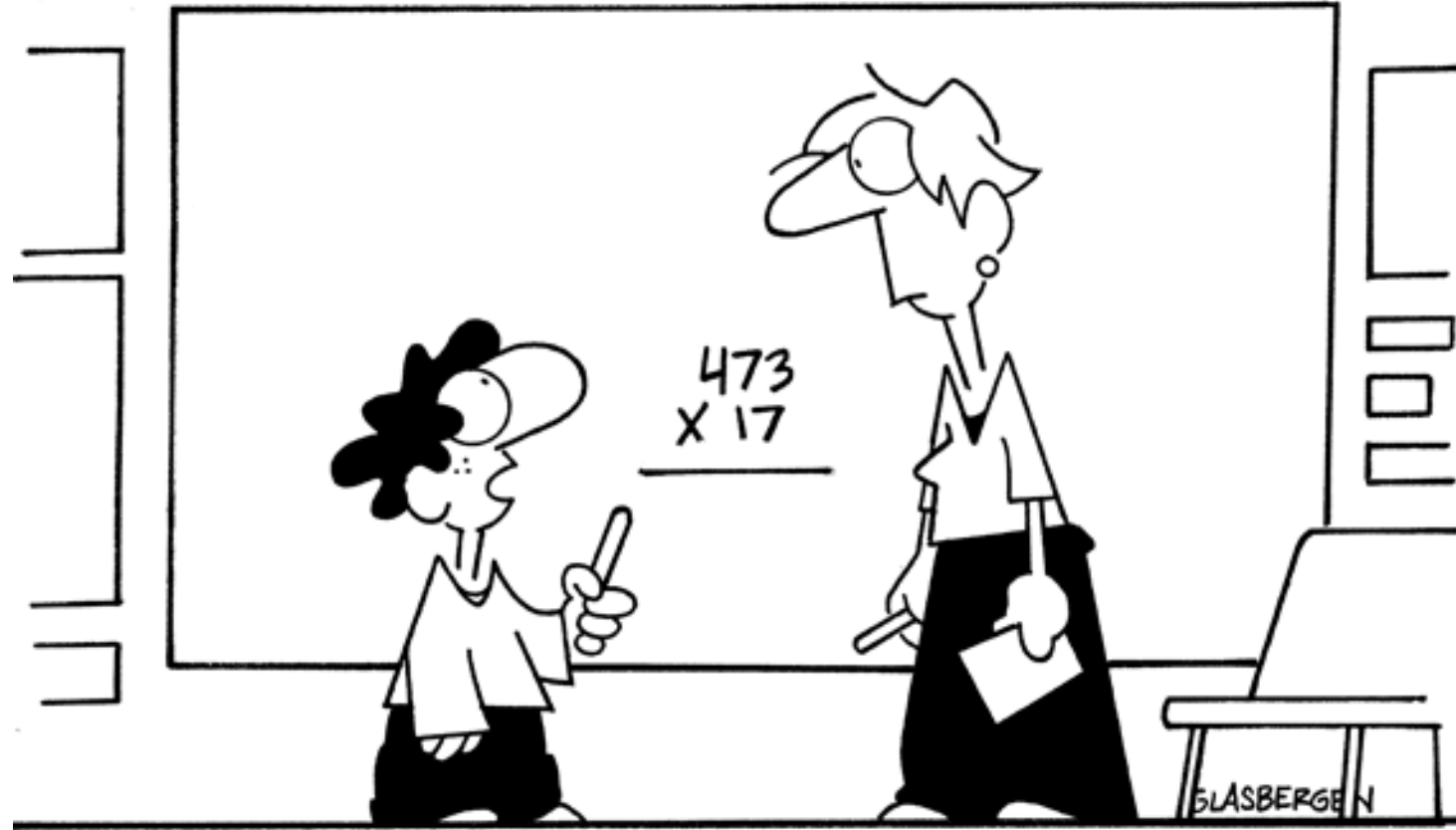
Cash savings field experiment: switching form



n=4,126

What did we learn? (1)

- Better use of theory to develop potential remedies
- Even “free money” is not enough to get people to switch at high levels
- More generally, potential engagement policies insufficient to deal with consumer inertia. Disclosure largely ineffective
- A large amount on the process of running trials
- Led to new policy, Basic Savings Rate. Iterative policymaking



**“If we learn from our mistakes, shouldn’t
I make as many mistakes as possible?”**

Phase 3: Credit cards - removing “bad” nudge to min pay (OP45)

Automatic minimum, full + fixed payment options

Pay your card bill

Make a payment

Set up a Direct Debit

To set up a Direct Debit you'll need to be the account holder and be able to authorise payments from the account.

Not the account holder or need joint signatures? Just download the Direct Debit instruction form fill it out and return it to us by post. If your joint account only needs one signature, just complete the form below.

How much would you like to pay each month?

The amount will be reduced by any payments received since your last statement

The minimum

It will take longer and generally cost more to clear your balance this way. If you make extra payments, your direct debit will only collect the difference needed to reach the minimum

Statement amount

You will clear your balance this way. If you make extra payments your direct debit will only reduce the difference to your last statement

This much

£

We'll collect your fixed amount or the minimum payment due, whichever is the greater. If you make extra payments, your direct debit will still collect the fixed amount or the remaining balance if this is lower

Removing “bad” nudge to min pay

Pay your card bill

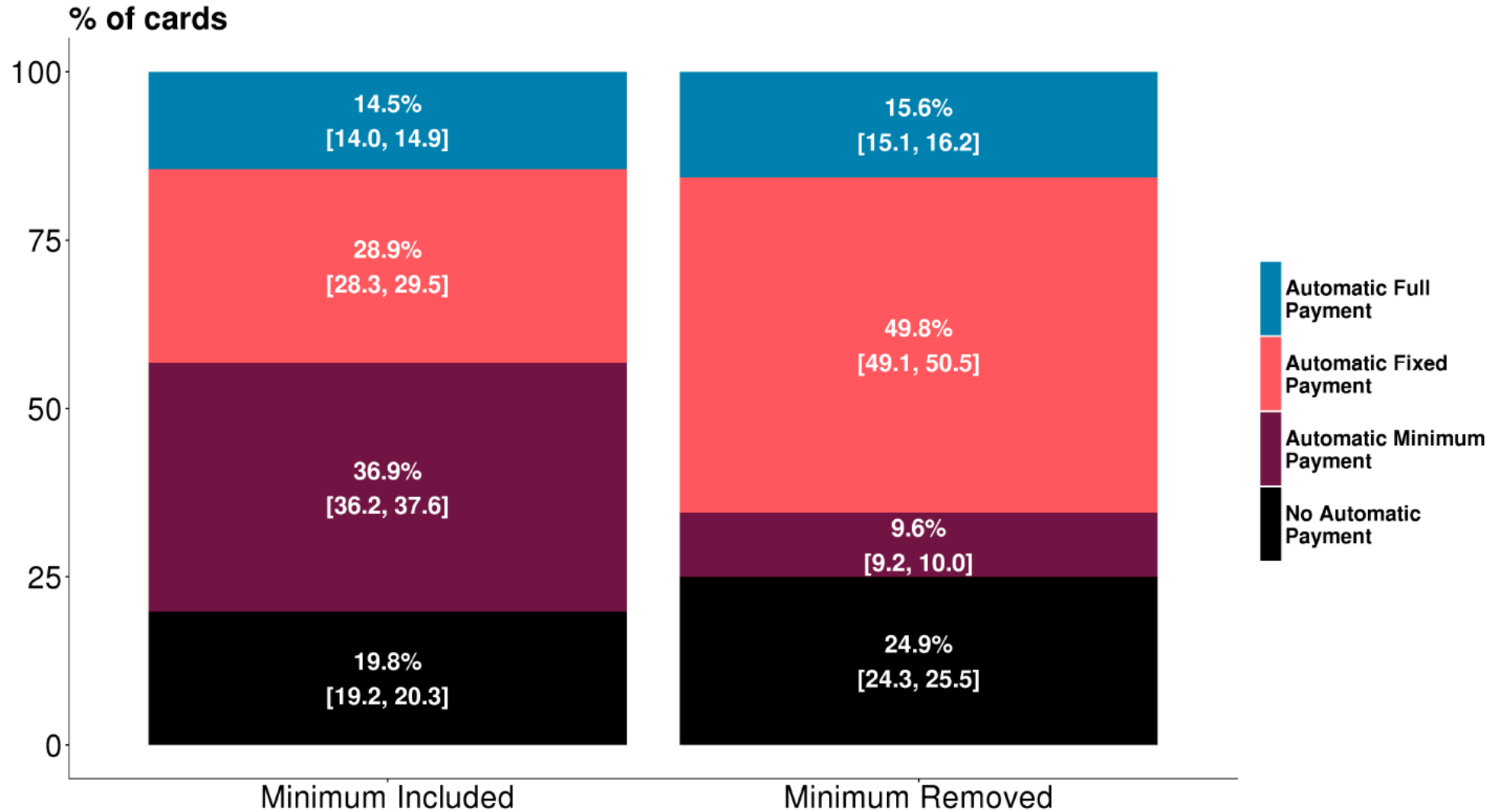
[Make a payment](#) [Set up a Direct Debit](#)

