Wharton
UNIVERSITY of PENNSYLVANIA
ONLINE

Lending, Crowdfunding, and Modern Investing

Introduction to Marketplace Lending

David Musto, Ronald O. Perelman Professor in Finance

From Peer to Peer Lending to Marketplace Lending

- Name change reflects the industry's pivot since its early days
  - Then: Platforms to take out the middleman
    - Match up lenders and borrowers
  - Now: Platforms do most of the work themselves by making the credit granting decisions
    - The money comes not from the retail public but from large investors like hedge funds

Structure of This Module

- Consumer credit landscape
- Original idea of peer to peer lending and its evolution into marketplace lending
  - Credit card debt
  - The big business of refinancing student loans
- Financing small business with merchant cash advances

Wharton
UNIVERSITY of PENNSYLVANIA
ONLINE

Lending, Crowdfunding, and Modern Investing

The Consumer Credit Landscape

David Musto, Ronald O. Perelman Professor in Finance

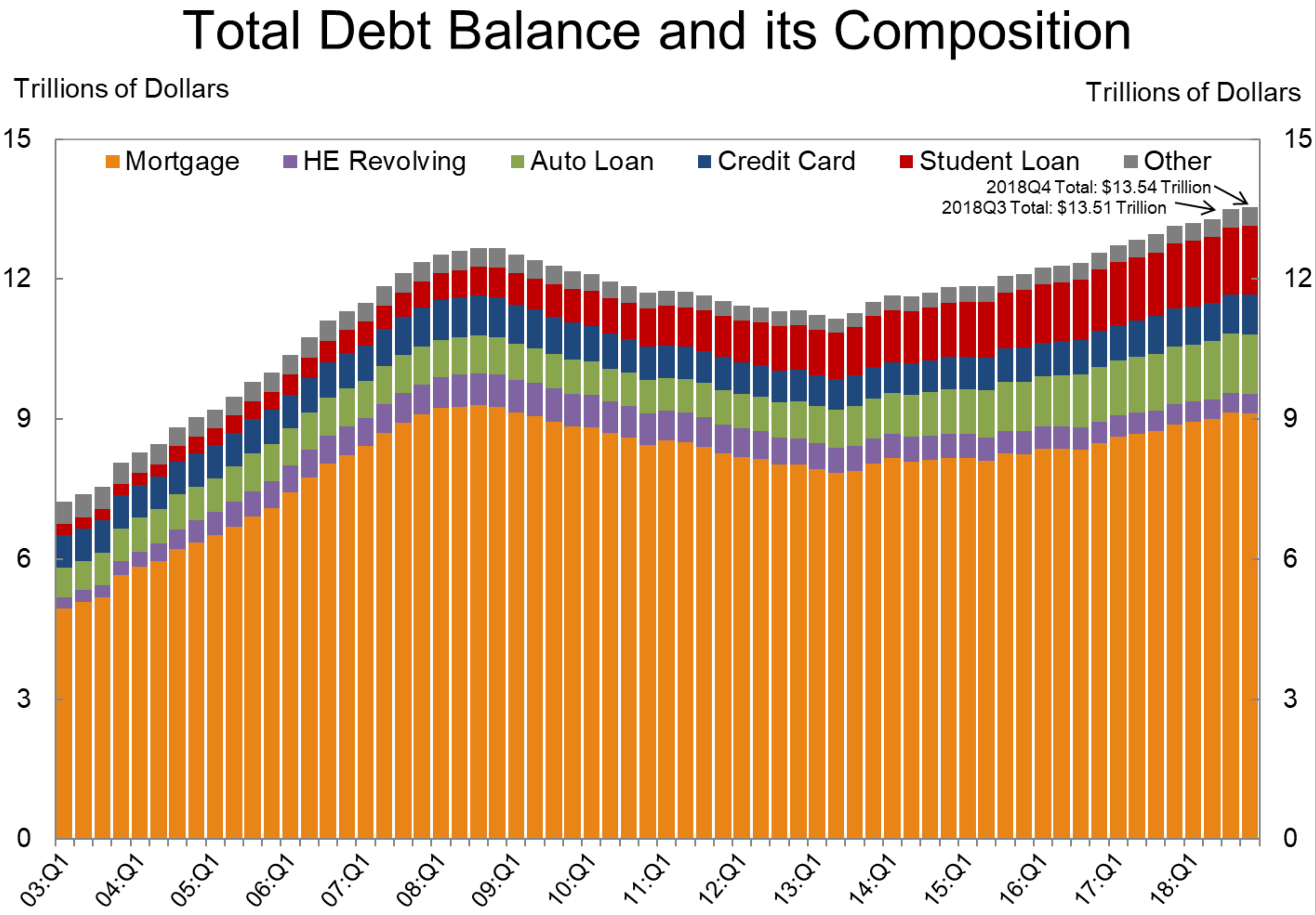
Consumer Credit Landscape

- Think about a household balance sheet
  - On the asset side, you have:
    - Physical assets
      - A house, one or more cars, maybe boat or vacation home
    - Financial assets
      - Retirement savings and other investments
    - Human capital
      - The skillsets and credentials the members of the household have earned through education and experience

Consumer Credit Landscape

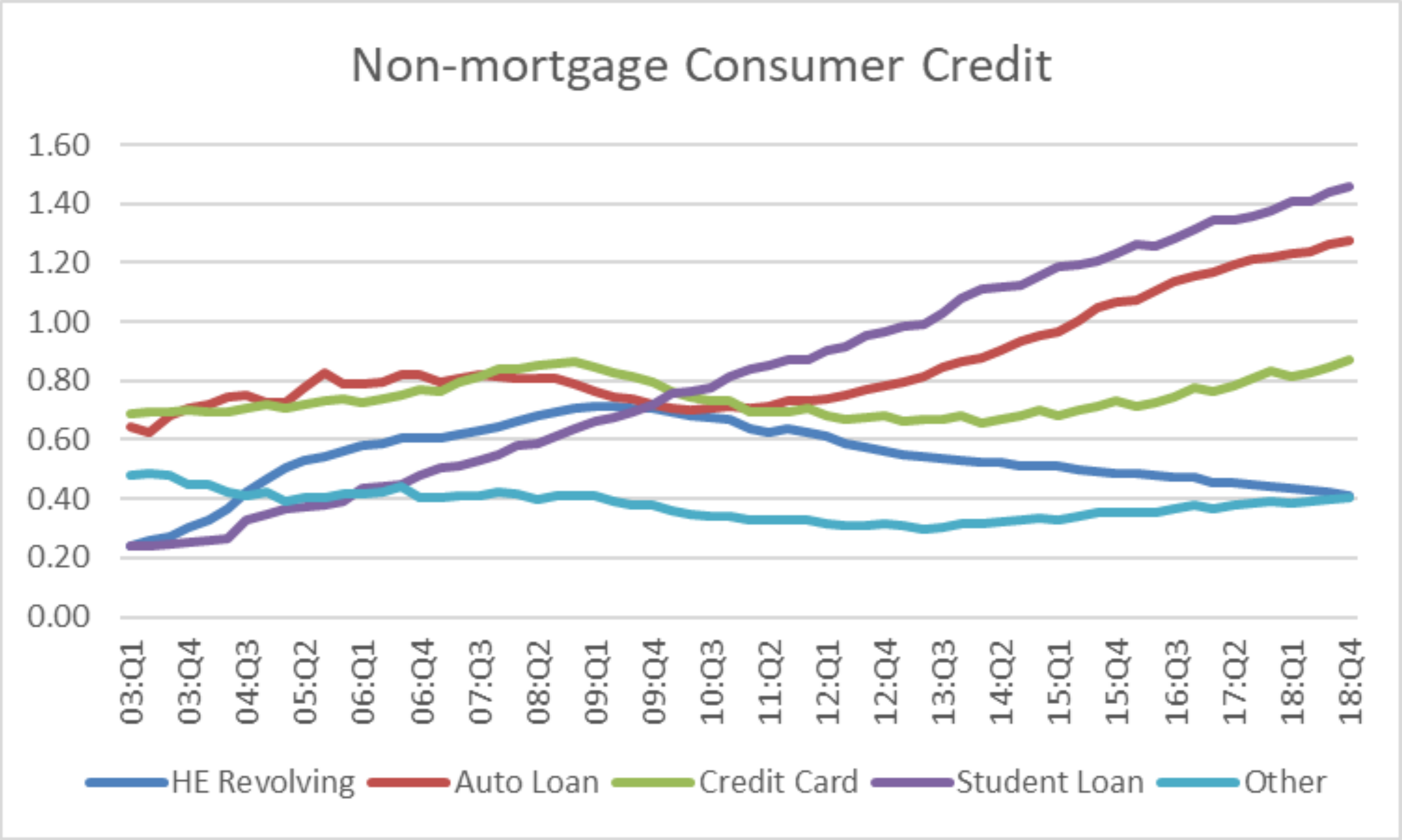
- Think about a household balance sheet
  - On the liability side, you have:
    - Debt incurred in acquiring those physical assets
      - A mortgage, car loans
    - Debt incurred in developing human capital
      - Student loans
  - Credit-card debt
  - Other debt

