Discussion of **The Rise of E-Wallets and Buy-Now-Pay-Later** by **Bian Lin, William Cong, and Yang Ji** & **A Helicopter Tour of Buy-Now-Pay-Later**

Deniz Aydın
Olin Business School
Washington University in St. Louis.

Introduction

- Fintech revolution
  - Innovative approaches to payments and risk management.
  - Tremendous growth in e-Wallets and BNPL
  - Unfortunately, these innovative data sources are not accessible to academics
  - e.g., *Data Security Law* (2021)

- Important questions and challenges
  - Does it expand access?
  - Is it safe? Does it lead to overspending and indebtedness?
  - What attracts borrowers to these plans?
  - Why are they 0% APR?

What Lin, Cong, and Ji Do

- Unique and innovative data
- Opening a lot of black boxes in e-Wallet and BNPL usage
- Randomized BNPL Supply Shock

- How BNPL interacts with other options and affects payment, spending, and borrowing behavior.
  - Complements bank credit.
  - Increases spending.
  - Benefit disadvantaged or underserved by banks.
  - Does not increase indebtedness or distress.

- Main Comment: Streamline and Re-organize
  - Give random BNPL supply shock the center stage.
  - Link BNPL specifics (underwriting, contracts, interest rates) to outcomes (e.g., indebtedness)

Outline for Discussion

- Helicopter Tour of BNPL
  - Transactional vs. Conventional Underwriting
  - Installment vs. Revolving Contracts
  - 0 %APR as a Special Price
  - Two-sided Markets

- Comments on
  - Identification
  - Estimation
  - Interpretation

What is BNPL

- How does the credit product differ from other ones that we usually know?
  - Short-term
  - Fixed payment schedule
  - Point-of-sale
  - Transaction level underwriting
  - 0% APR (in general)

- BNPL is not new
  - 1920s in the U.S.: Pandemic, Credit Expansion, Great Depression
  - Turkey, Israel, Brazil etc.: Usury-aversion

Ascent BNPL Survey

www.fool.com/the-ascent/research/buy-now-pay-later-statistics/

- 35% in U.S. use, down from 50% in 2022 and 56% in 2021.
  - 67%—think BNPL could replace credit cards

- 37%—to avoid interest (borrow low save high)

- 45%—otherwise wouldn't fit within their budget

- 13% because they couldn't get approved for credit cards
- 13% because credit cards were maxed out

- Categories: 46% Electronics, 46% Clothing, 31% Furniture and Appliances

How is BNPL different?
BNPL is *Transactional* Underwriting

- Traditional underwriting
  - individual-level scores, histories, and metrics
  - FICO is for an individual, irrespective of purchase

- Transactional underwriting—each transaction is individually analyzed.
  - E[Y|X], where Y, X, E[] all different.
  - Variables used:
    - What you buy
    - When you buy
    - Other footprints

Nukala (WP) “Buy-Now, Pay-Later and Purchase-level Underwriting”

- Vasudha’s (WashU Olin) Job Market Paper (she is on the market this year)

www.vasudhanukala.com/research

- Unique dataset from a U.S.-based BNPL firm.
  - Does transaction-level underwriting improve classification accuracy?
  - What is the source of the information in the transaction?
  - How does supply change, and for whom?
  - What are the effects on consumer welfare?

Nukala (WP) "Buy-Now, Pay-Later and Purchase-level Underwriting"
What is the source of the information in the transaction?

- What did you buy? —Vissing-Jorgensen
- Digital footprints? —Berg, Burg, Gombovic, and Puri

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
FICO score							
Internal score (residual)							
Product	✓	×	✓	×	✓	×	✓
FICO score	×	✓	✓	×	×	✓	✓
Internal score (residual)	×	×	×	✓	✓	✓	✓
AUC							
ΔAUC (%) - relative to Product	-	13.38	15.18	17.72	20.4	32.00	32.73
ΔAUC (%) - relative to FICO	-11.80	-	1.59	3.83	6.22	16.42	17.06

- Transactional underwriting contributes to improved performance and lack of indebtedness.

How is BNPL different?
Preplanned (Installments)

- Revolving debt is accumulated through dynamic choice.
  - credit card = BN-think-you-will-PL
    - but underestimate they will revolve end-of-billing cycle
    - <u>naivete about dynamic inconsistency</u>

- Installments preclude the opportunity to revise choices with the eventuality of the latter information set.
  - on the contrary, consumers forgo repayment flexibility.
  - it's (like) a commitment device

- (I think) installments are a better 'safer' contract and contribute to a lack of indebtedness.

What attracts borrowers to BNPL?
0% APR

- The paper studies debt choices from a menu of (cheap and expensive) options.

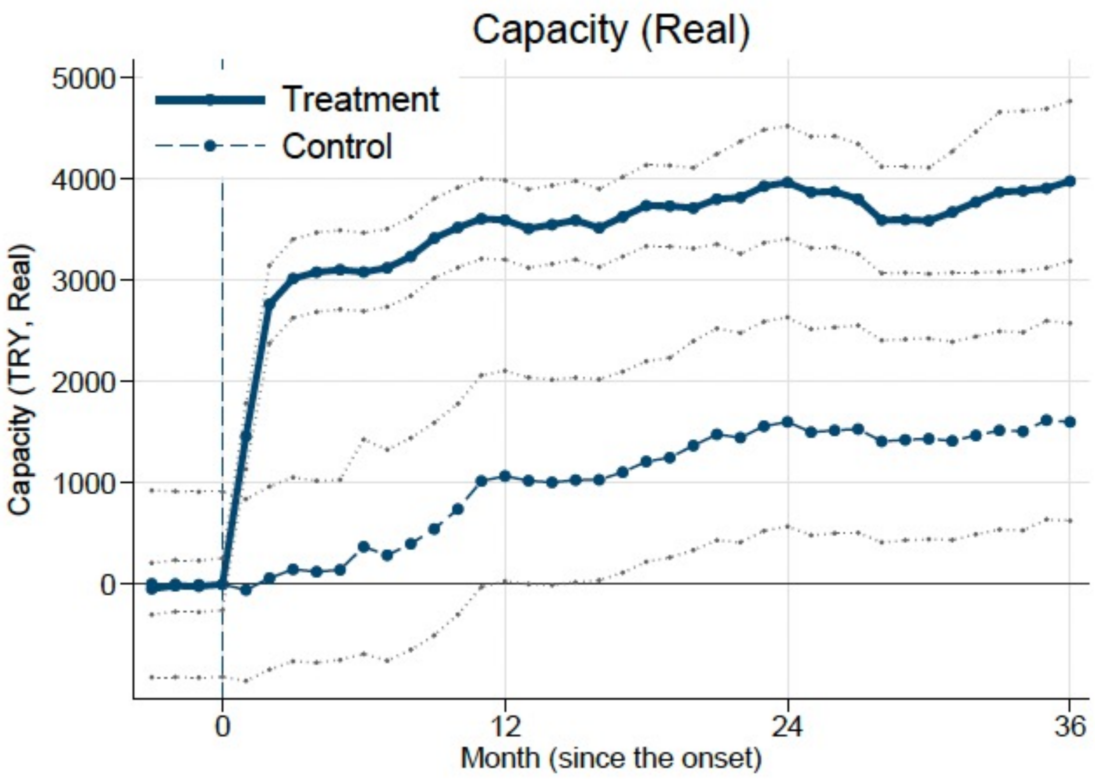
- In a financing hierarchy in which the cost of financing is minimized
  - Borrow 0% BNPL and
    - do not use expensive debt
    - do not use debit or cash

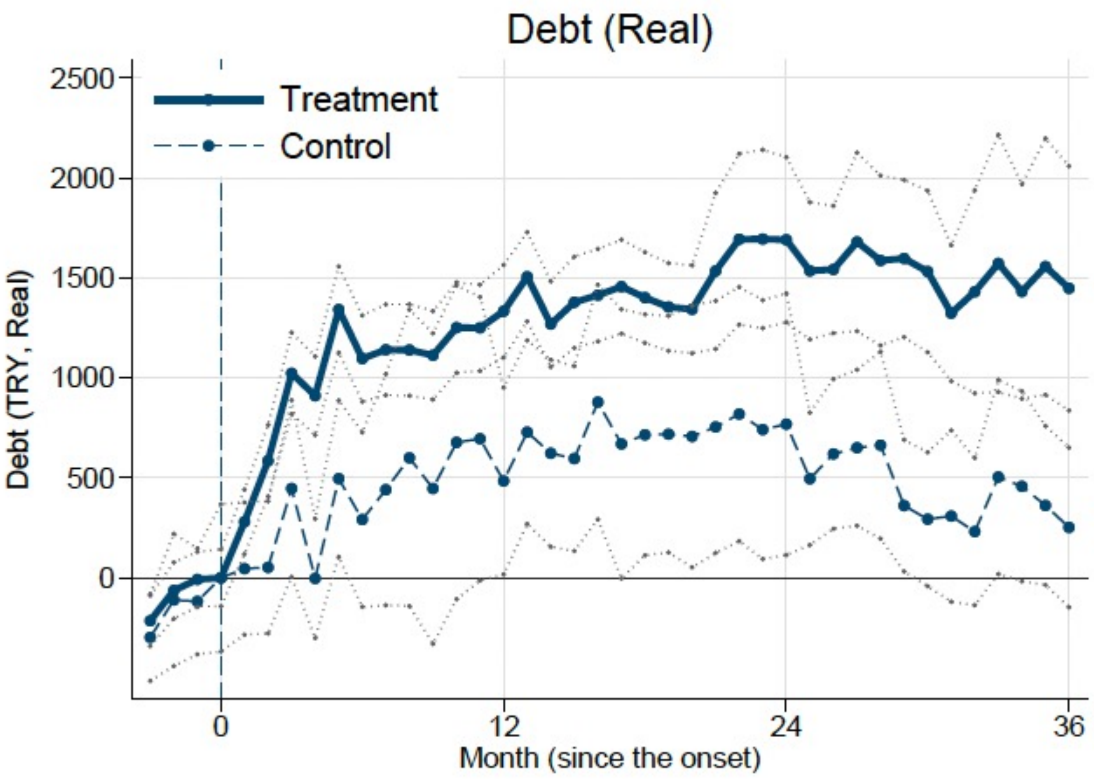
- There are short-run (static) and long-run (dynamic) financing hierarchy tests that could be conducted with this data.
  - In the long-run, all debt should be BNPL.

- Digression—We provide such tests for SMEs in a working paper with Olivia Kim (HBS).

Aydın and Kim (WP) "Finance and Investment"

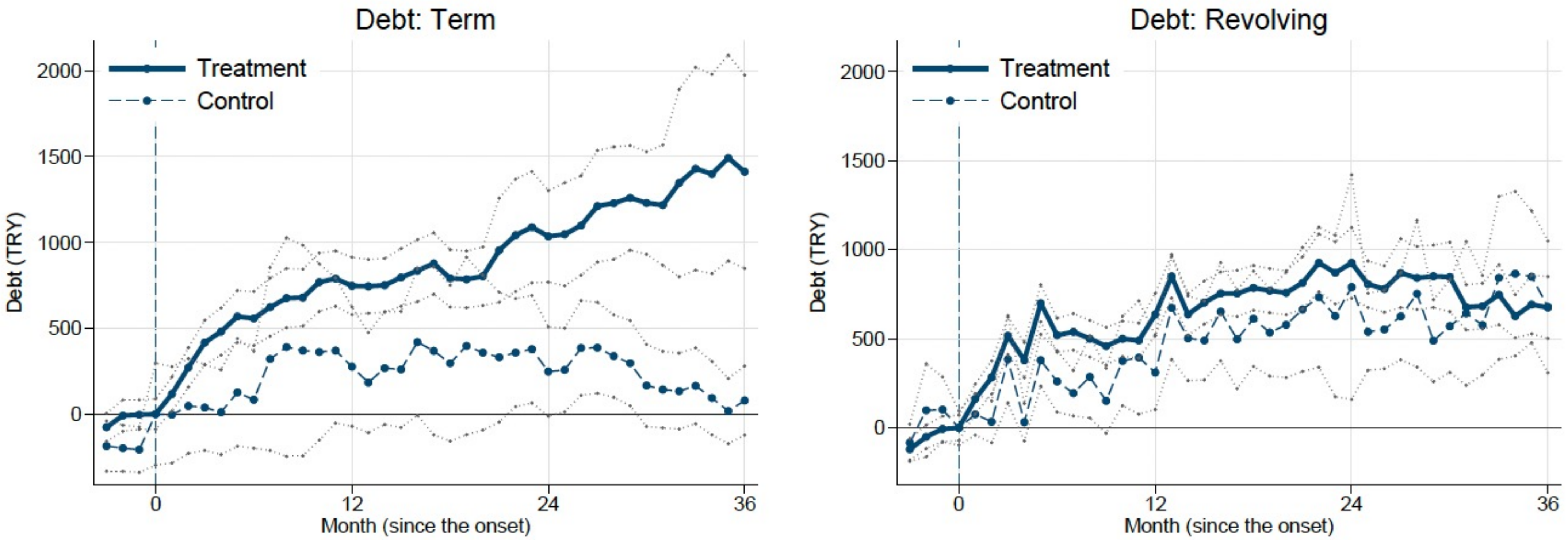
First-stage (Capacity) and Intent-to-treat (Debt) Effects





Aydın and Kim (WP) "Finance and Investment"

Debt Structure (Term vs. Revolving) Dynamics



In the long run, debt response with cheap term loans, directed to investment.

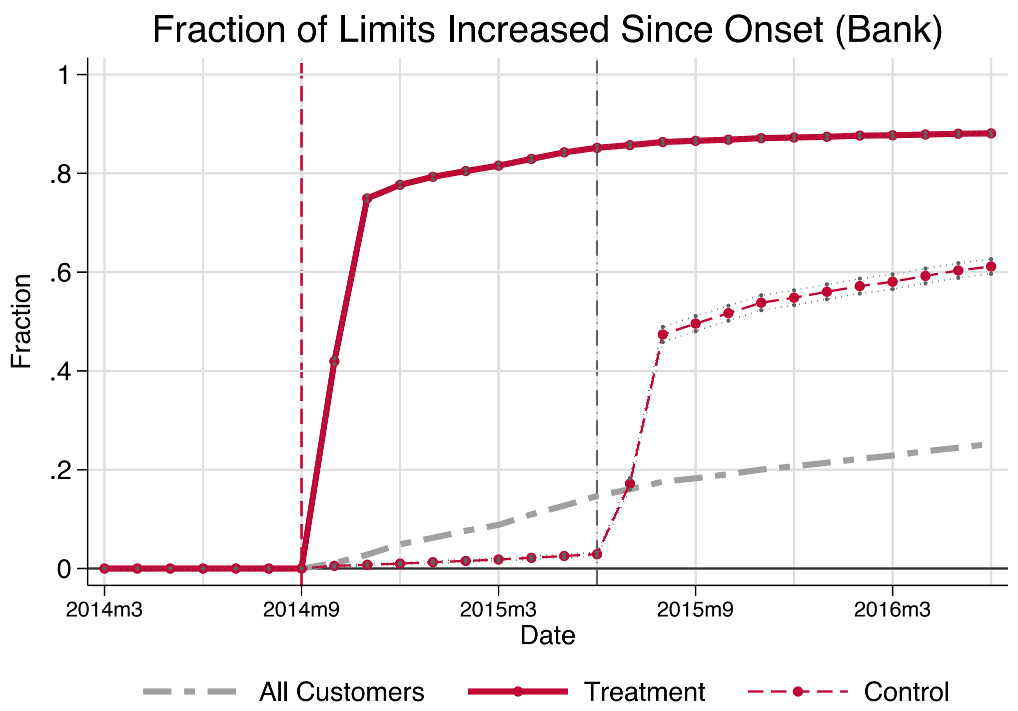
Comment—Identification
Randomization, Instrument, Empirical Specification

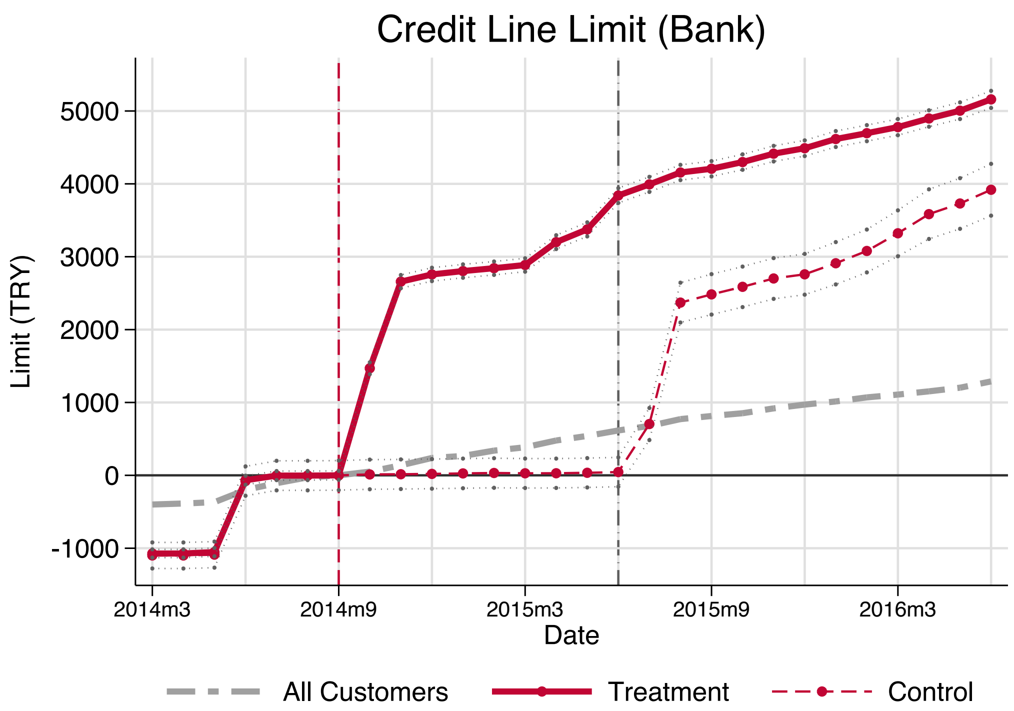
- Experiments can be constructed to randomize various aspects.
  - Who? How much? When?

- This paper:
  - Treatment group offered BNPL and was notified immediately.
  - Control group offered BNPL two months later 2 months later.

- What is random is timing (postponing), not whether or how much.
  - **Why not construct dynamic empirical specifications to use this feature?**
  - Similar to Aydin (2022); Parker et al. (2013) stimulus study
    - When stimulus payment is received depends on the last two digits of the SSN

Aydın (2023) *AER* Consumption Response to Credit Expansions





Final Words

- Streamline and re-organize
  - Give random BNPL supply shock the center stage.
  - Link BNPL specifics (underwriting, contracts, interest rates) to outcomes (e.g., indebtedness)

- Other Comments
  - What do borrowers use this credit on (merchants)?
  - What are the specifics of this setting that make users carefully moderate their borrowing and spending?
  - How does pricing of rates and fees work in two-sided markets?
  - What other features attract borrowers to these plans? (e.g., budgeting)
  - How do default and bankruptcy work in China?

Thank you!