How much would you like to pay each month?
The amount will be reduced by any payments received since your last statement

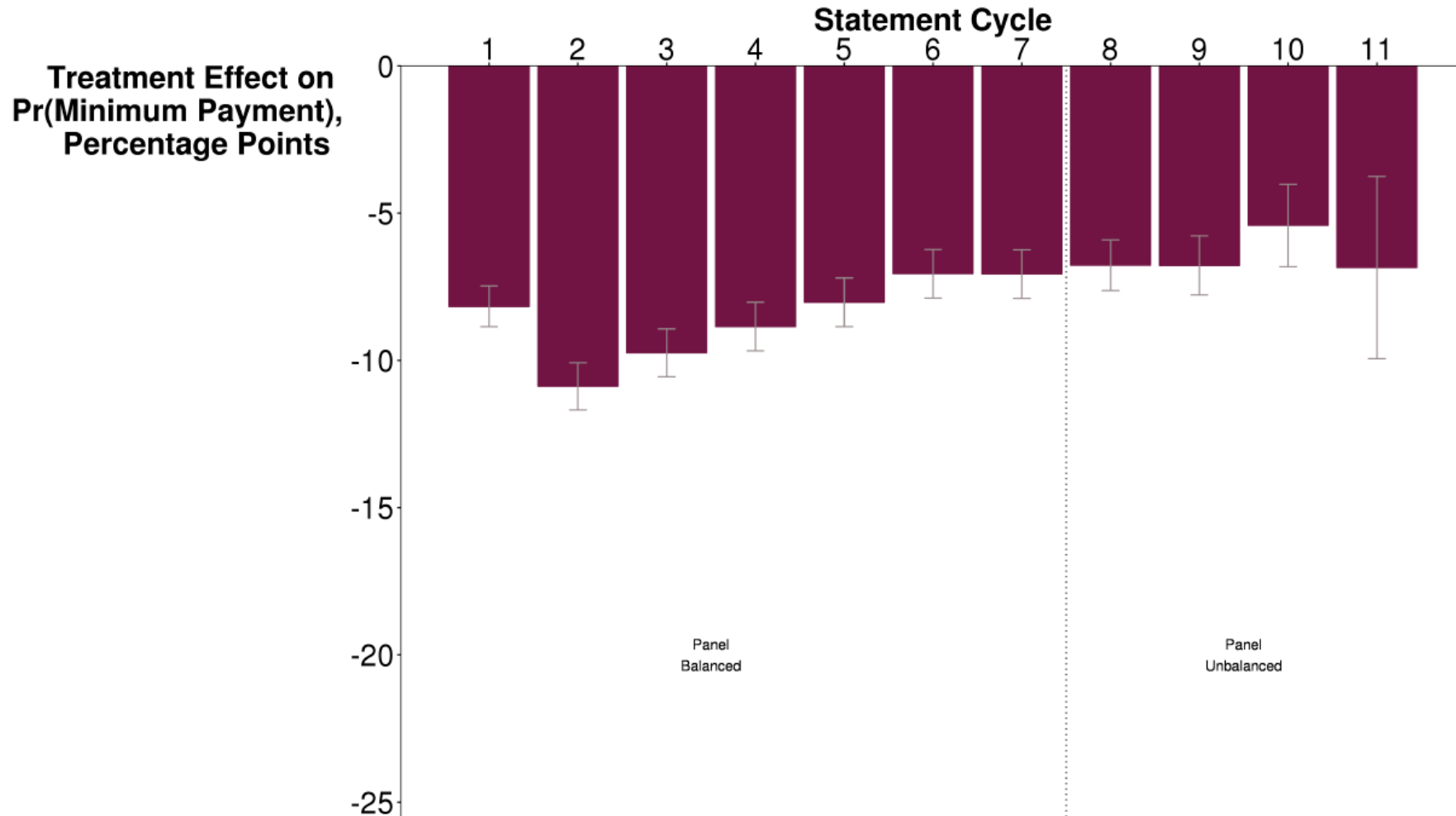
Statement amount
You will clear your balance this way.
If you make extra payments your direct debit will only reduce the difference to your last statement

This much
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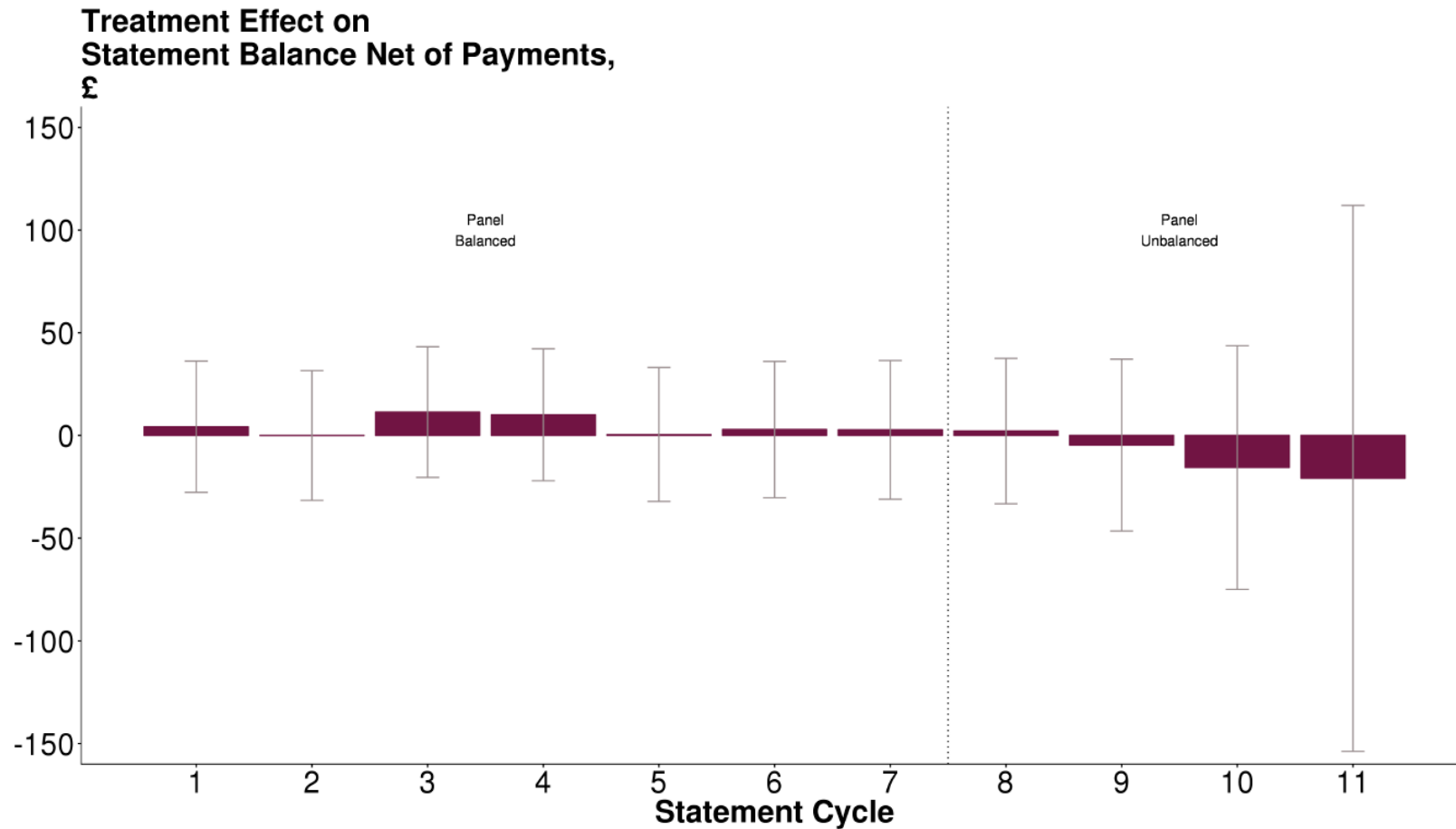
Large effect on direct debit sign-ups



Sizeable impact on min pay...