Household Debt

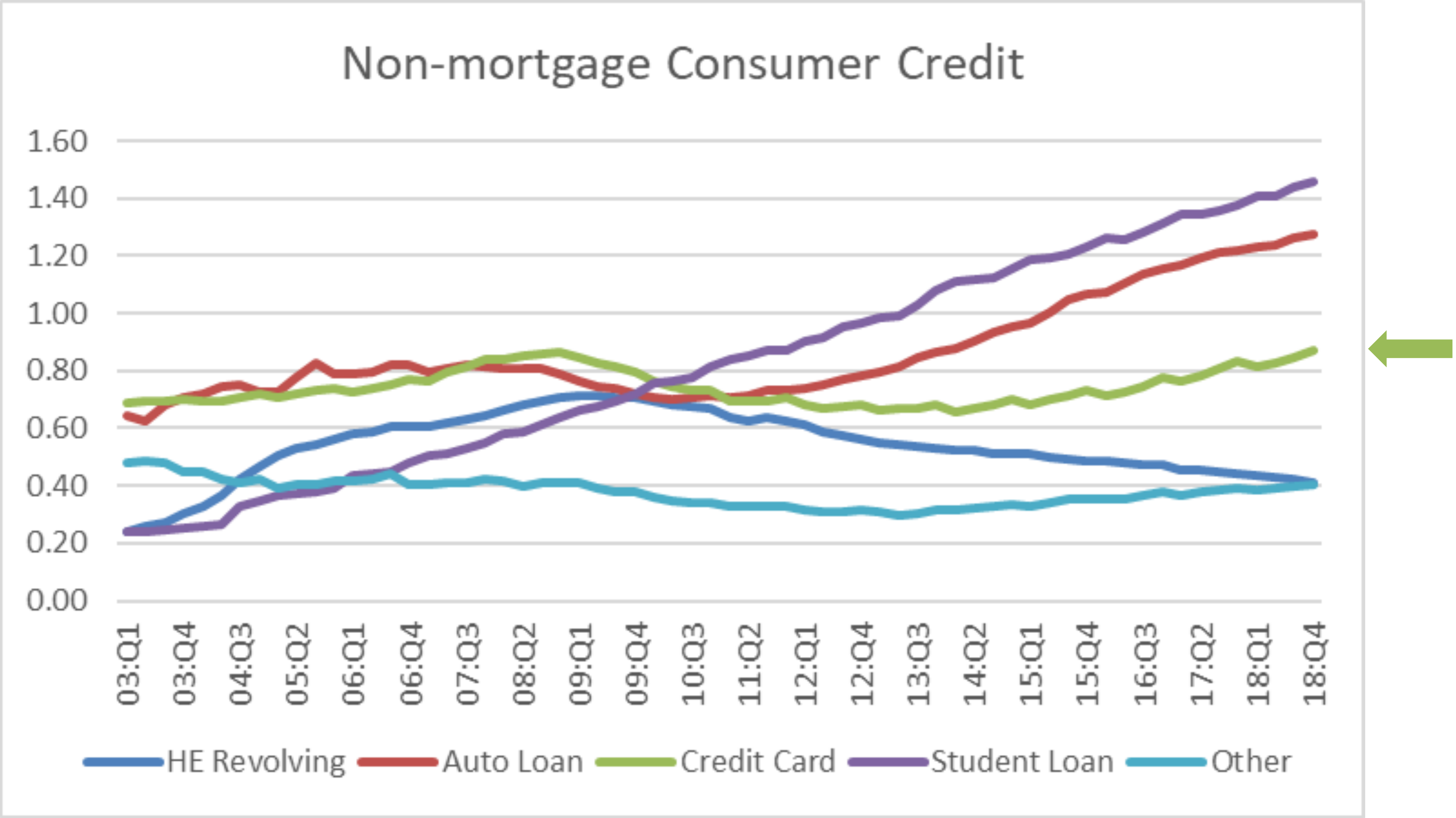


Source: New York Fed Consumer Credit Panel/Equifax

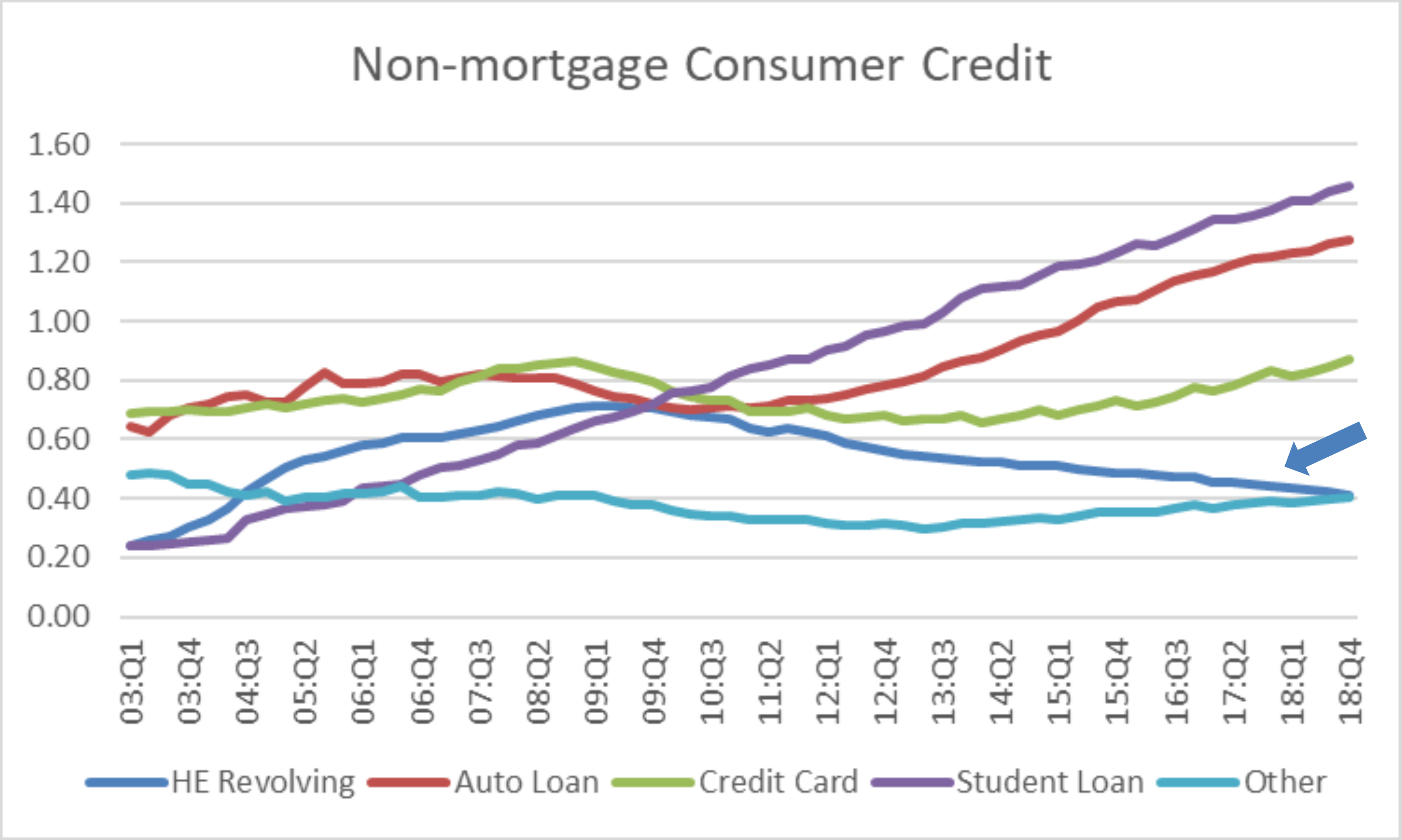
Trends For Each Mon-mortgage Component



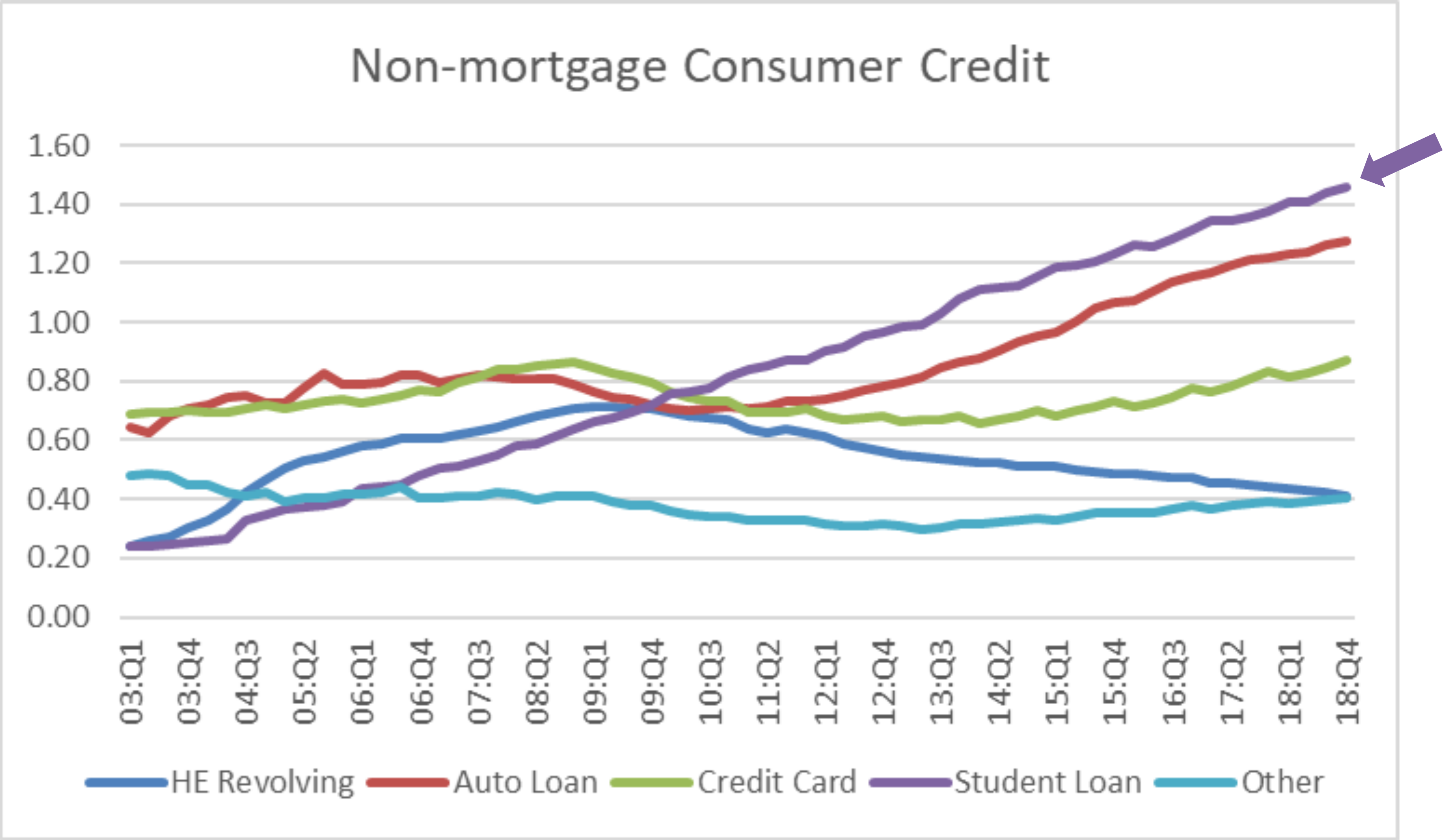
Trends For Each Mon-mortgage Component



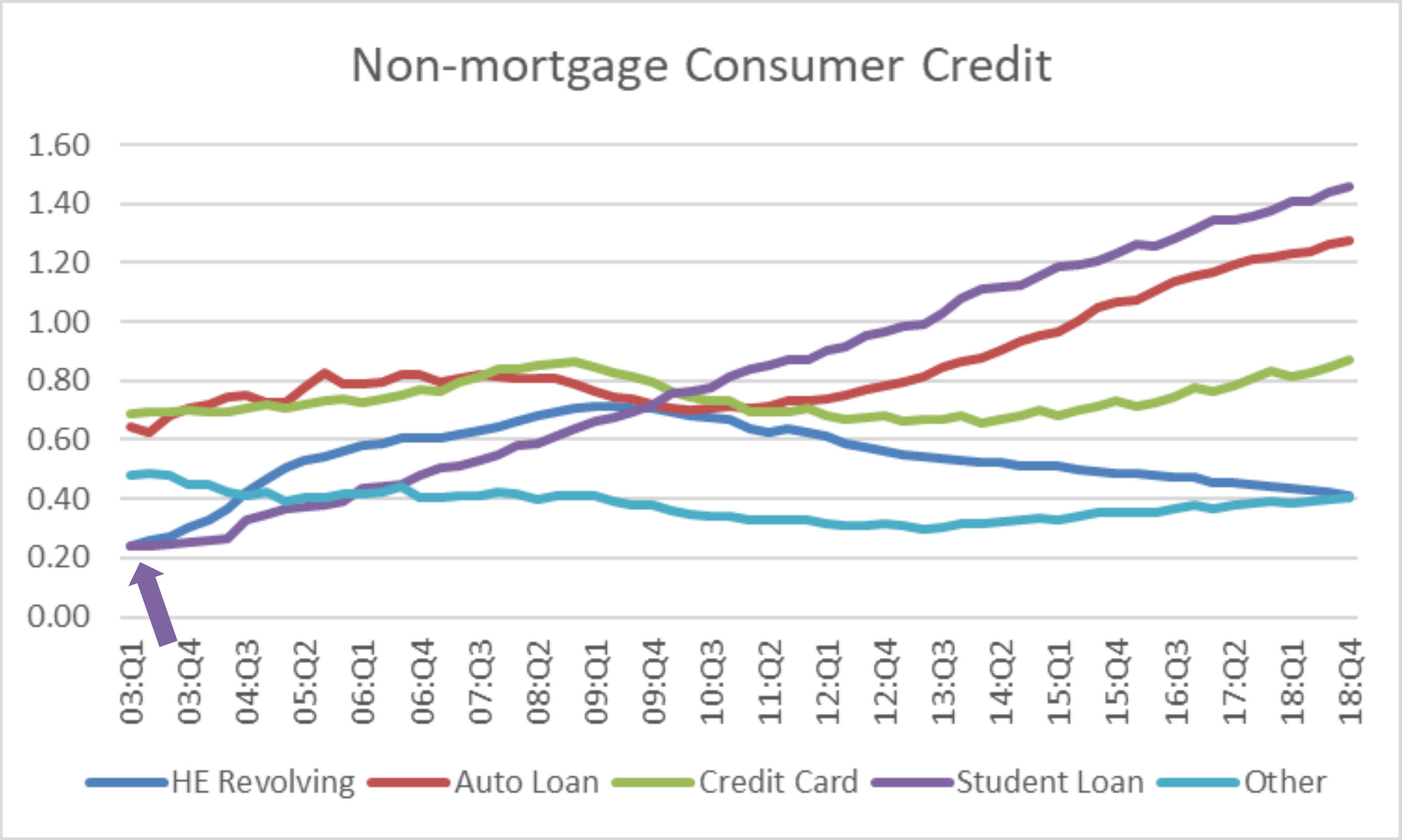
Trends For Each Mon-mortgage Component



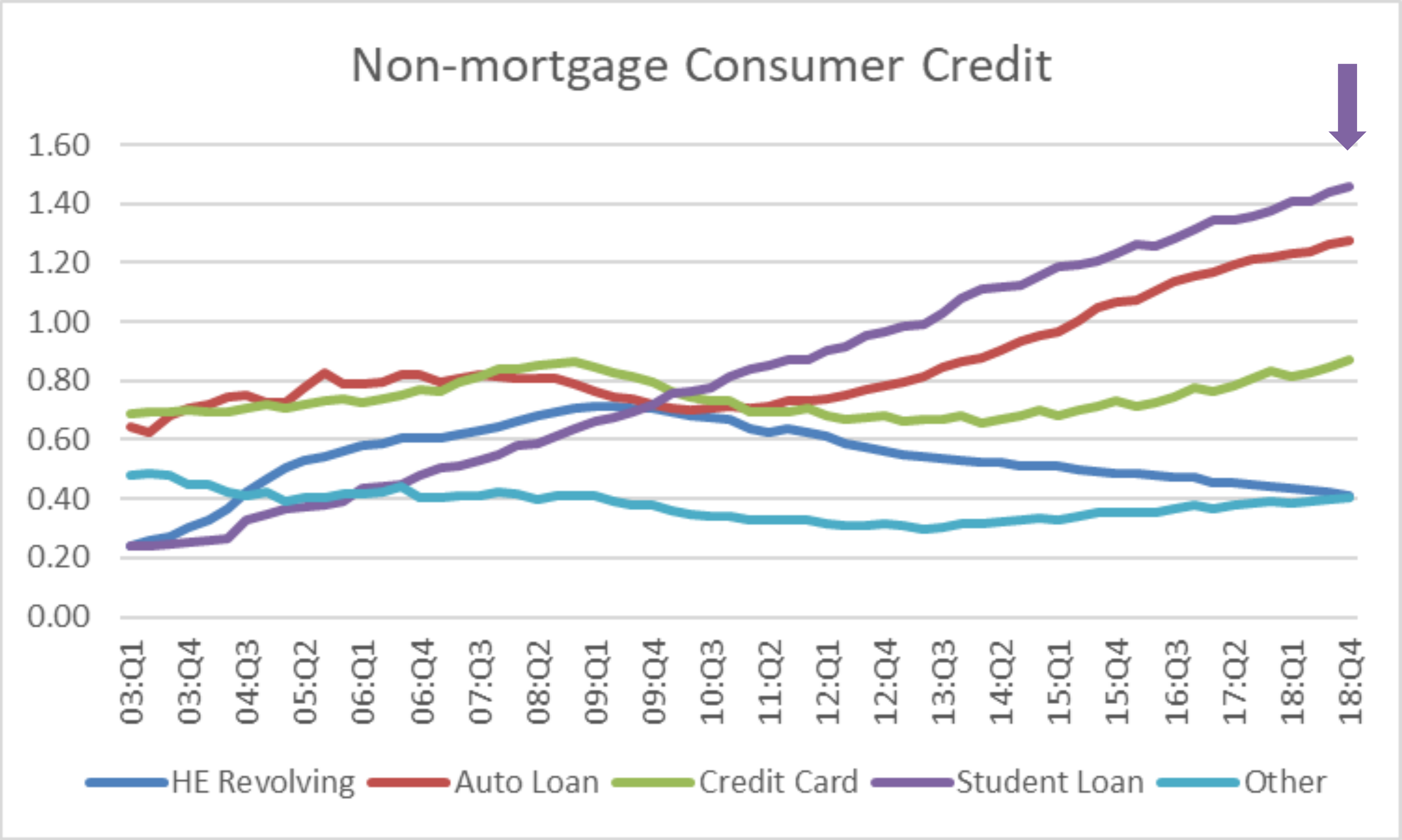
