“I’ve Got Nothing to Lose”:
Consumers’ Risk Perceptions and Protective Actions after the Equifax Data Breach

Yixin Zou, Abraham H Mhaidli, Austin McCall, Florian Schaub
Who has heard of the Equifax data breach?
Who has heard of the Equifax data breach?
Who was affected by this breach?
Who has heard of the Equifax data breach?
Who was affected by this breach?
For those affected, how many of you have frozen your credit report?
One of the **big three** U.S. credit bureaus.
One of the big three U.S. credit bureaus.

Key function

Provide credit reports of individual consumers to businesses.
THE EQUIFAX DATA BREACH

- Made public on September 7th, 2017.
- **146.6** million consumers affected.[1]
- Information exposed:
  - Names
  - Addresses
  - Birth dates
  - SSNs
  - ...

THE EQUIFAX DATA BREACH

 Artikel protective measures:

- Credit freeze.
- Fraud alert.
- Identity theft protection.
- Credit monitoring.
- ...
THE EQUIFAX DATA BREACH

Available protective measures:
- Credit freeze.
- Fraud alert.
- Identity theft protection.
- Credit monitoring.
- ...

Low usage of **credit freeze and fraud alert**.\(^2\)

\(^2\) https://www.creditsesame.com/blog/credit/credit-cards-hacked-only-one-percent-fight-back-with-credit-freezes/
RESEARCH QUESTIONS

1. What are consumers’ mental models of credit bureaus?
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2. How do consumers perceive the **risks** of the Equifax data breach?
RESEARCH QUESTIONS

1. What are consumers’ **mental models** of credit bureaus?
2. How do consumers perceive the **risks** of the Equifax data breach?
3. What **protective actions** did consumers take in response to the Equifax data breach, and **what are their reasons for taking or not taking actions**?
RESEARCH METHOD


- Recruitment
  - Social media and email lists.
  - Screening survey for diverse demographics.
PARTICIPANT DEMOGRAPHICS

Gender

- Male: 13
- Female: 11

Age

- 18-29: 3
- 30-39: 7
- 40-49: 6
- 50-59: 4
- 60-69: 4
- 40-49: 4

- 18-29
- 50-59
- 40-49

- 30-39
- 60-69
PARTICIPANT DEMOGRAPHICS

Income
- <25k: 2
- 25-50k: 6
- 50-75k: 3
- 75-100k: 1
- 100-125k: 5
- >150k: 4

Education
- No college: 10
- Bachelor: 9
- Graduate: 5
PARTICIPANT DEMOGRAPHICS

✧ Exit survey
  ♦ NFEC financial decision test.
  ♦ CFPB financial well-being scale.
PARTICIPANT DEMOGRAPHICS

◊ Exit survey
  ♦ NFEC financial decision test.
  ♦ CFPB financial well-being scale.

◊ Results
  ♦ Medium level of self-assurance regarding financial situations.
  ♦ Good knowledge of entry-level financial decisions.
KEY FINDINGS

Mental Model

- Most aware of big bureaus and their function.

Risk Perception

Protective Action
### KEY FINDINGS

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<td>- Types of info collected.</td>
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<td></td>
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Fig 1. An example of *incomplete* mental models
Fig 1. An example of **incomplete** mental models

- Length of credit history?
- Public records?
- Inquiries?
- ...

**Acquire it**

Banks

Lenders

Loans + (bank accounts) Opened accs + Credit Cards → Credit Score

P18
Fig 1. An example of **incomplete** mental models

- Public record repositories?
- Debt collectors?
- ...

vanced
Address -
Employer - their SALARY
Relatives - cousins, aunts, etc
Covert 'spying' - hire a detective
Facebook - their hobbies, travel,
their banks of c.unions
Type of car they drive
Appearance of person - clothing,
IRS - their tax returns
City Hall, mayor's office,
chamber of commerce

Fig 2. An example of **inaccurate** mental models
Address -
Employer - their salary
Relatives - cousins, aunts, etc.

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Fig 2. An example of **inaccurate** mental models
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KEY FINDINGS

Mental Model

◈ Most aware of big bureaus and their function.
◈ Incomplete and inaccurate understanding.

Risk Perception

◈ Most aware of the breach.
◈ Identity theft and privacy invasion.

Protective Action
KEY FINDINGS

Mental Model
- Most aware of big bureaus and their function.
- Incomplete and inaccurate understanding.

Risk Perception
- Most aware of the breach.
- Identity theft and privacy invasion.
- Optimism bias.