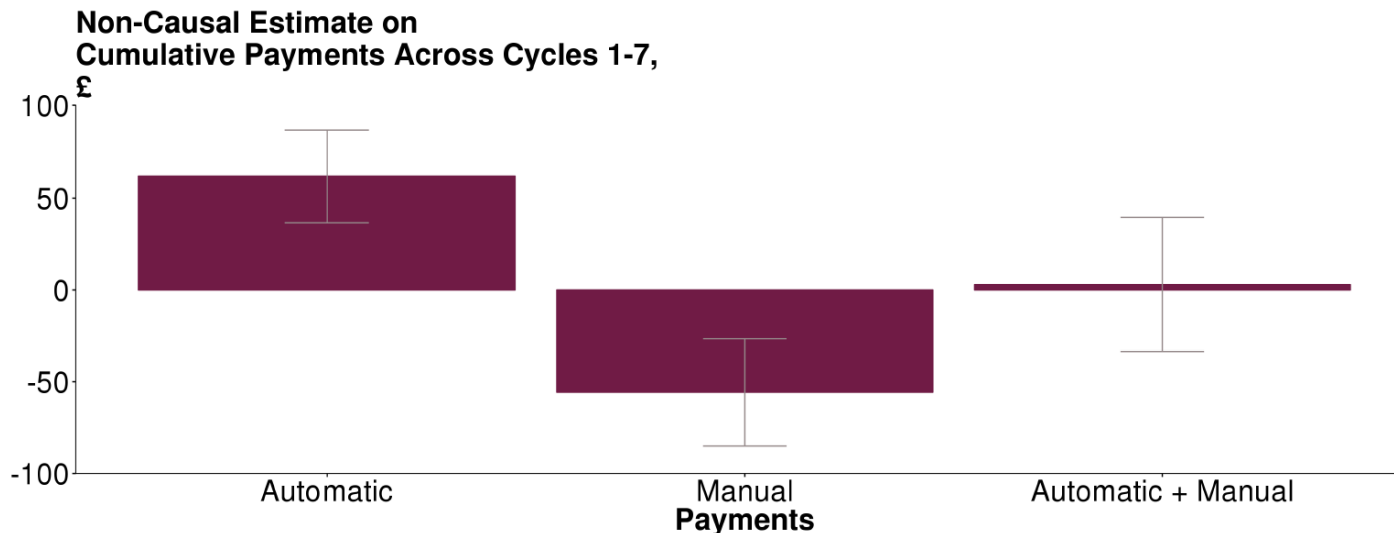


...but no impact on debt held!



Why!?

- Increase in fixed payment choice goes away? No
- Fixed payment choice binds at minimum? No
- Increased spending offsets repayments? No
- Auto payments increase, manual payments decrease, no net effect.



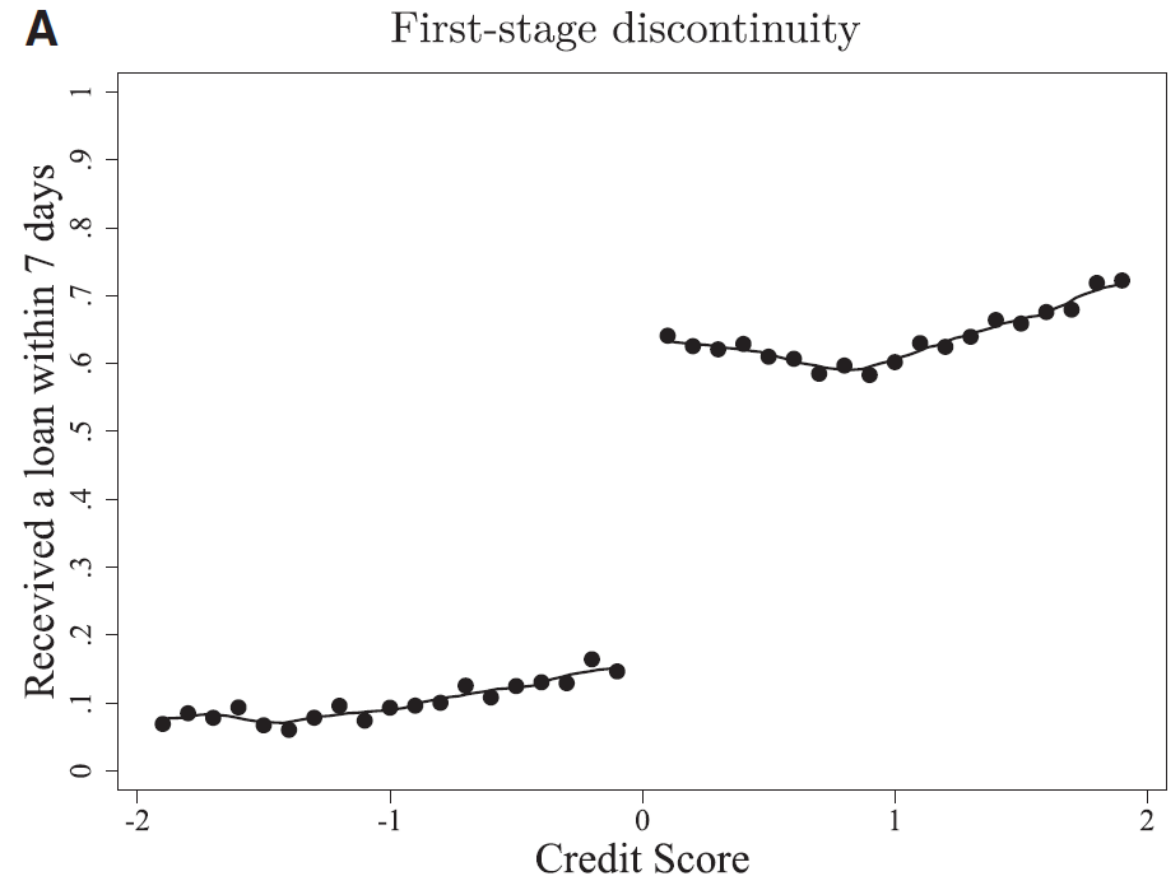
- Manual payments by consumers who have auto payments set up are infrequent but large in value

What did we learn? (2)

- Potential policy would not have worked, again. Need to iterate
- Consumers on auto min payments less inert than first appear
- Need to evaluate nudge effects using longer-term real economic outcomes
- Data with the full array of outcomes important for building understanding

III. Natural experiments: payday loans (RFS, 2018)

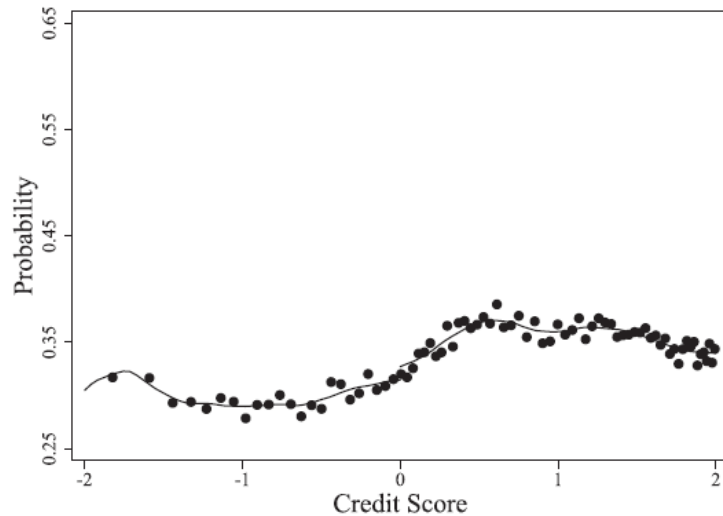
- Loans from top 37 firms, 99% of market
- Denied and accepted loans from 11 large firms, > 90% of market
- Match individuals across all firms. Match in credit reference agency files



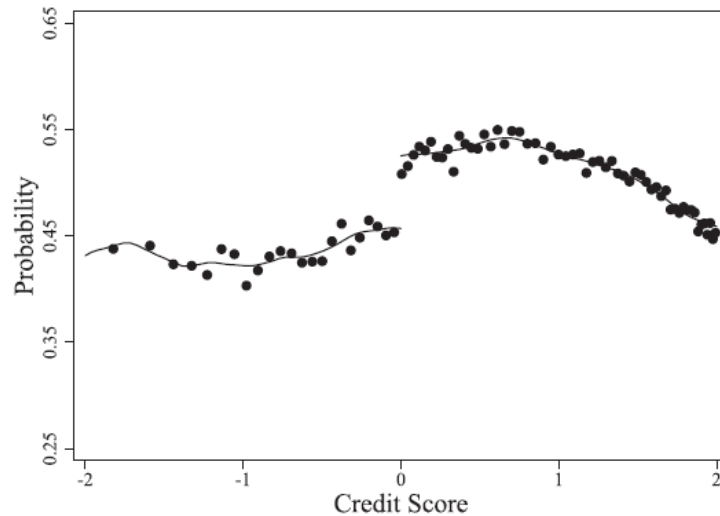
Impact of payday loan given by discontinuity