Trends For Each Mon-mortgage Component



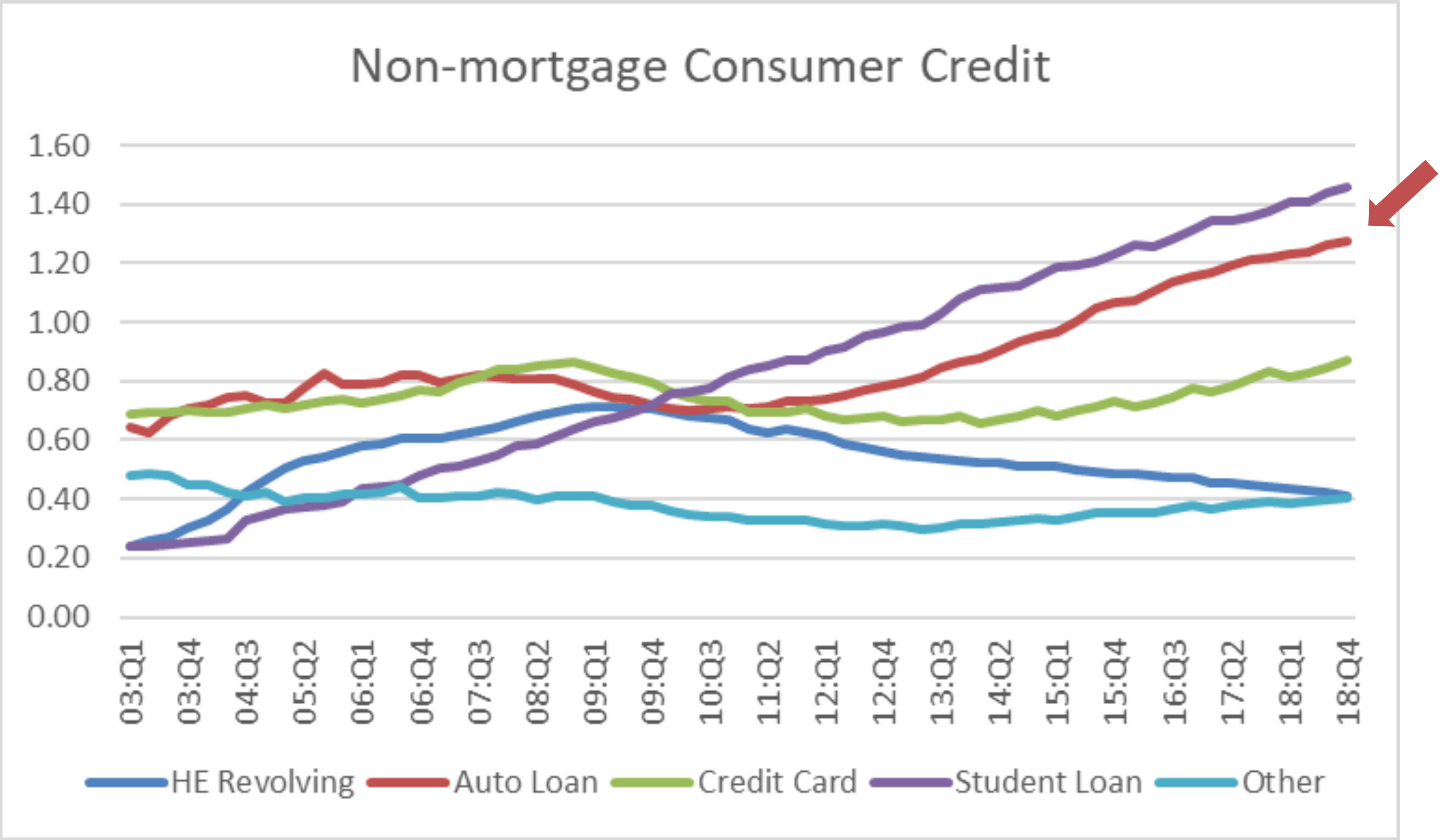
Trends For Each Mon-mortgage Component



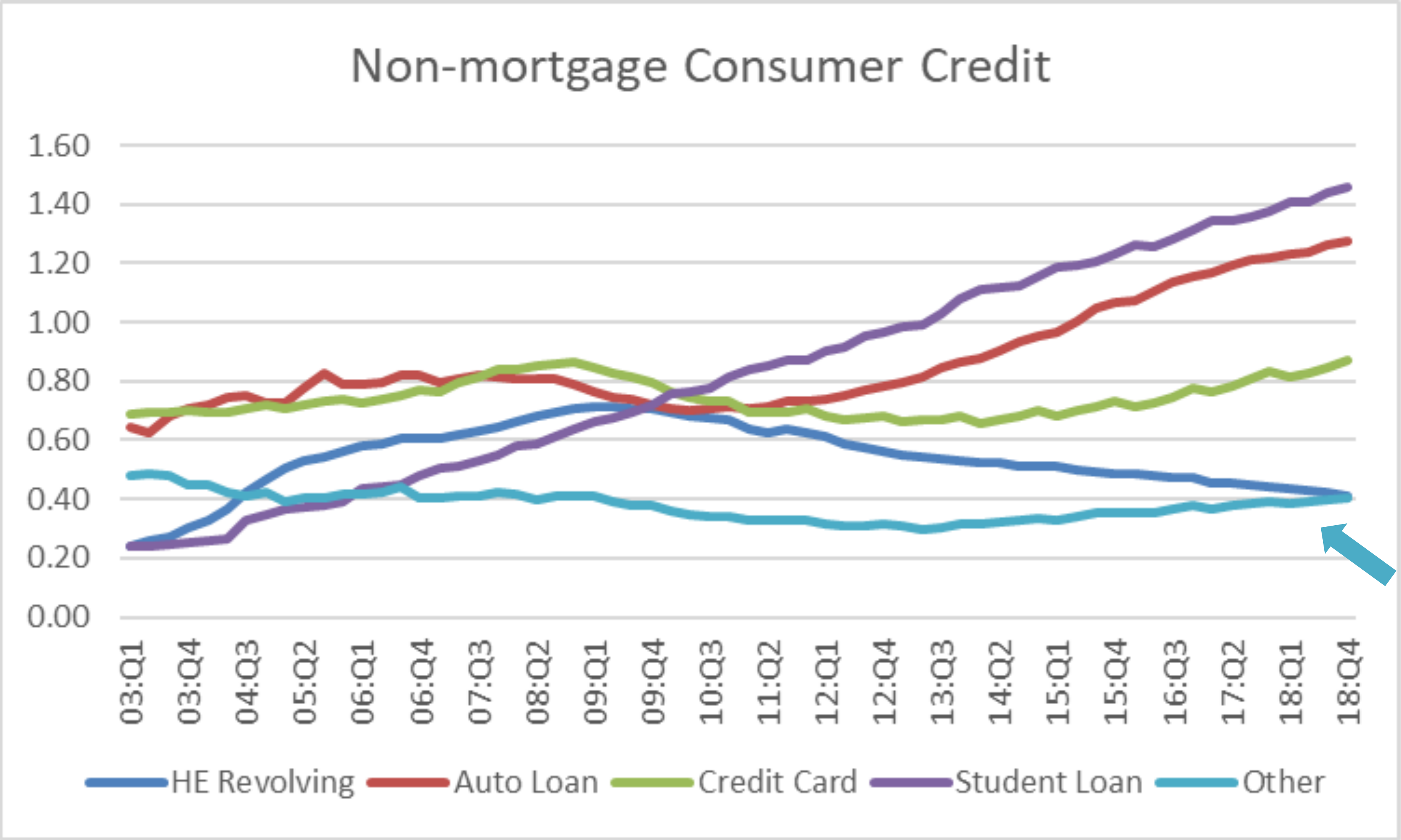
Trends For Each Mon-mortgage Component



Trends For Each Mon-mortgage Component



Trends For Each Mon-mortgage Component



Opportunities for Fintech

- Every sort of consumer credit is ripe for disruption by FinTech
  - Largest mortgage lender, as of 2018, is Quicken
  - Other FinTech companies focus on car loans
- We’re going to focus here on the uncollateralized lending:
  - Credit cards, student loans and the loans bundled into this “other” category

Credit Card Debt

- Credit cards started in the 1950s
- Were all about convenience
- Run up charges and pay balance at the end of the month
- Maybe you hit a bump, and don't pay the whole balance
    - Now you're a borrower
        - Paying a pretty big rate
        - No collateral

How Can You Lower Your Interest Rate?

- Can move the balance to a new card
- Take out a home-equity line of credit
  - Interest rate can be a lot lower
    - Why? Because you’ve posted your house as collateral
  - Saw a lot of HELOCs leading up to the crisis

