Discussion of "Writing Quality and Soft Information in the GenAl Age: Evidence from Online Credit Markets"

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ChatGPT Is Transforming Our Lives

Finance:

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Life:

cooking suggestions, travel planning, therapy, virtual friends



What This Paper Does

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- Show Textual Data in Loan Application Predicts Whether Loan Funded
 - Extending Netzer, Lemaire & Herzenstein (2019, JMR)
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 - Extending Netzer, Lemaire & Herzenstein (2019, JMR)
- Counterfactual Replacing Loan Applicant's Textual Data With ChatGPT Version
 ChatGPT Standardizes Text: Writing Quality, Information
- Expect lenders to rely less on soft textual information
- Methodological Innovations
 - Combining 'old' (Heckman Correction) & 'new' (deep learning, multimodal transformer, LLMs) methods
 - "Deep Heckman Correction"...should we now call the old one, Shallow Heckman Correction?

Informative Signals

What Information Is Valuable?

Credit Scoring Model:

- $Pr(Y_{t+1} = 1) = f(X'_t \beta)$
- Look for features (x_t) that predict default (Y_{t+1})
- A valuable feature is an informative signal to discriminate consumer types:
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 - Goods (non-defaulters) from bads (defaulters)
- Some features are deemed unfair and not allowed to be use (immutable characteristics)
 - Textual information seems fair game
 - But maybe women write better than men? (disparate impact by gender not allowed, so standardization may be beneficial)
- Technology that masks information, makes it harder to discriminate types

What Information Is Valuable?

- We may have a prior that advances in informational technology always help discriminating consumer types (i.e., extract more information from data)
- Paper's innovation is highlighting that a technological advancement available to loan applicants (ChatGPT) reduces information available to lenders
- Connect to broader literature on masking information (& unintended effects)
 e.g., Agan & Starr, 2018 QJE bans on employers asking for criminal histories;
 Bartik & Nelson, 2025 RESTAT bans on use of credit reports by employers;
 appendix of Gibbs, Guttman-Kenney, Lee, Nelson, van der Klaauw & Wang., JEL
 for cases in credit reporting

The Use of Textual Data

Data Comes from Prosper.com in 2007 to 2008

- 2006 to 2009 Prosper was an auction platform
 - Loan applicant would submit application with text
 - Lenders would consider the risk and decide whether to fund (how much, rate)
 - Applicant decides whether to accept offer

Purpose of loan: This loan will be used to pay off an existing high interest loan and my student loan

My financial situation: I am a good candidate for this loan because I do make my monthly payments on time, and all my accounts are current. My utility accounts are in good standing. I am not in a financial crisis, I am just trying to pave the way