(1) *Probability of a missed payment on any account*

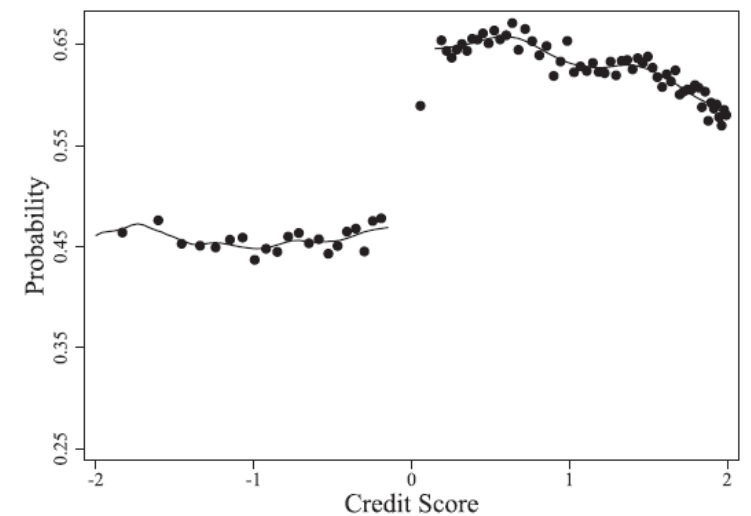
A 0–6 months before



B 0–6 months after

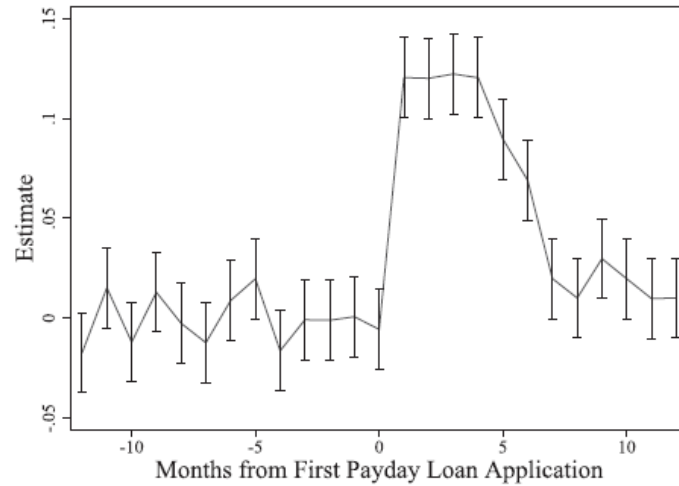


C 6–12 months after

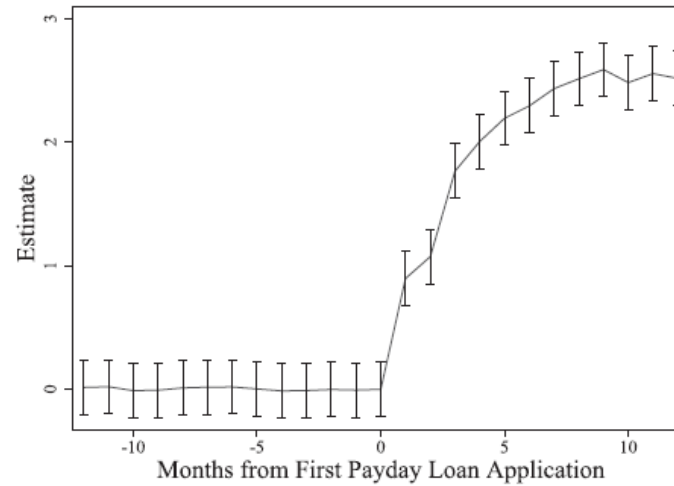


Payday loans lead to greater formal credit use

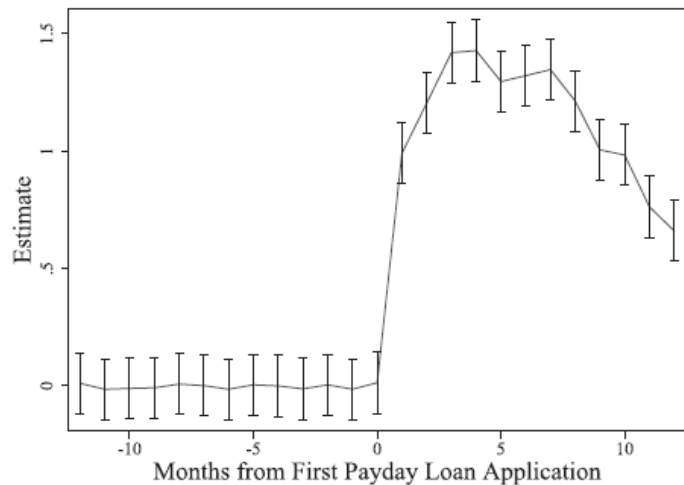
A Non-payday credit applications



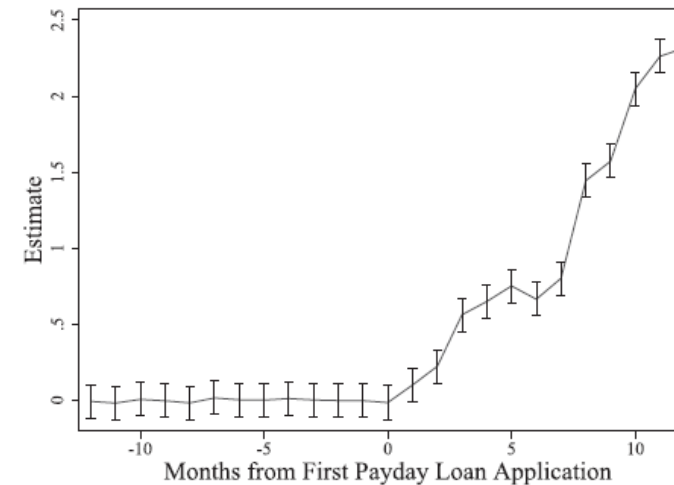
B Credit products held



C Total credit balances

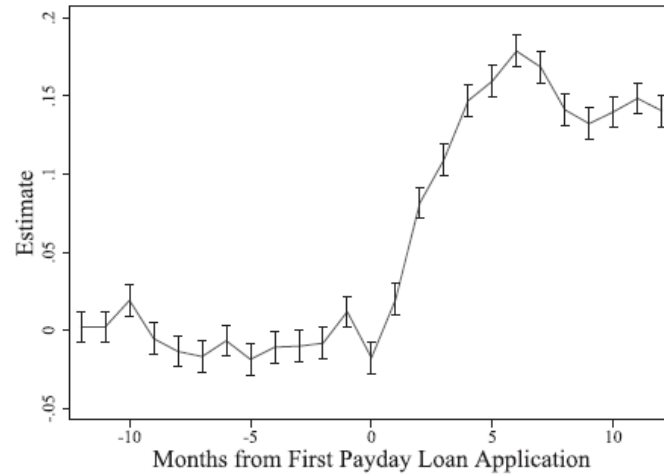


D Non-payday credit balances

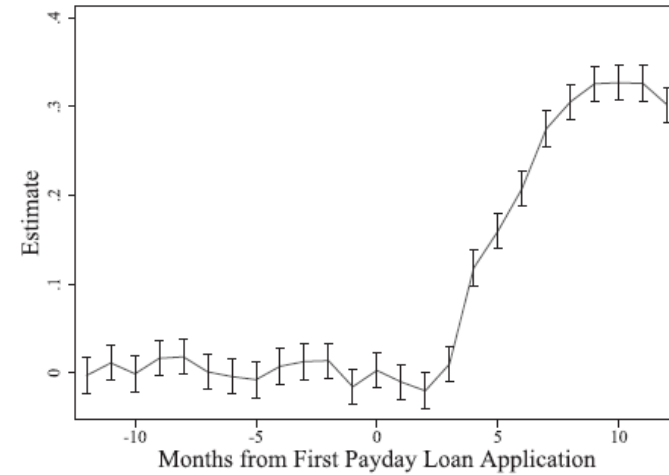


Payments missed, default balances increased and overdraft limits persistently exceeded