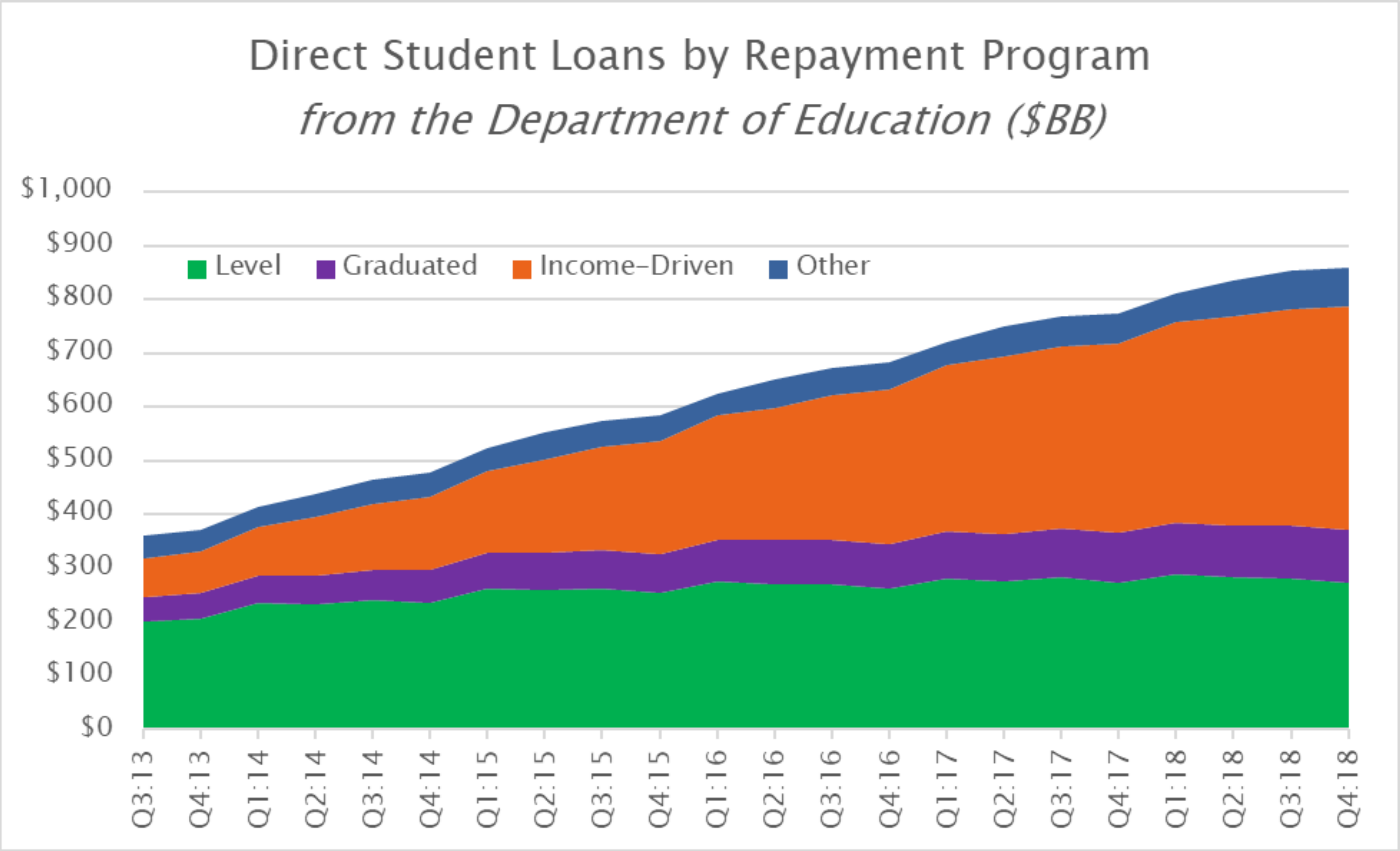
Student Loan Debt

- In one sense, student debt is good news: people are borrowing to build human capital, and now they have that human capital to lead more productive lives
- But the steady rise tells us this does not always go to plan, that some borrowers cannot pay down the loans with higher income down the road

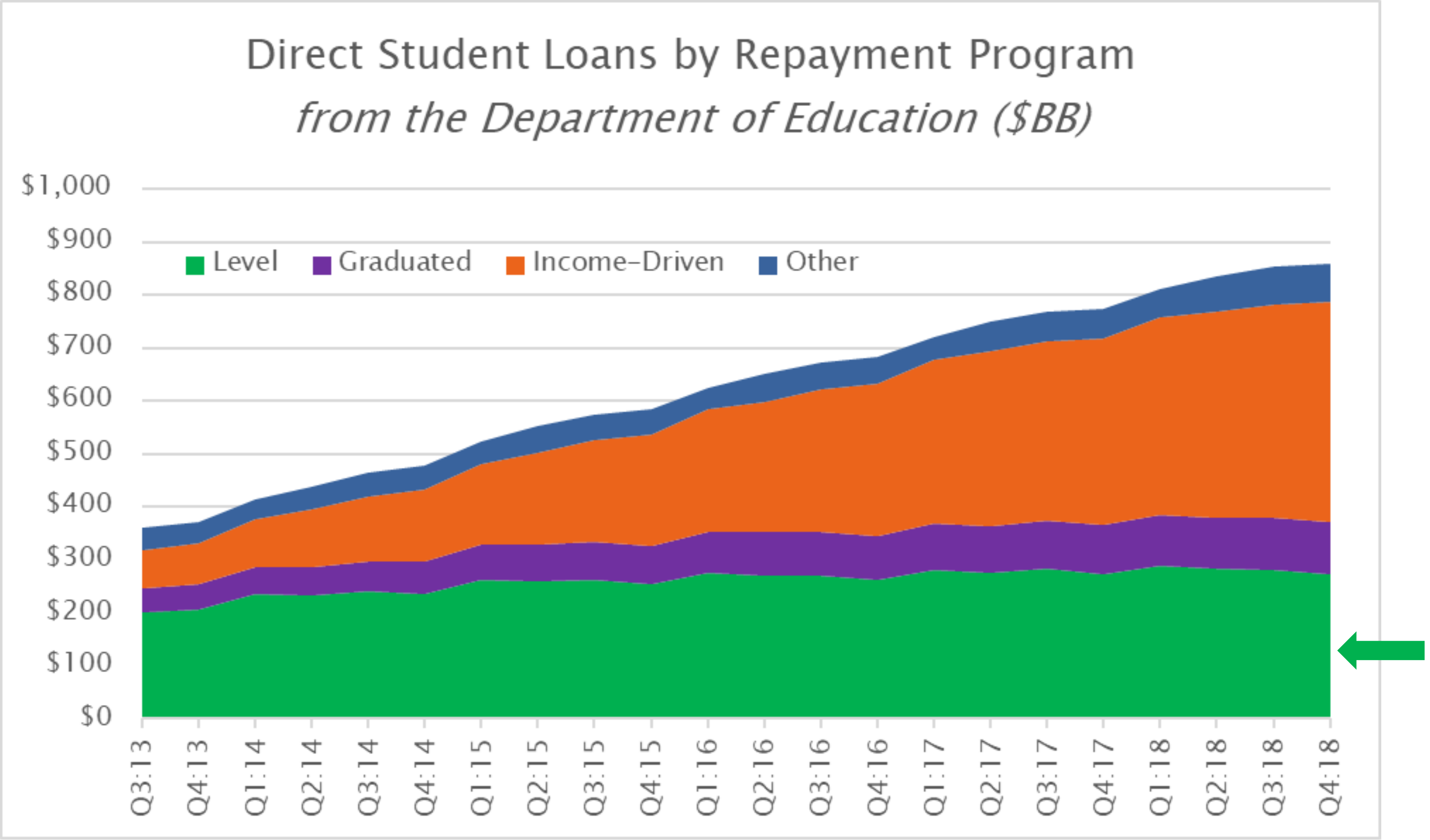
Why Student Loan Balance is Growing

- Income driven repayment
  - Pay 10% of your discretionary income toward your loans
  - Total income minus a subsistence amount, 150% of the poverty level for your family size in your state
- Whatever is still owed after twenty years is discharged