for an easier future

Monthly net income: \$1920 Monthly expenses: \$1550

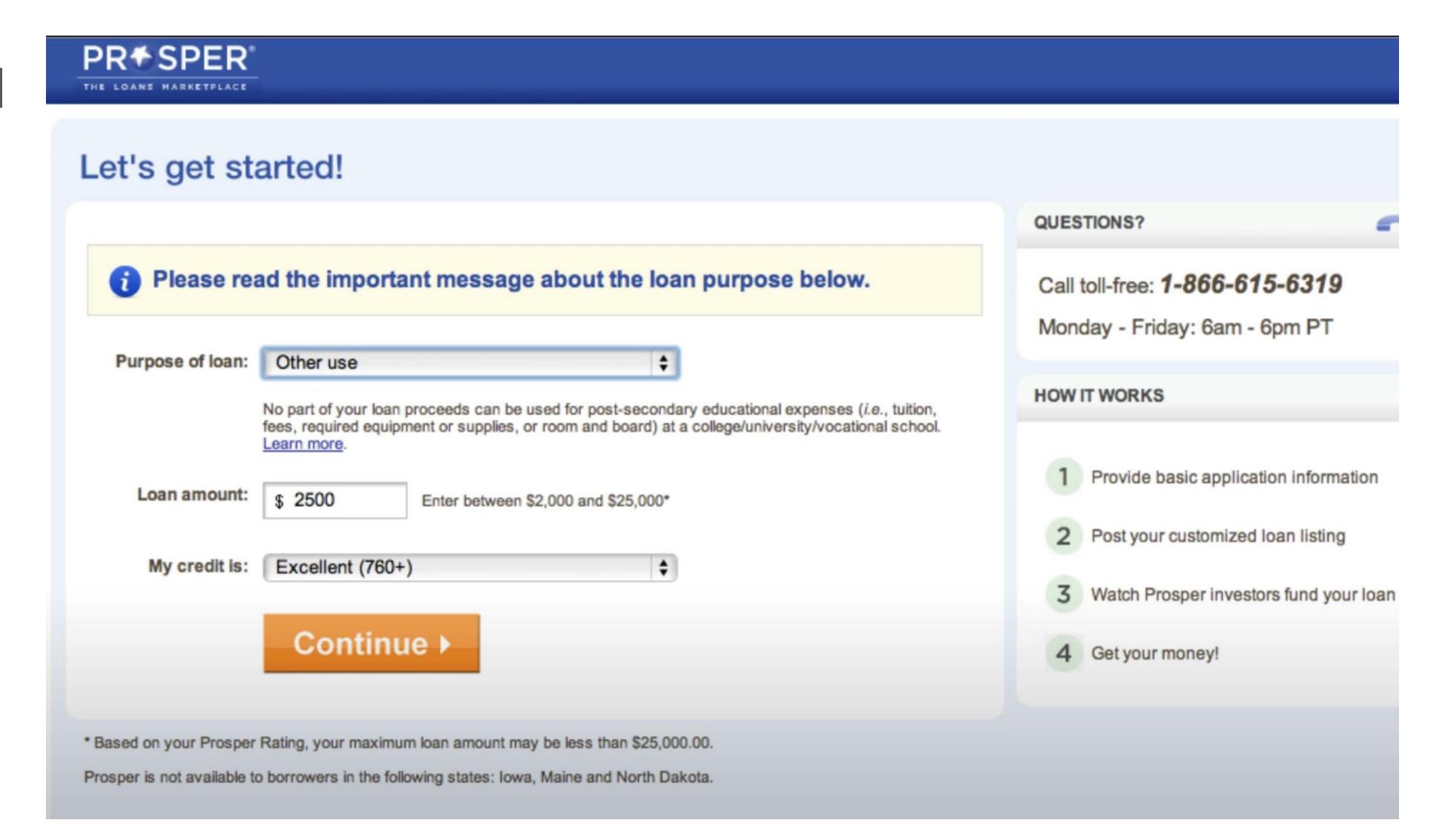
- Since 2010, Prosper no longer works this way.
 - No auctions
 - Prosper now determines the risk and sets rates