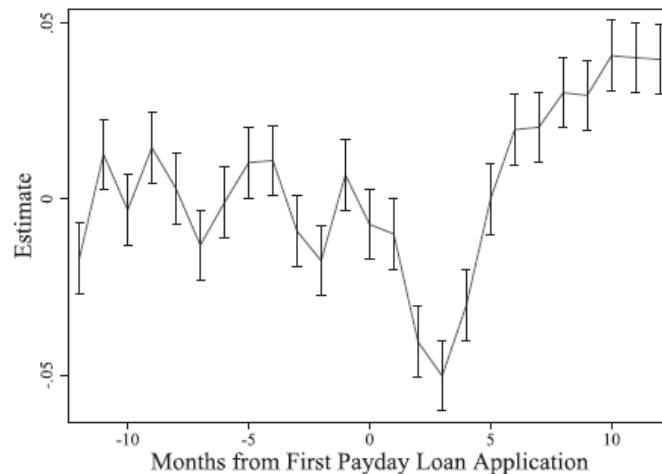
A Missed payment on any account



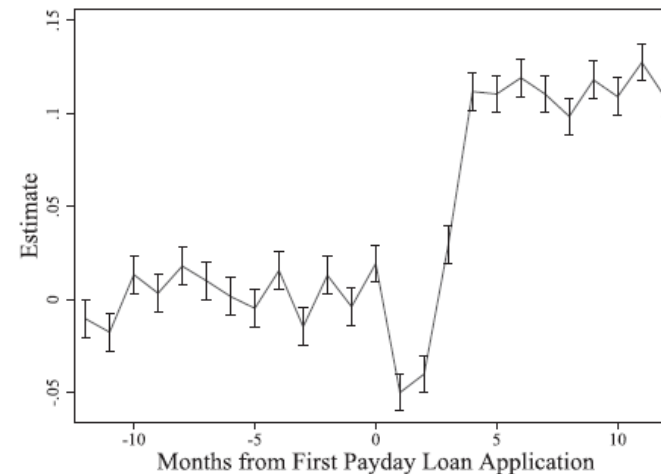
B Missed payment on non-payday account



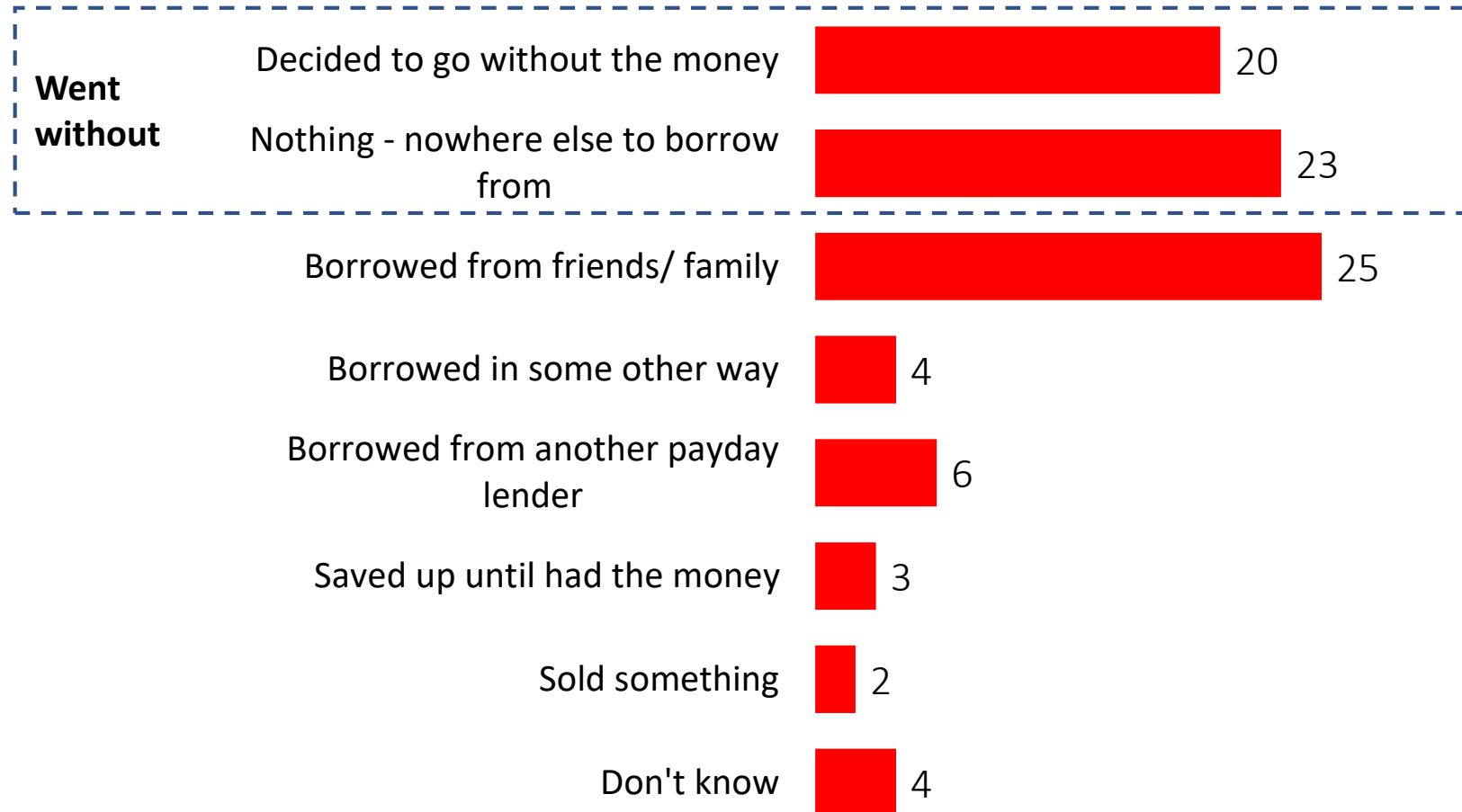
C Non-payday default balances



D Exceeded overdraft limit



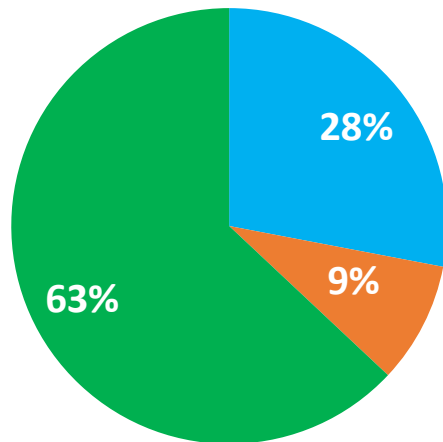
If no payday loan... most do not borrow



No increase in loan shark use, nor impact on subjective well-being or financial distress

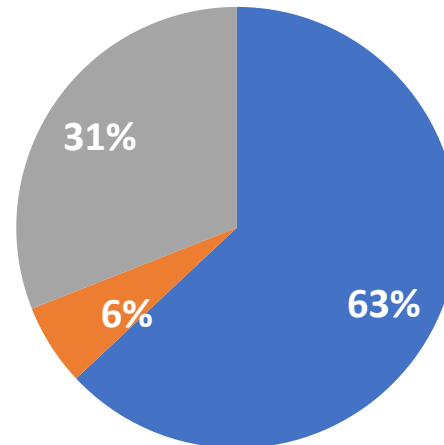
Most without loans think for the best they were declined.
Many who do get loans regret it. And habitual users regret it more

Consumers without loans



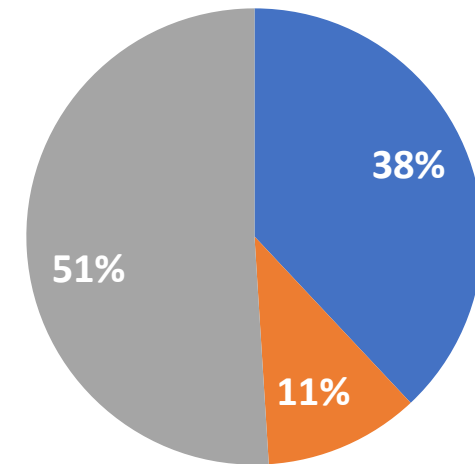
- Better if application accepted
- Indifferent
- For the best application declined