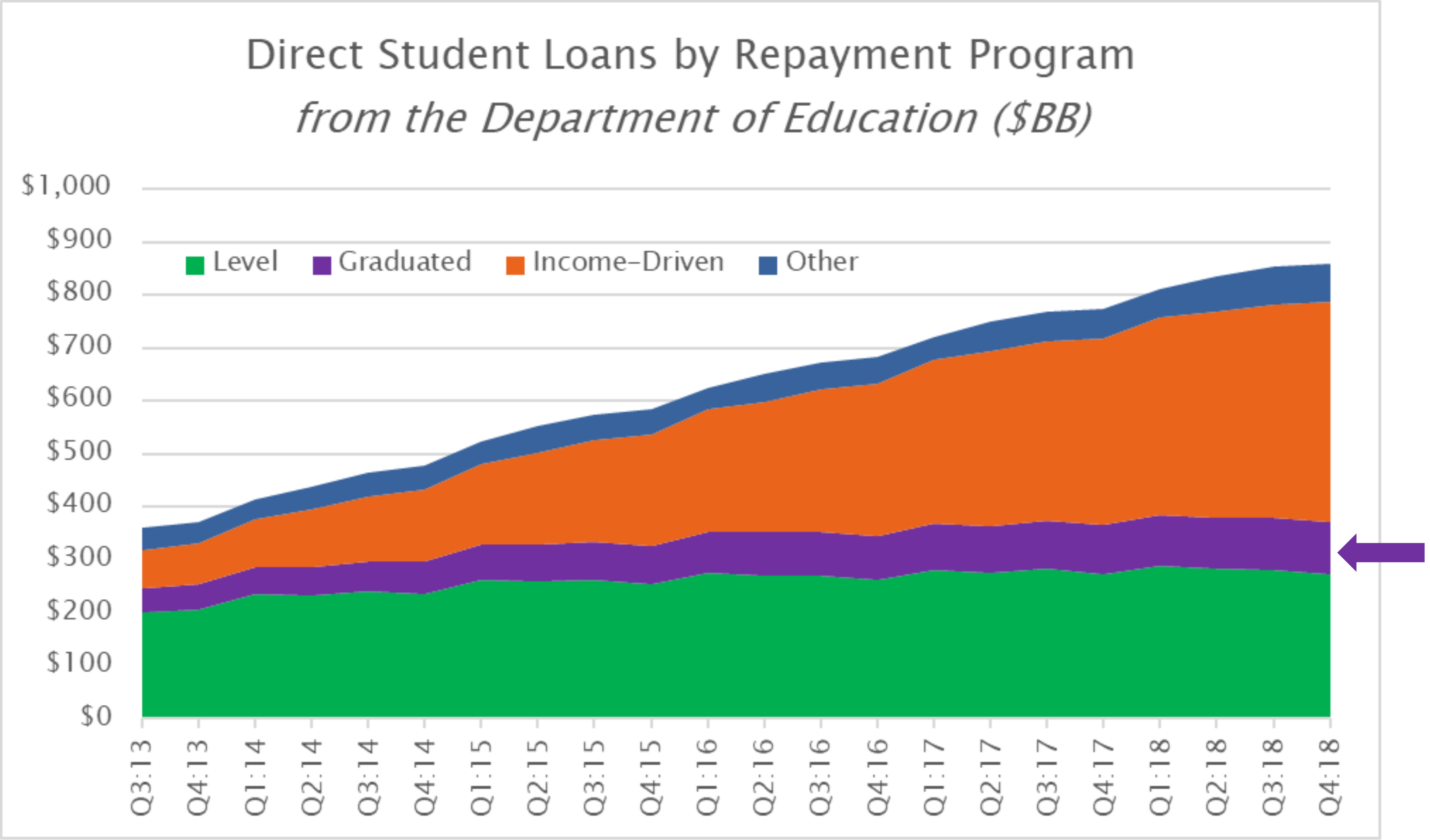
Student Loan Debt



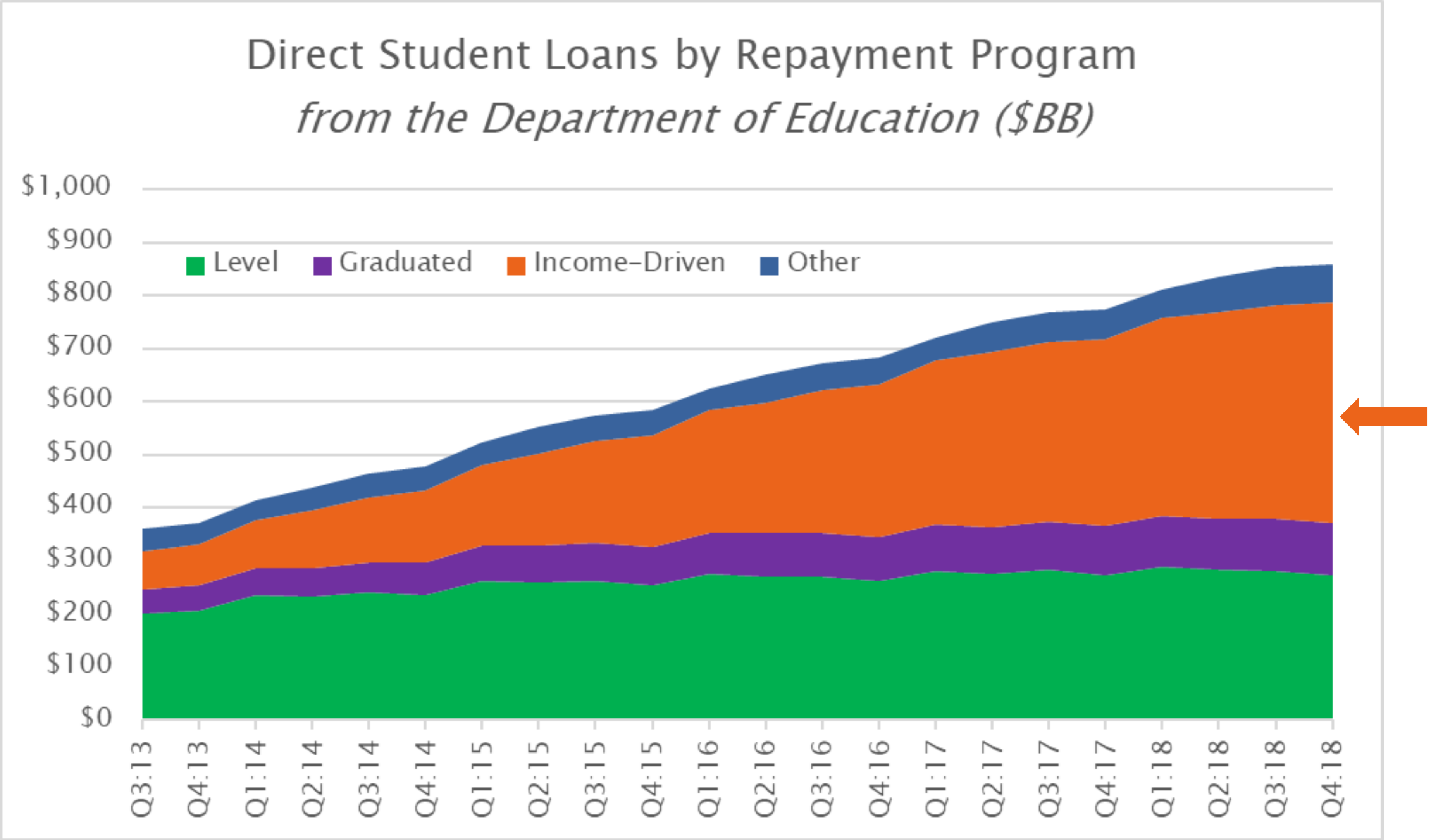
Student Loan Debt



Student Loan Debt



Student Loan Debt



Student Loan Interest Rates

- Those who take out a student loan in the same time frame have the same interest rate
  - Rate for an undergraduate student loan for 2018-19 was 5.05%
  - Rate for graduate school was 6.6%
- Calculated off of Treasury yields
  - The Treasury auctions off 10-year notes every May 15th
  - In May 2018, the ten-year note sold with a yield of 3%
    - For college loans, add 2.05%
    - For graduate school loans, add 3.6%

Everybody Pooled Together

- No risk based pricing - don’t try to sort out the good risks from the bad risks, they just offer everybody the same rate
- Virtue of taking out a federal loan is the variety of deferments and income-driven programs available afterward
- Downside is that you’re paying a rate that reflects an average risk, rather than your specific risk
    - Downside if your risk is lower

Summary

- Easy to slip into owing money on your credit card
  - A little south of a trillion dollars of credit-card debt right now (2019)
- You can reduce the rate by rolling into a home-equity loan
- Trillion and a half of student-loan debt now
  - Income-based repayment on the downside
  - For those on the upside, paying an interest rate that reflects the average risk of the pool of borrowers, rather than their own, now lower, risk

Wharton
UNIVERSITY of PENNSYLVANIA
ONLINE

Lending, Crowdfunding, and Modern Investing

Evolution of Peer to Peer Lending

David Musto, Ronald O. Perelman Professor in Finance

Peer to Peer Lending

- Peer to peer lending showed up in the late pre-crisis years, around 2006
- People loan to each other
  - Big players – Lending Club and Prosper Marketplace
- Internet platforms line up the borrowers and lenders
  - Facilitate the mechanics of the loans, passing money from lenders to borrowers, and passing it back as the loan is paid down, and taking a cut

Borrowers

- Borrowers would post financial information, maybe a picture
- How much they want to borrow, maximum interest rate
- Terms of the loans are around 3 to 5 years
- Why are they borrowing?
  - 80% borrow to pay down their credit card debt
  - Don’t want to or can’t go the HELOC route
  - Hoping their peers will loan at a better rate than the card issuer

Credit Rationing

- Credit rationing
  - The borrower knows things about their risk portfolio that the lender does not know
  - If the borrower privately knows there's a big probability they won't pay it back, then a high-interest loan is less expensive to me than it is to a low-risk borrower