Since 2010 (?), Prosper Doesn't Ask for Textual Information

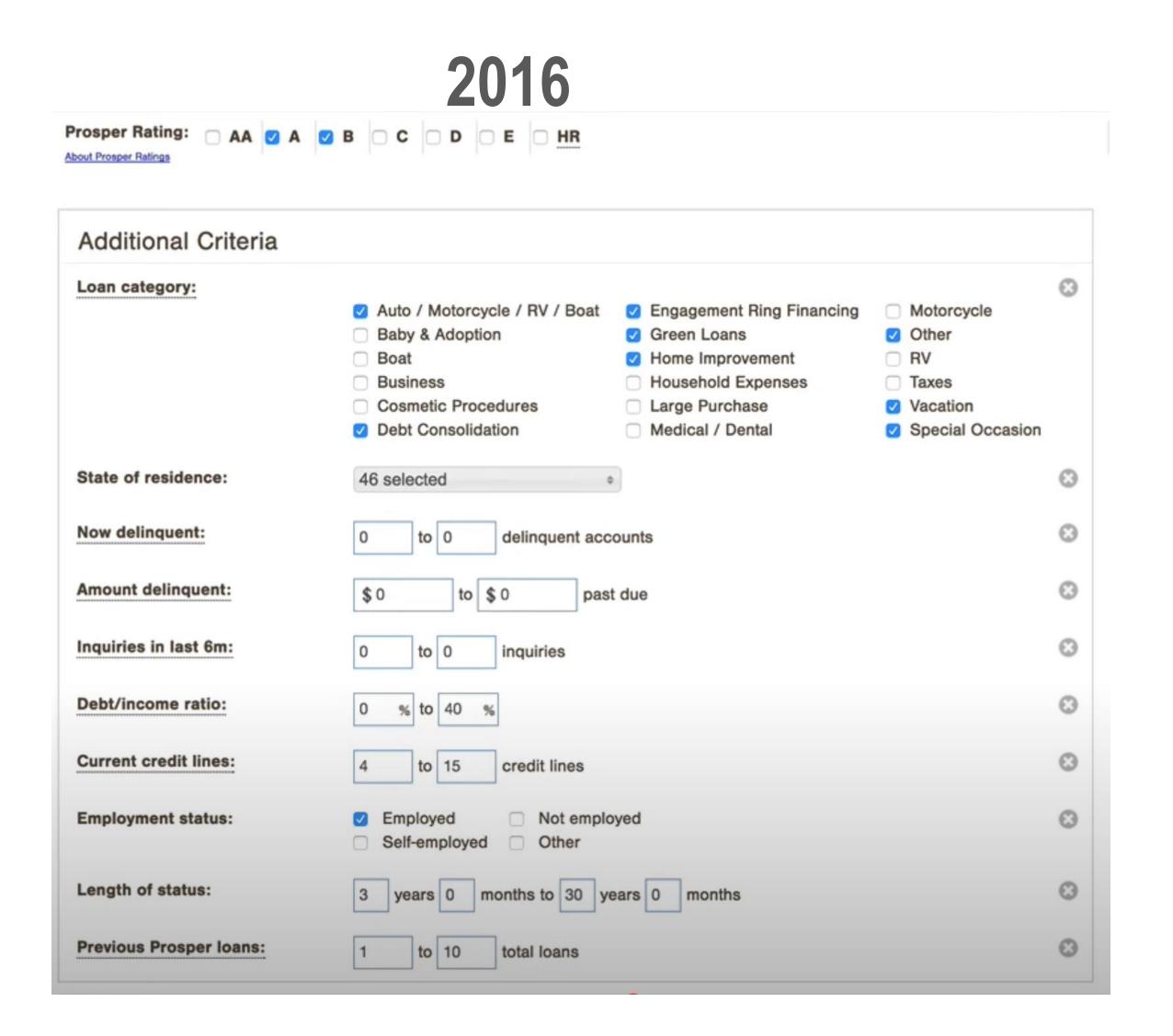
- Loan Applicants Do Not Include Textual Information
- No Textual Information for Lenders/Investors to Use

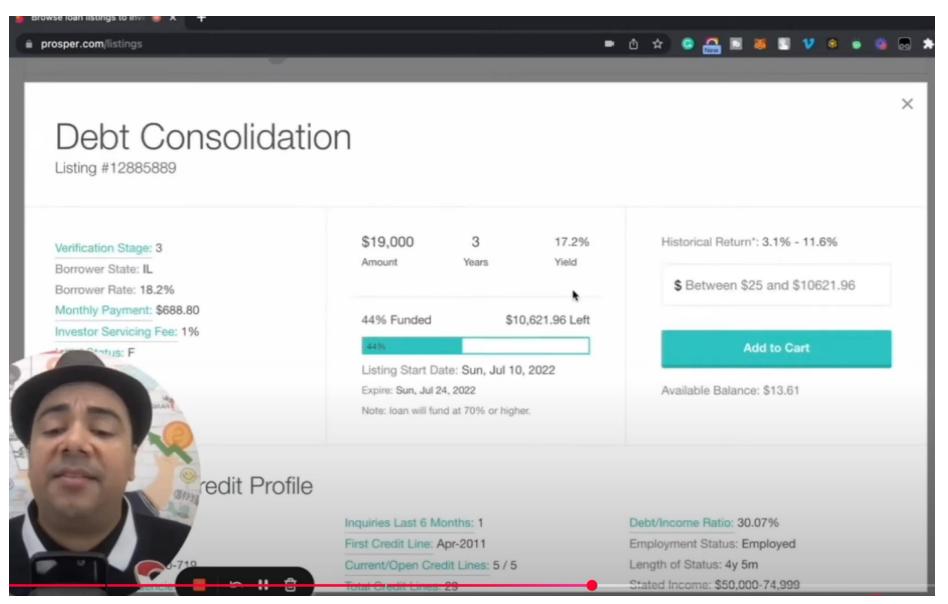
Since 2010 (?), Prosper Doesn't Ask for Textual Information - Only Asks for Multiple Choice 'Loan Purpose'

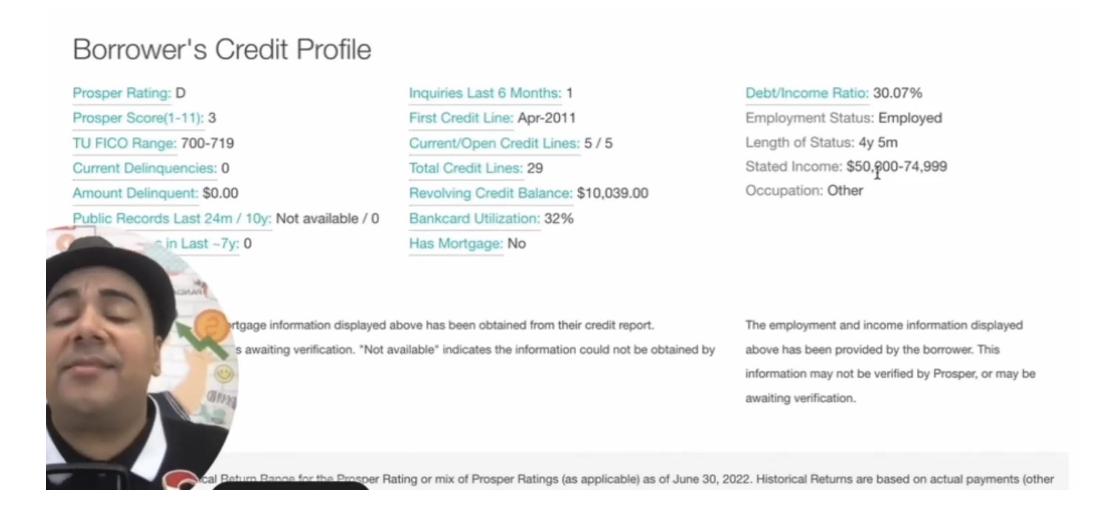
2011



Since 2010 (?), Prosper Doesn't Ask for Textual Information - Only Asks for Multiple Choice **'Loan Purpose' 2023**







Since 2010 (?), Prosper Doesn't Ask for Textual Information - Only Asks for Multiple Choice 'Loan Purpose'

2025: I also asked ChatGPT.

"No, Prosper doesn't make you write 'why you want a loan'.

You simply pick a category to signal intended use of funds."

Suggestion: Paper Would Benefit From Demonstrating That This Is A **Real** Problem

- As far as I can tell, Prosper only ask for categories of loan purpose
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- Idea 1: Speak with Prosper.com
 - What have they done and why?
 - Incentives aligned between academics and platform to collaborate

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- Idea 1: Speak with Prosper.com
 - What have they done and why?
 - Incentives aligned between academics and platform to collaborate
- Idea 2: Find other lenders that use textual data in loan applications.
 - Maybe it is not a thing in the U.S., but is important elsewhere?
 - One example I know of is tiny (and crazy) market for anonymous loans on reddit (Correira, Martins & Waikel (2024)

Posted by [username] x hours ago

[REQ] – (\$350) (#St Louis, MO, USA), (Repay \$400 by 4/22/2022), (PayPal, CashApp)

Got overzealous with bills and thought I could be all caught up and boy I was very wrong. Thanks

Selection

Selection Into ChatGPT May Be Informative Signal Unobserved In Study

- ChatGPT counterfactual doesn't allow for selection
- Is there Adverse or Advantageous Selection of borrowers into using ChatGPT?
- The type of consumer that selects into using ChatGPT may be more informative than the textual information itself
 - Sophisticated consumers know how to use ChatGPT, and reveals their type
 - Bad consumers know they are bad but want to appear like good consumers

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 - Sophisticated consumers know how to use ChatGPT, and reveals their type
 - Bad consumers know they are bad but want to appear like good consumers
- Detecting ChatGPT use by applicant may be more important to lenders than the text
 - Parallel to professors detecting student use of ChatGPT on exams
- Use of ChatGPT appears especially open to fraud:
- Intentionally ask ChatGPT how to reword to increase odds of loan being approved
- ChatGPT prompt unintentionally changes meaning

Thank You!

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