Consumers with loans



- Happy with decision to borrow
- Indifferent
- Regret borrowing

Habitual borrowers



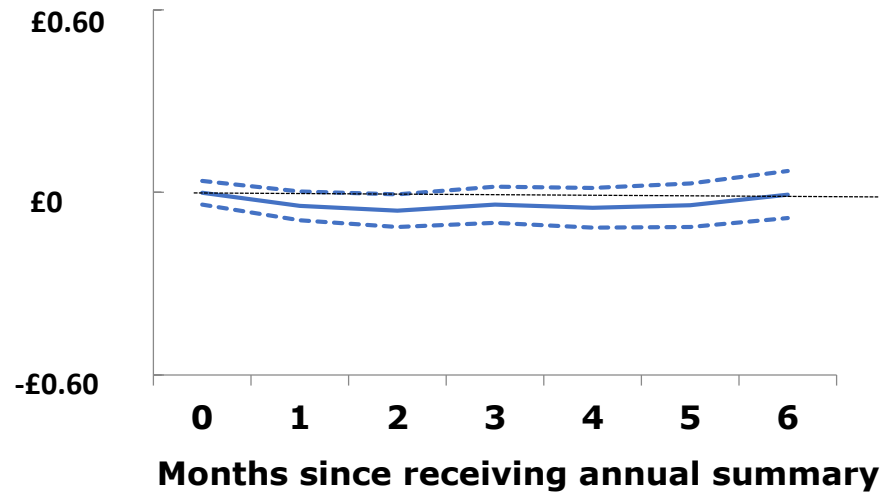
What did we learn? (3)

- Natural experiments are a crucial part of the toolkit
- Need careful design of analysis using behavioural theory, considering consumer welfare
- Can use legal powers to create an ideal dataset of granular administrative data on consumer behaviour
- Administrative data analysis partially a substitute and partially a complement for surveys. Surveys remain important
- Present results of natural experiments as if field experiments

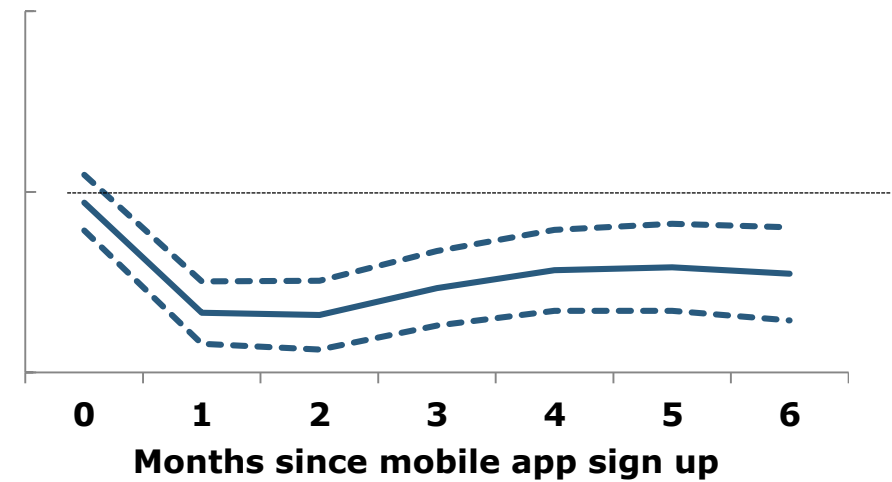
Natural experiment: retail banking (OP10)

Annual summary disclosure
ineffective

Change in overdraft
charges



Mobile banking apps effective
- especially with text alerts



Retail banking, natural experiment (OP36)

Distribution of unarranged overdraft charges

Monthly average (£)	Share of consumers	Share of charges
15+	2%	64%
10-15	1%	12%
5-10	2%	12%
0-5	8%	12%
Zero	86%	0%

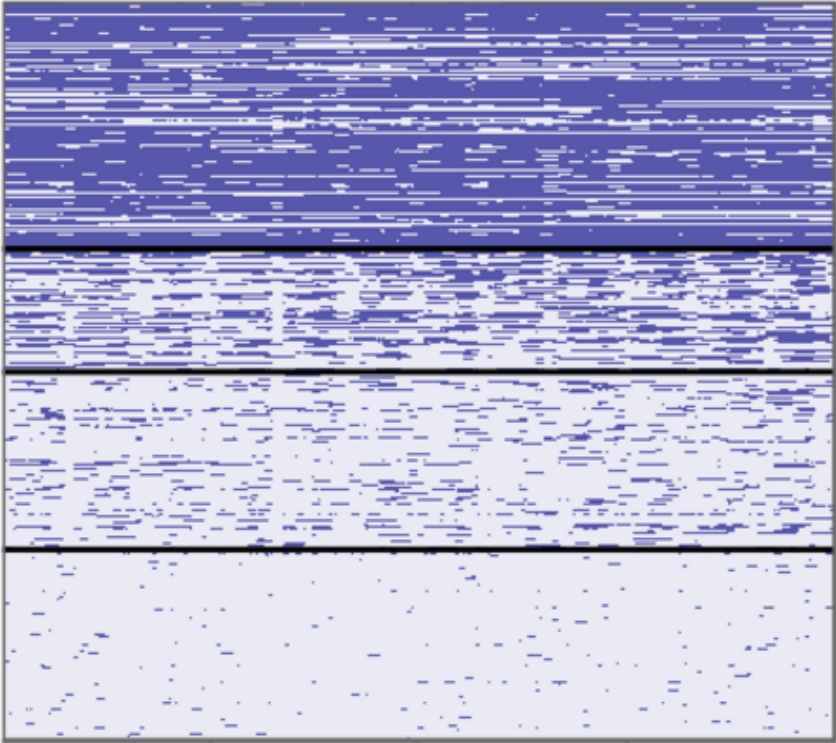
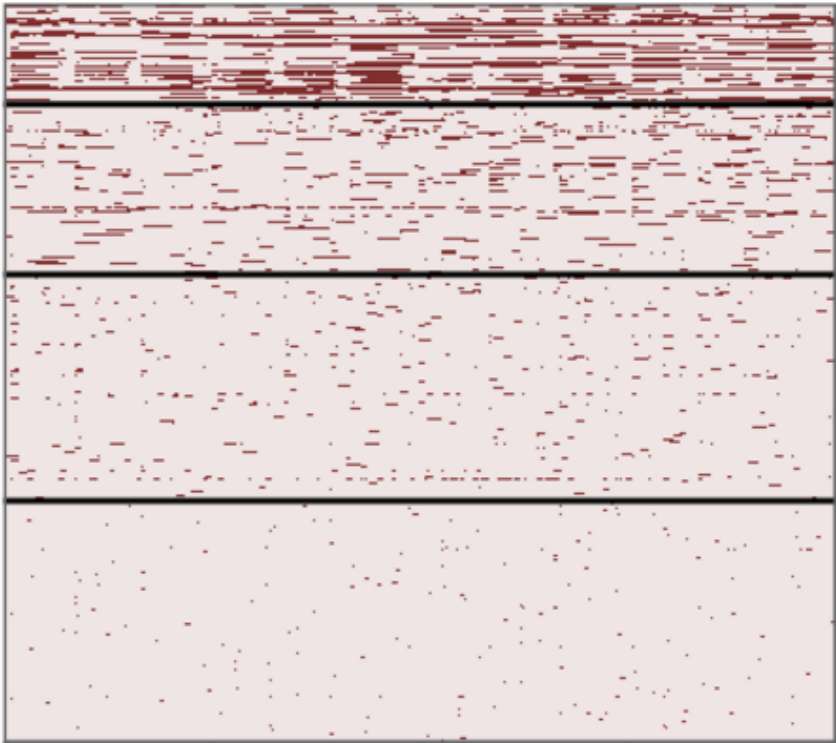
Notes: Based on 925,027 customers across six banks.

A small percentage of overdraft users overdrawn a large percentage of the time

Unarranged

Arranged

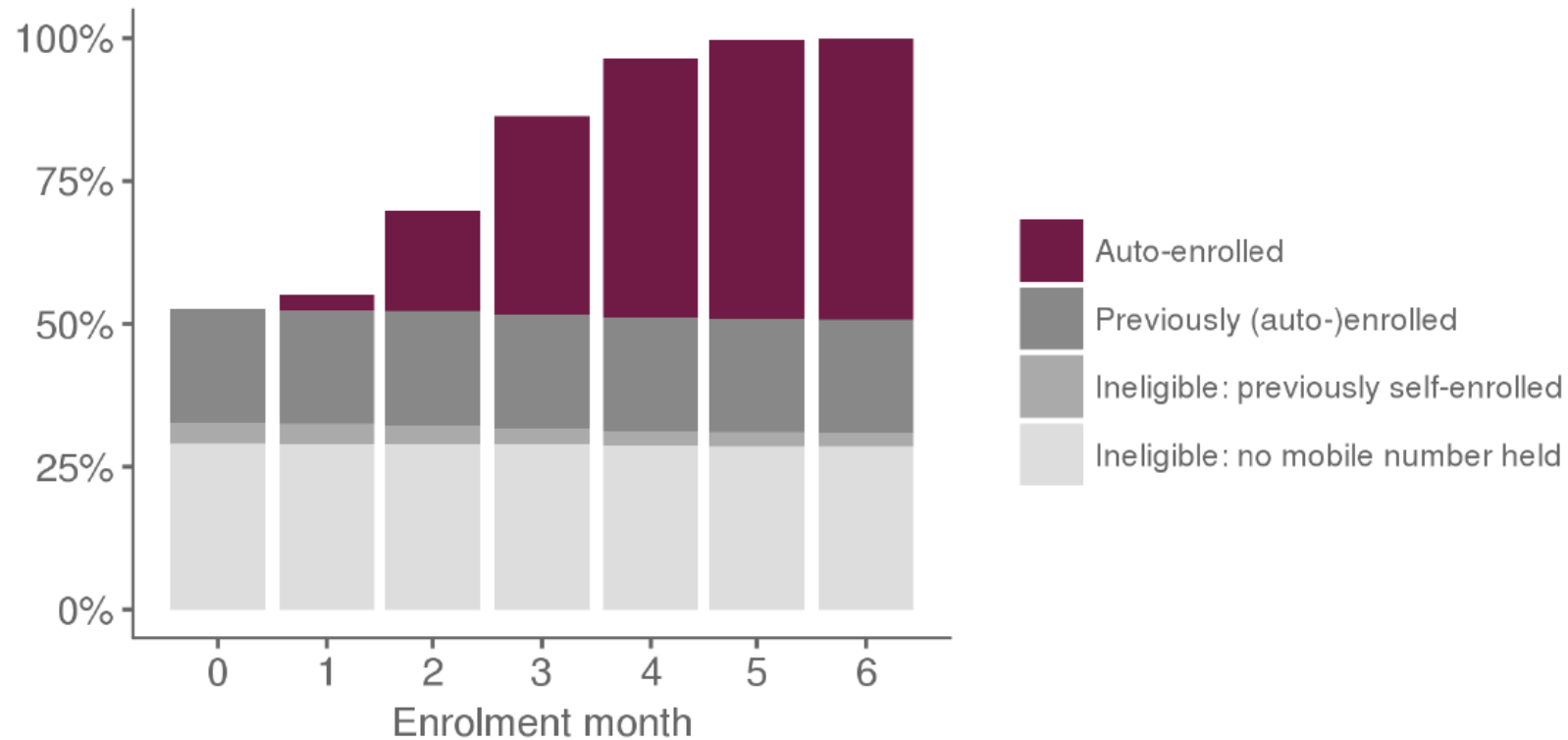
Consumers



One year

One year

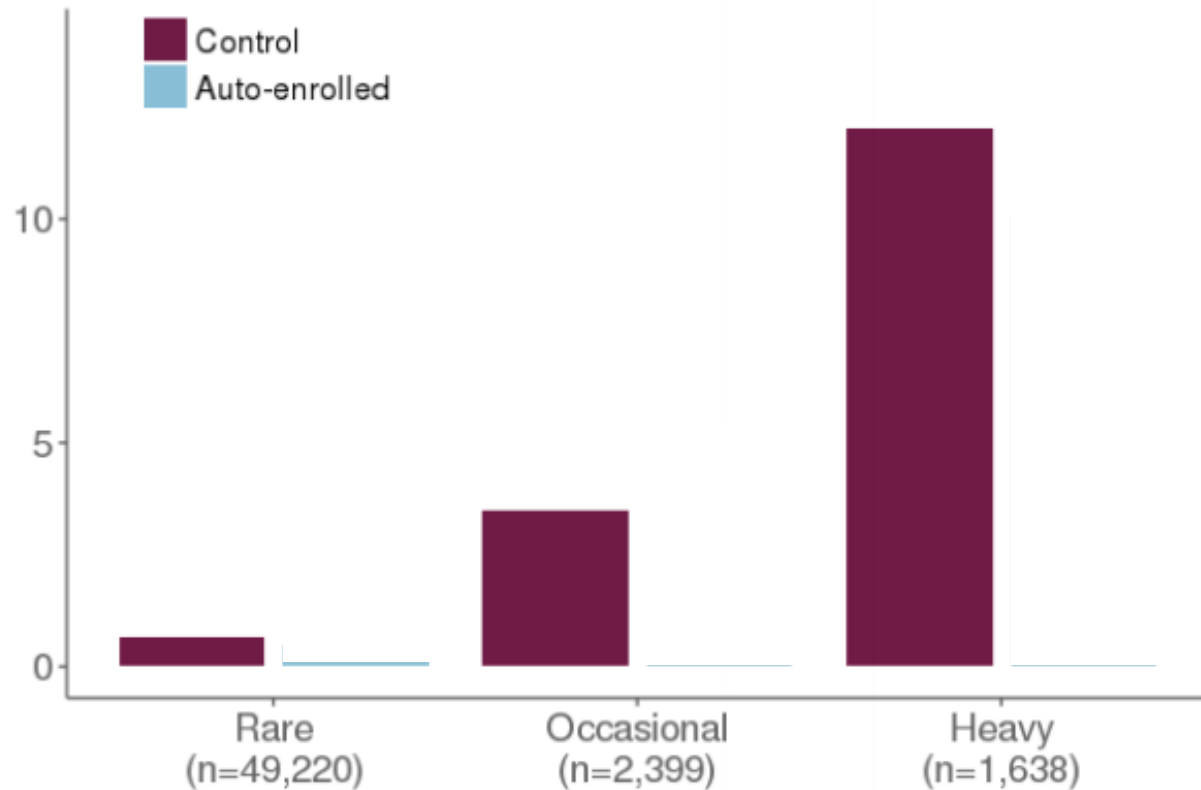
Natural experiment example: proportion enrolled into alerts (Bank B)



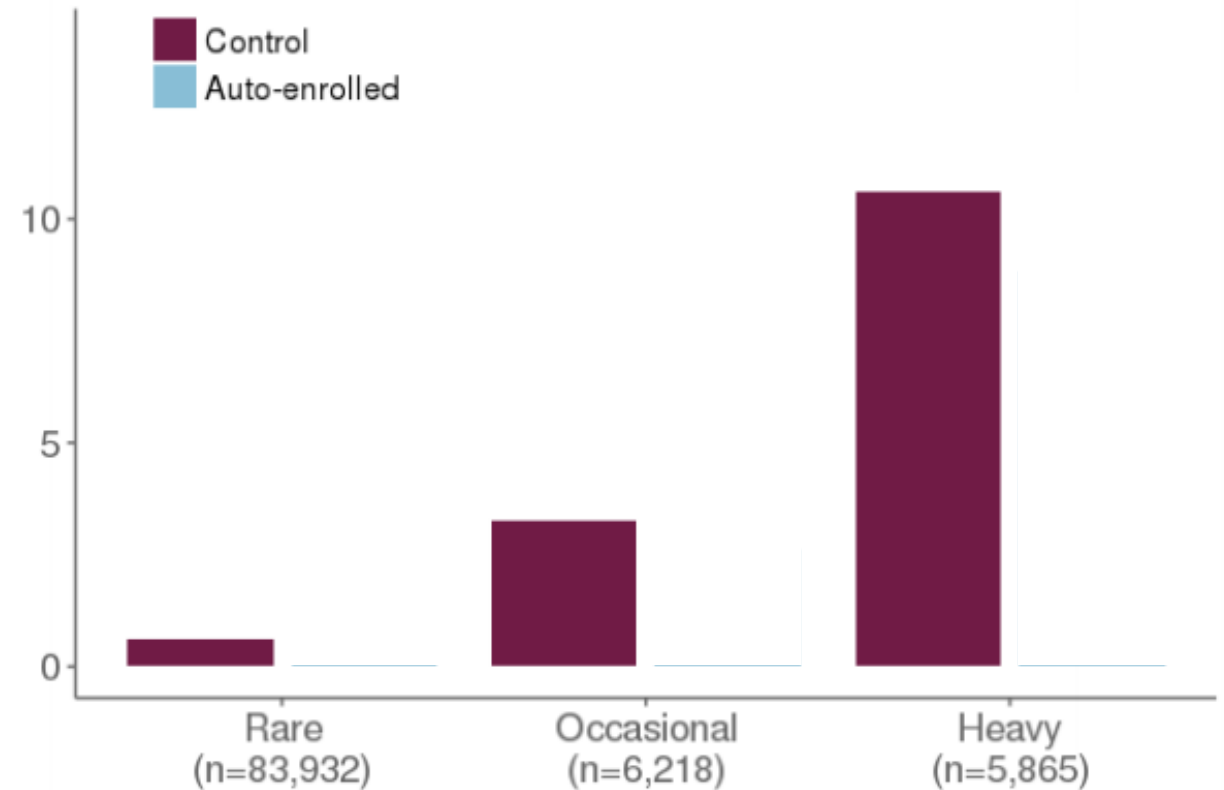
Notes: Based on sample of existing Bank B customers as of January 1st, 2015 (n=208,971) after exclusions.

Large reductions in overdraft usage, especially for rare users

Bank A: Unpaid item charges (£/month)



Bank B: Unpaid item and unarranged overdraft charges (£/month)



Retail banking: field experiments (OP40)

Tested 4 types of alert:

1. Alert when reach OD limit, replicating OP36 experimentally
 - Average consumer sees a reduction of 13-18%
2. Alert when start using arranged OD (consumers with arranged OD):
 - A reduction of 3-8% in arranged overdraft charges
3. Early warning alert when balance is approaching zero (with no arranged OD)
 - Do not find convincing evidence
4. Early warning alert when balance is approaching zero (no OD at all)
 - No evidence that effective

What did we learn? (4)

- The evidence led directly to policy: package led on alerts
- Design, u/x testing and lab experiments (fairly) useful to narrow down what will test
- Natural experiments and exploring data – including machine learning – complementary to field experiments
- Field experiments remain crucial: many ideas did not work



“Now, keep in mind that these numbers are only as accurate as the fictitious data, ludicrous assumptions and wishful thinking they’re based upon!”

UKCN project on consumer-facing remedies

- This research led to a UKCN project
- Two years of work across UK regulators to get organisations up to speed on latest and best methods, co-chaired with Adam Land at CMA
- All day conference, and publishing paper, on 1st October
- Line-up: David Laibson from Harvard, Lauren Willis from Loyola Law School, Rory Sutherland from Ogilvy and more

Nine conclusions, and a question

1. Know (behavioural) theory

2. I test therefore I learn: see when and how we use field trials by FCA

3. Data, data everywhere

- Need detailed info on real life behaviour, natural experiments, machine learning

4. The lab is back

5. Regulators poor at understanding consumers

- Qual and ethnographic, surveys, design and u/x testing, pilots and prototyping

6. Let many methods bloom: mostly complements

7. But be discerning on what for what. Make judicious decisions on what evidence to create

8. Disclosure alone is mostly not enough. Defaults powerful

9. The production possibility frontier moves ever forward

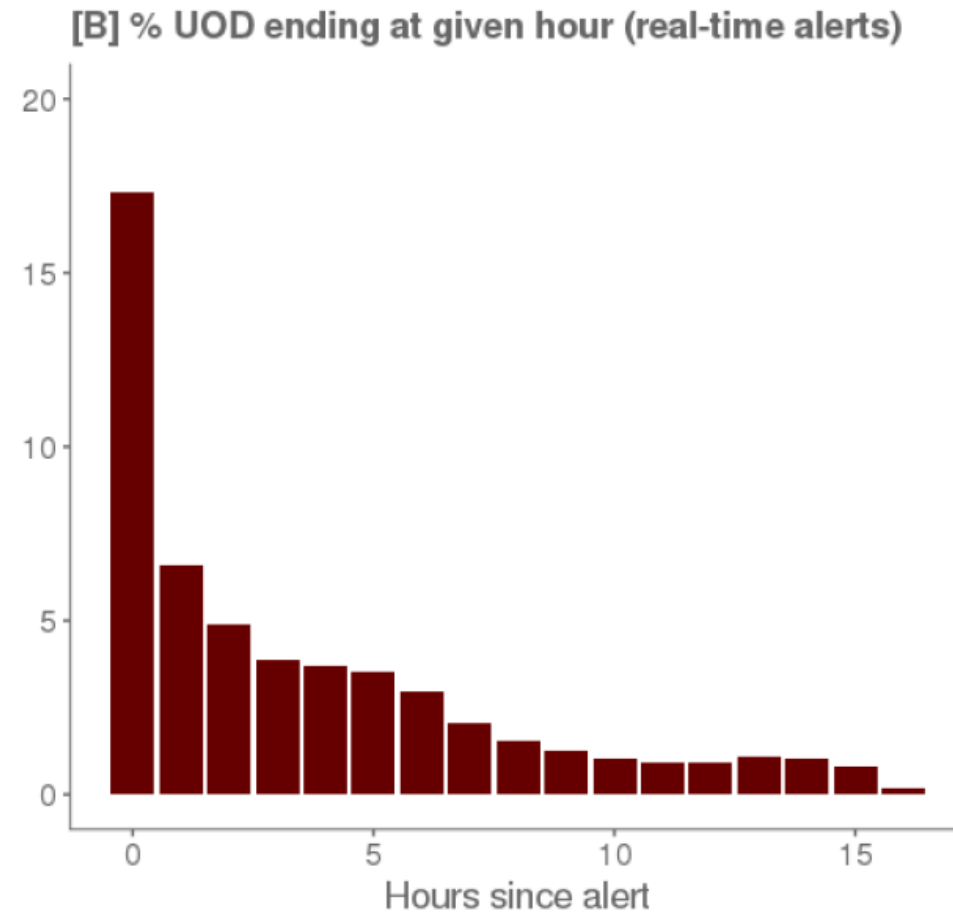
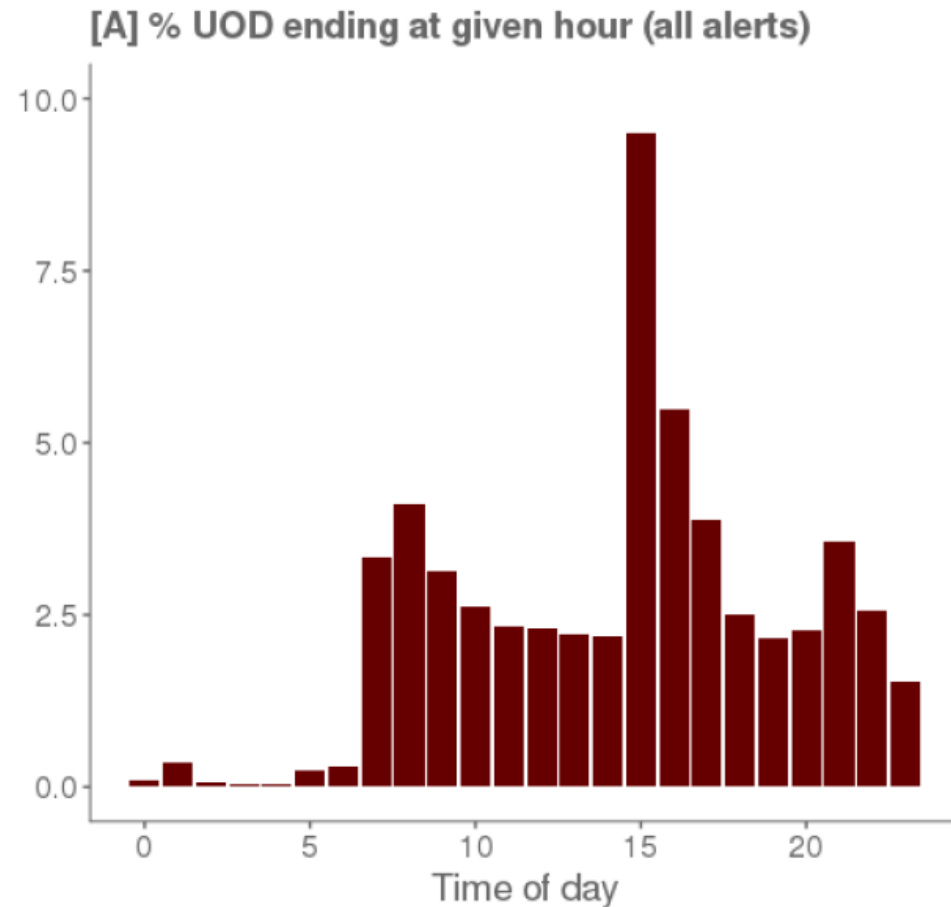
- E.g. synthetic controls, neutral nets with functional form restrictions

Q. Do legal processes and policymaking need to shift too?

- Iterative policy process. Legal understanding of consumers. Black box regulation?

- Extra

With granular data we can observe granular patterns



Notes: Based on data for all of 2016 from two banks.