Protective Action
REASONS FOR OPTIMISM BIAS

- The “I’ve got nothing to lose” fallacy.
I don’t have any credit. I have a bad record so I wouldn’t do that [check Equifax’s website to see if affected]. Nobody can hurt me. It’s already at the lowest place. (P5)
REASONS FOR OPTIMISM BIAS

- The “I’ve got nothing to lose” fallacy.
- **Vagueness** in notification message.
REASONS FOR OPTIMISM BIAS

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- The “I’ve got nothing to lose” fallacy.
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- **Absence** of negative signals.
REASONS FOR OPTIMISM BIAS

◈ The “I’ve got nothing to lose” fallacy.
◈ Vagueness in notification message.
◈ **Absence** of negative signals.
◈ Presumption of **not being included** in Equifax’s database.
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<td>✷ Identity theft and privacy invasion.</td>
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Use identity theft protection

Proactive

Took actions
Aware, no action
Unaware, no action
Not mentioned

Reactive

Check Equifax's website

Check credit report

Closer self-monitoring

Use credit monitoring service

Freeze credit report

Place fraud alert

Use credit monitoring service
REASONS FOR INACTION

Optimism bias
"Why would they come after me? If they’re going to go to all the bother of stealing my identity, why don’t they go after somebody with some real wealth?" (P9)
REASONS FOR INACTION

1. Optimism bias
2. Insufficient knowledge
REASONS FOR INACTION

- Optimism bias
- Insufficient knowledge
REASONS FOR INACTION

- Optimism bias
- Insufficient knowledge
REASONS FOR INACTION

Optimism bias

Insufficient knowledge

Tendency to delay
REASONS FOR INACTION

“I wait until something bad happens and then I will react to it, so maybe it’s not as good as a proactive approach. So far I think I'm okay with all the finance and nobody's stole my identity yet.” (P23)
FACTORS IMPACTING ACTION/INACTION

- Optimism bias
- Insufficient knowledge
- Tendency to delay
- Cost
FACTORS IMPACTING ACTION/INACTION

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FACTORS IMPACTING ACTION/INACTION

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- Tendency to delay
- Cost
- Source of advice
- Optimism bias
FACTORS IMPACTING ACTION/INACTION

- Optimism bias
- Insufficient knowledge
- Tendency to delay
- False sense of security
- Source of advice
- Cost
FACTORS IMPACTING ACTION/INACTION

- **Optimism bias**
- **Insufficient knowledge**
- **Tendency to delay**
- **Cost**
- **False sense of security**
- **Source of advice**

“The freeze might have given me a false sense of security...I haven’t spread out the frequency of my reports. I haven't paid for reports more frequently than what I can get for free.” (P16)
Public Policy

- **Free and more frequent** access to credit reports.
Credit Rating: Fair

- Experian: 680
- TransUnion: 755

- Credit Inquiries: 6
- Credit Utilization: 32%
- Late Payments: 0

- Experian: 787
- TransUnion: 669

- Credit Inquiries: 12
- Credit Utilization: 32%
- Late Payments: 0

Updated Mar 16, 2015
Next Update in 3 days
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Economic Growth, Regulatory Relief and Consumer Protection Act

Long title: A bill to promote economic growth, provide tailored regulatory relief, and enhance consumer protections, and for other purposes.

Enacted by: the 115th United States Congress

Effective: May 24, 2018
**IMPLICATIONS**

**Public Policy**
- Free and more frequent access to credit reports.
- Free credit freezes.
- **Stringent** and **preemptive** regulation.

**Technical Solution**

**Educational Efforts**
# IMPLICATIONS

## Public Policy
- Free and more frequent access to credit reports.
- Free credit freezes.
- Stringent and preemptive oversight.

## Technical Solution
- Enhancing **usability** of protective mechanisms.

## Educational Efforts
IMPLICATIONS

Public Policy
- Free and more frequent access to credit reports.
- Free credit freezes.
- Stringent and preemptive oversight.

Technical Solution
- Enhancing usability of protective mechanisms.
- Enhance transparency of information flows.

Educational Efforts
Just-in-time notifications.
Just-in-time notifications.

Integrate rights to approve and dispute.
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**IMPLICATIONS**

**Public Policy**
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- Free credit freezes.
- Stringent and preemptive oversight.

**Technical Solution**
- Enhancing usability of protective mechanisms.
- Enhance transparency of information flows.

**Educational Efforts**
- Aiming educational resources at influencers.
- Better support interpersonal sources.
SUMMARY

General awareness of credit bureaus, incomplete and inaccurate mental models.
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◧ **High risk perception** of the Equifax data breach, albeit optimism bias.
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- Various reasons for inaction: **optimism bias, insufficient knowledge, tendency to delay** etc.
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