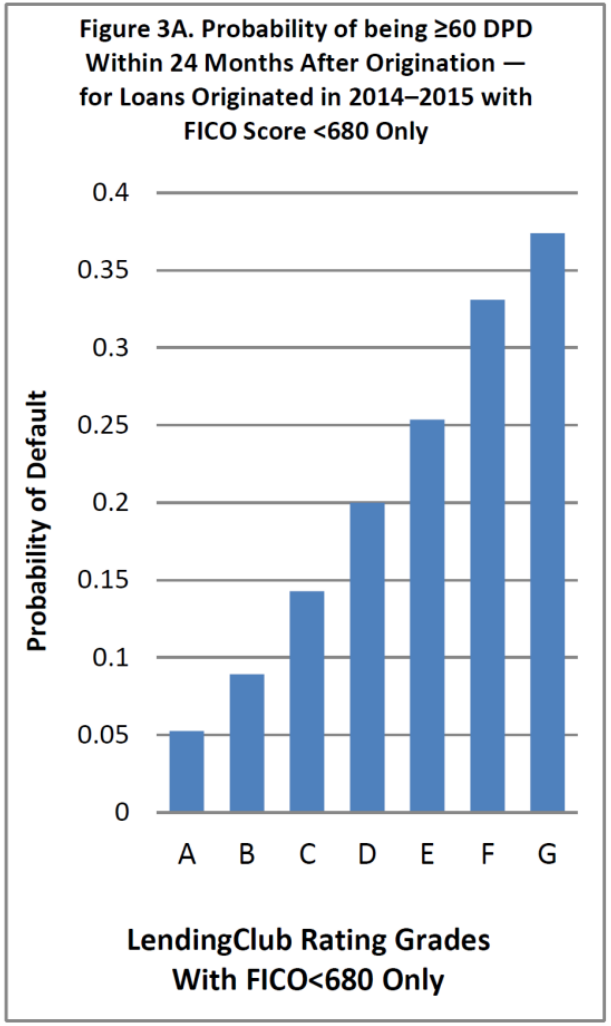
Evolution

- Lending platforms became more involved in the decisions
  - Make a credit risk evaluation and set an interest rate
  - Investors would simply decide if they want to be a part of it or not
- Over the subsequent years, information provided to lenders has gone down, and automated lending by institutions has gone up

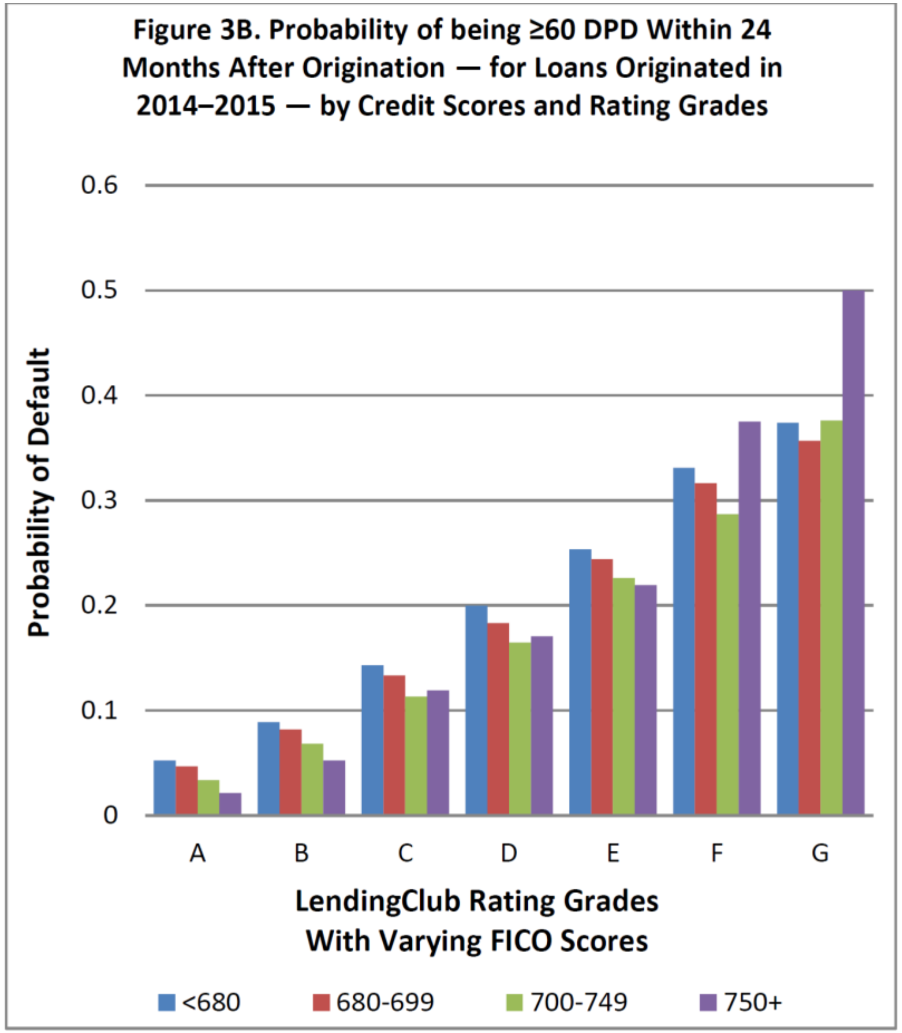
What it's Like Now

- Around 95% of lending is by institutions
- Borrowers allow the lender to browse their bank accounts, credit card accounts, utility bills, or their phones
  - Big data, machine learning to create risk score
- Correlation between lenders' credit scores and traditional credit scores like FICO has gone down and down
  - Lenders' credit scores do much better
- "Invisible Prime" borrower

Invisible Prime: A Credits Among Borrowers Below 680 FICO



Source: LendingClub



Source: LendingClub

Source of Funds

- Institutional investors automatically buy loans based on the platform's risk assessment and pricing
- Loans are also securitized
  - Assemble a pool of loans, issue securities backed by that pool

Summary

- Peer to peer platforms offer an alternative to consumers trying to finance their credit card debt
- Platform makes the lending decisions, and institutions automatically buy what they originate
- Not a retail investment play anymore

Wharton
UNIVERSITY of PENNSYLVANIA
ONLINE

Lending, Crowdfunding, and Modern Investing

Student Loan Debt

David Musto, Ronald O. Perelman Professor in Finance

Student Loan Debt

- Everybody getting a federal grad-school loan for 2018-19 got the same interest rate: 6.6%
- Those who get into distress, or who aren't making the money they hoped for, can take advantage of deferments, and also forbearance, and also income-driven repayment programs

Graduates Doing Better

- If you’re among the graduates doing better, you don’t need to borrow at such a high spread
- So a lender could offer to loan to you at 4%
  - You spend the proceeds paying down your federal loan, and now you have this private loan at 4%

SoFi

- Main business model of SoFi and other lenders
  - Refinance the lower-risk borrowers out of their student loans to a better rate

10-year Rate Has Moved Up Since 2016

Moving Beyond the Refinance Business

- Transitioning away from focusing on refinancing
- Now wants to be the original lender
- Somewhat trickier proposition, given the uncertainties about graduation and placement prospects, which also depends on the economy

Summary

- Lending to all student borrowers at the same rate makes for an easy profit opportunity to lend
- Complication – Borrowers give up income-driven repayment option
- Refinancing business depends crucially on the path interest rates take, which is why it helps to go upstream and get some business originating the loans in the first place

Lending, Crowdfunding, and Modern Investing

Lending to Small Businesses

David Musto, Ronald O. Perelman Professor in Finance

Lending to Small Businesses

- Marketplace lending that is aimed at small business, especially retailers
  - Lending by payment aggregators like Square
  - Payment aggregators have built on the existing idea of a merchant cash advance

Advantages over Other Lenders

1. Payment aggregator sees every sale, every tip, every time someone uses a card, and can potentially see cash payments as well
    - Can make judgements about the retailer’s future cash flow and other prospects
    - This information can be the basis of a loan offer

Advantages over Other Lenders

2. The payment aggregator can repay itself out of the merchant’s cash flow
   - They can say to you, I’ll loan you $10,000, and then I’ll repay myself by taking 10% of your future receipts, until I have repaid myself $11,000
   - They don’t have to worry about you deciding whether to repay. They just repay themselves out of your cashflow, before you ever get the money

Square Capital

- Some of the money loaned is their own money, and some is provided by outside investors
- Small business is borrowing at rates that take advantage of the lenders ability to
  - Make a informed decision
  - Takes the cash flow directly out of the companies revenues

Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE