

FEDERAL RESERVE BANK *of* NEW YORK

# Student Loan Borrowing and Repayment Trends, 2015

April 16, 2015

Andrew Haughwout, Donghoon Lee, Joelle Scally, Wilbert van der Klaauw

The views presented here are those of the authors and do not necessarily reflect those of the Federal Reserve Bank of New York, or the Federal Reserve System.

# Some higher education background

- College remains a worthwhile investment for most of those who pursue it
  - Median annual earnings were \$23,000 higher for bachelor's degree holders compared to high school graduates in 2014
  - Unemployment rates for bachelor's degree holders much lower than high school graduates (6% vs 3.5% in 2014)
- Student loans are an important tool for financing college for many students
- Speech by William C. Dudley, March 4 on student loans:
  - “. . .[T]here is much uncertainty and heterogeneity in outcomes, with net returns to these human capital investments being negative for some. Understanding causes and consequences of this heterogeneity is important.”
  - “How we finance post-secondary education has significant effects on a variety of critical economic outcomes.”

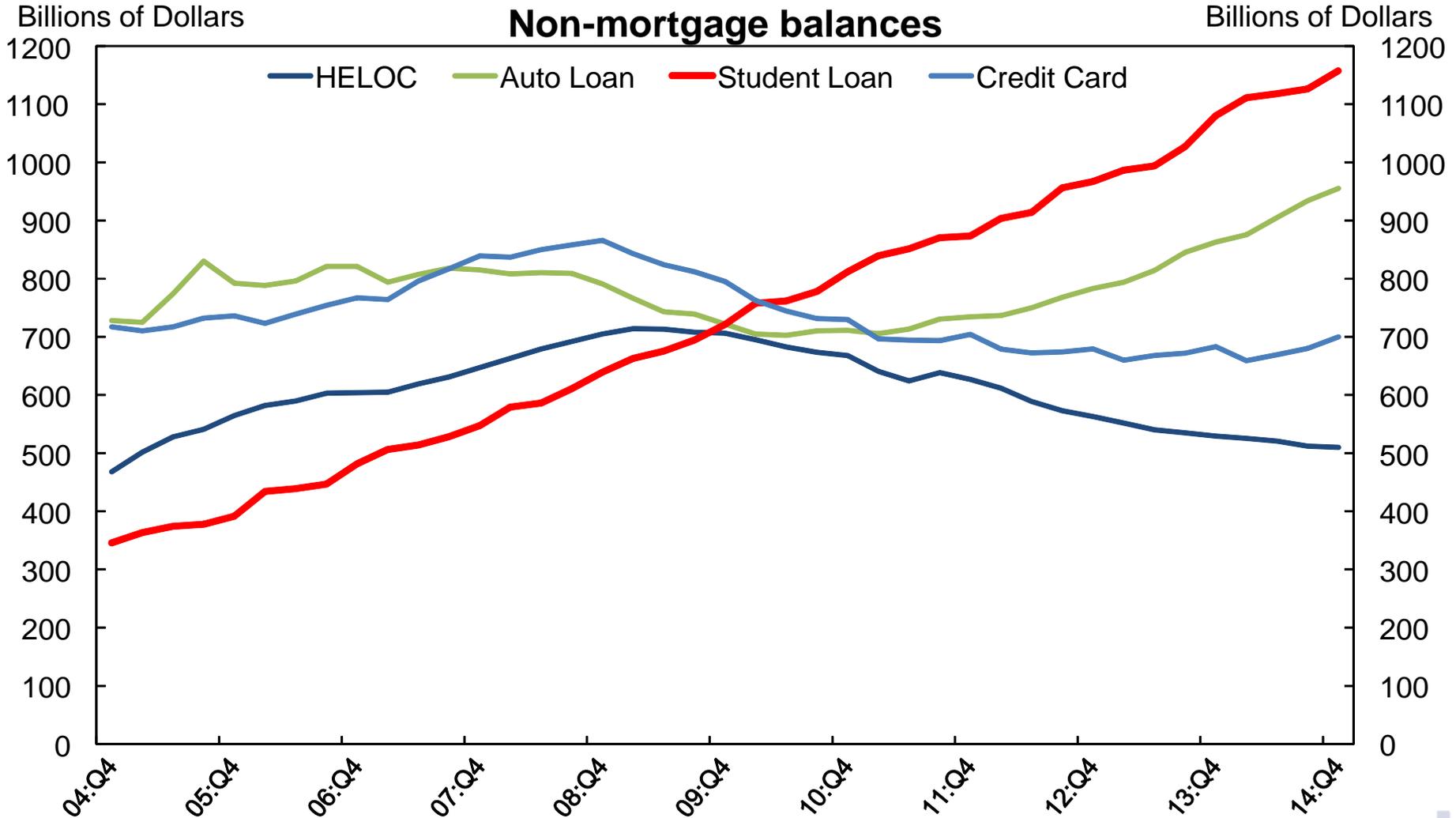


# Researching student borrowing

- We try to better understand student loans for two reasons:
  - Student debt is large, and appears to have significant effects on macroeconomic outcomes (household formation, homeownership, consumption)
  - Good information on borrowing and repayment is necessary to design best policies for financing this most important kind of investment



# Student loans defy business cycle



Source: New York Fed Consumer Credit Panel / Equifax

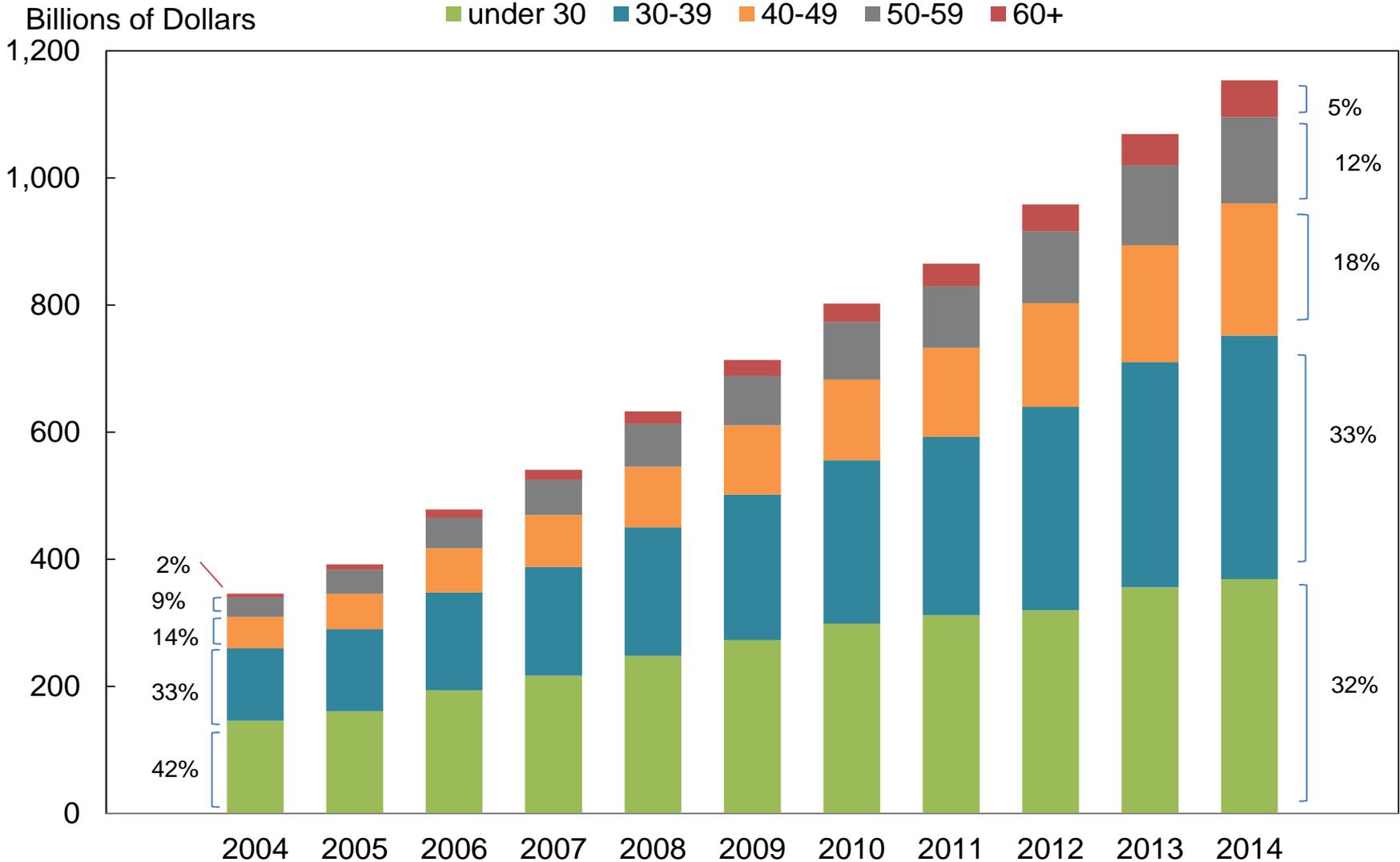


# Student loans increased as other debts declined

- During and after the Great Recession, households reduced their other debts, but student loan balances continued to increase
- Because the majority of student loans are federal, tight bank lending standards did not affect student loans
- The increase was a result of both increasing numbers of borrowers and increasing average balances per borrower
  - Between 2004 and 2014, there was an 89% increase in the number of borrowers and a 77% increase in the average balance size
- College enrollment grew by 20% between 2005 and 2010 – faster than any period since the 1970's – and has declined slightly since



# Total student loan balances by age group



Source: New York Fed Consumer Credit Panel / Equifax

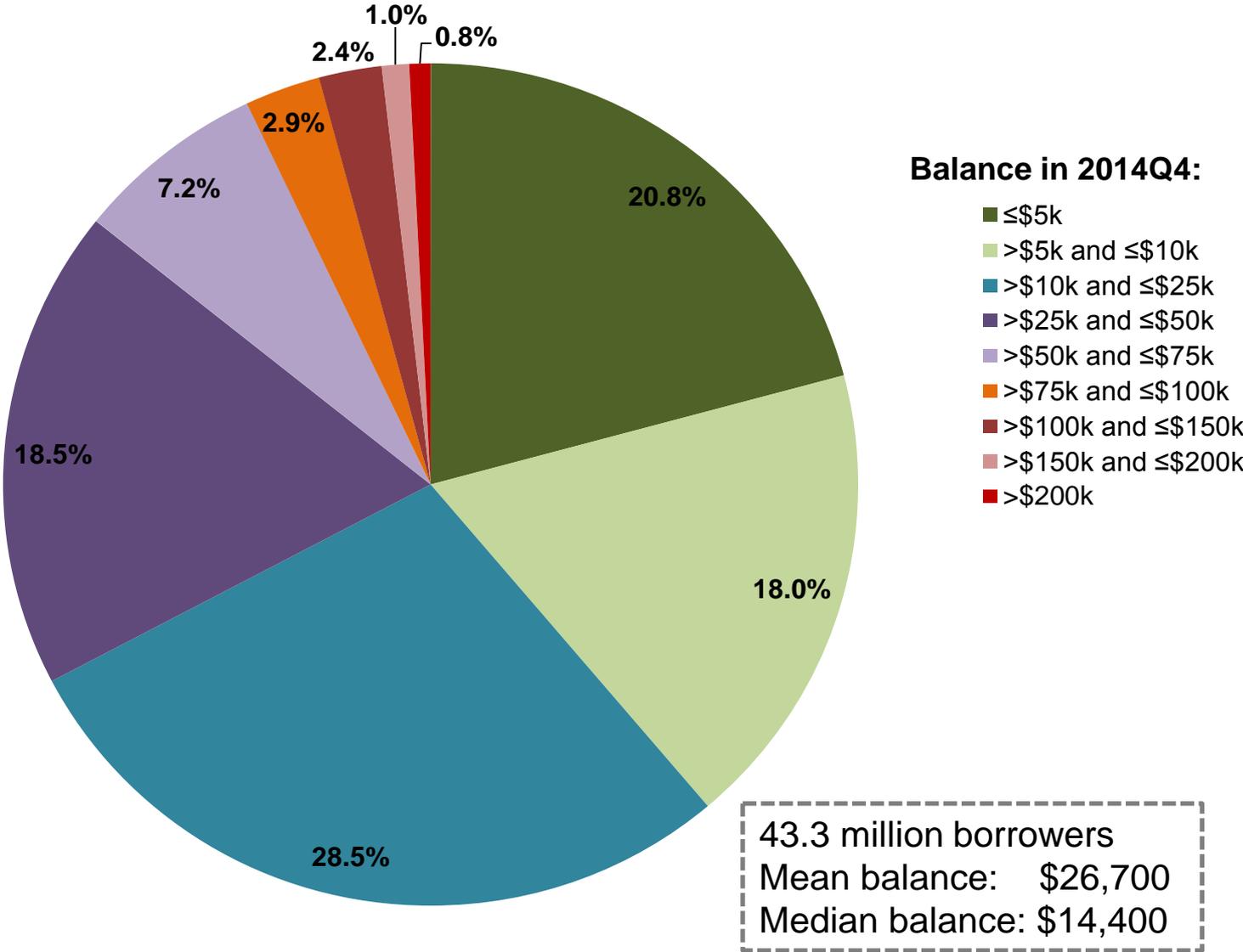


# Increases among borrowers of all ages

- Student loan balances grew for borrowers of all ages between 2004 and 2014:
  - The number of borrowers over 40 increased at twice the pace of the number of borrowers under 40
    - Especially fast growth in balances held by for borrowers age 60+, up nearly nine-fold
  - As a consequence, share of balances held by borrowers age 40+ increased from 25% to 35%
- 2/3 of student loan balances are held by borrowers not in their 20s



# Distribution of borrowers by 2014Q4 balance



Source: FRBNY Consumer Credit Panel/Equifax

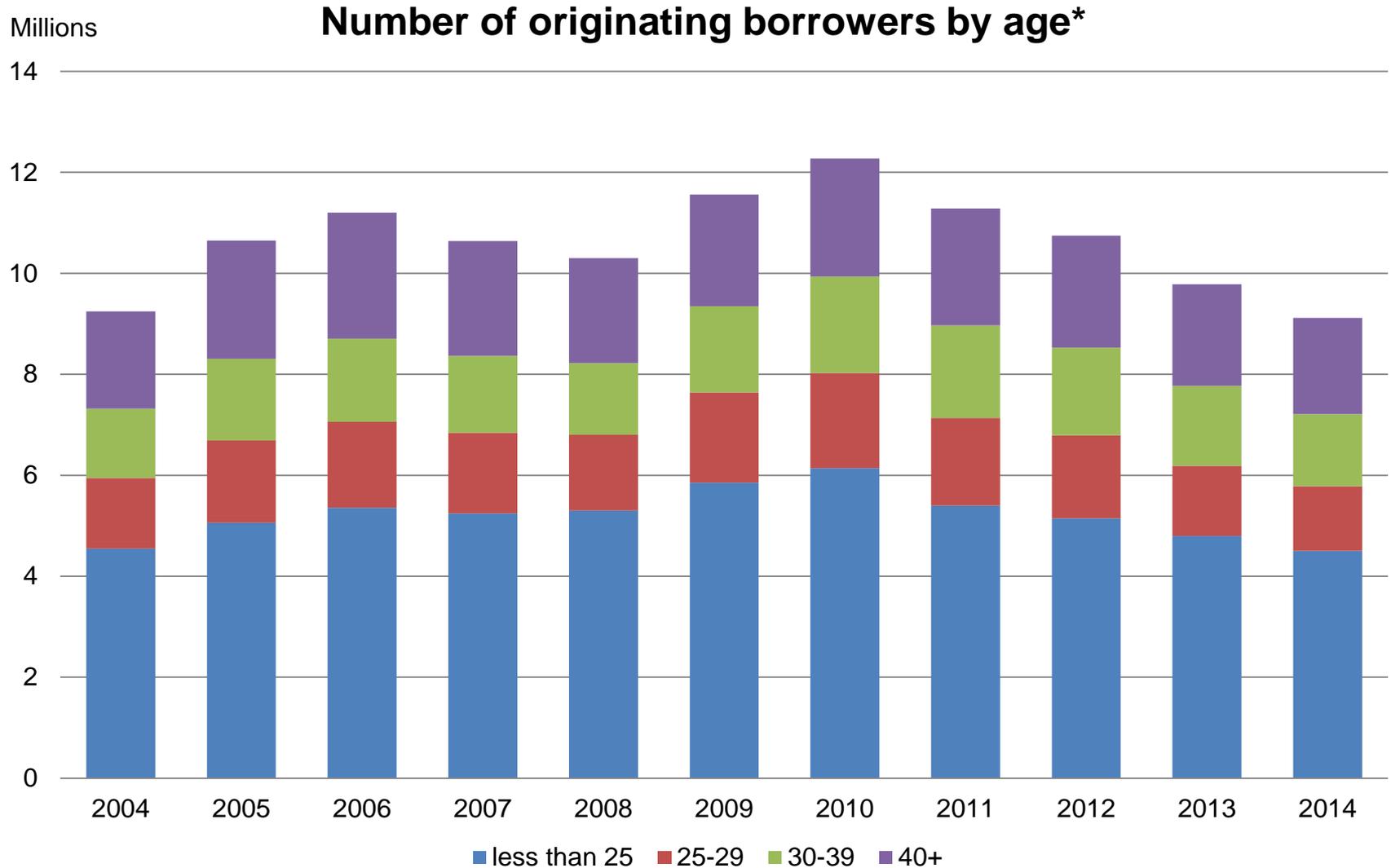


# Significant heterogeneity in amounts owed

- Most borrowers have a current outstanding balance below \$25k
  - About 40% owe less than \$10K
- Mean outstanding balance is \$26k; median balance is \$15k
  - Significant numbers of borrowers with large balances (over \$25K)
- Borrowers in their 30's and 40's have the highest mean and median balances, at about \$31k and \$17k respectively



# Who is borrowing now?



Source: FRBNY Consumer Credit Panel/Equifax; \* excludes small number of borrowers with missing age

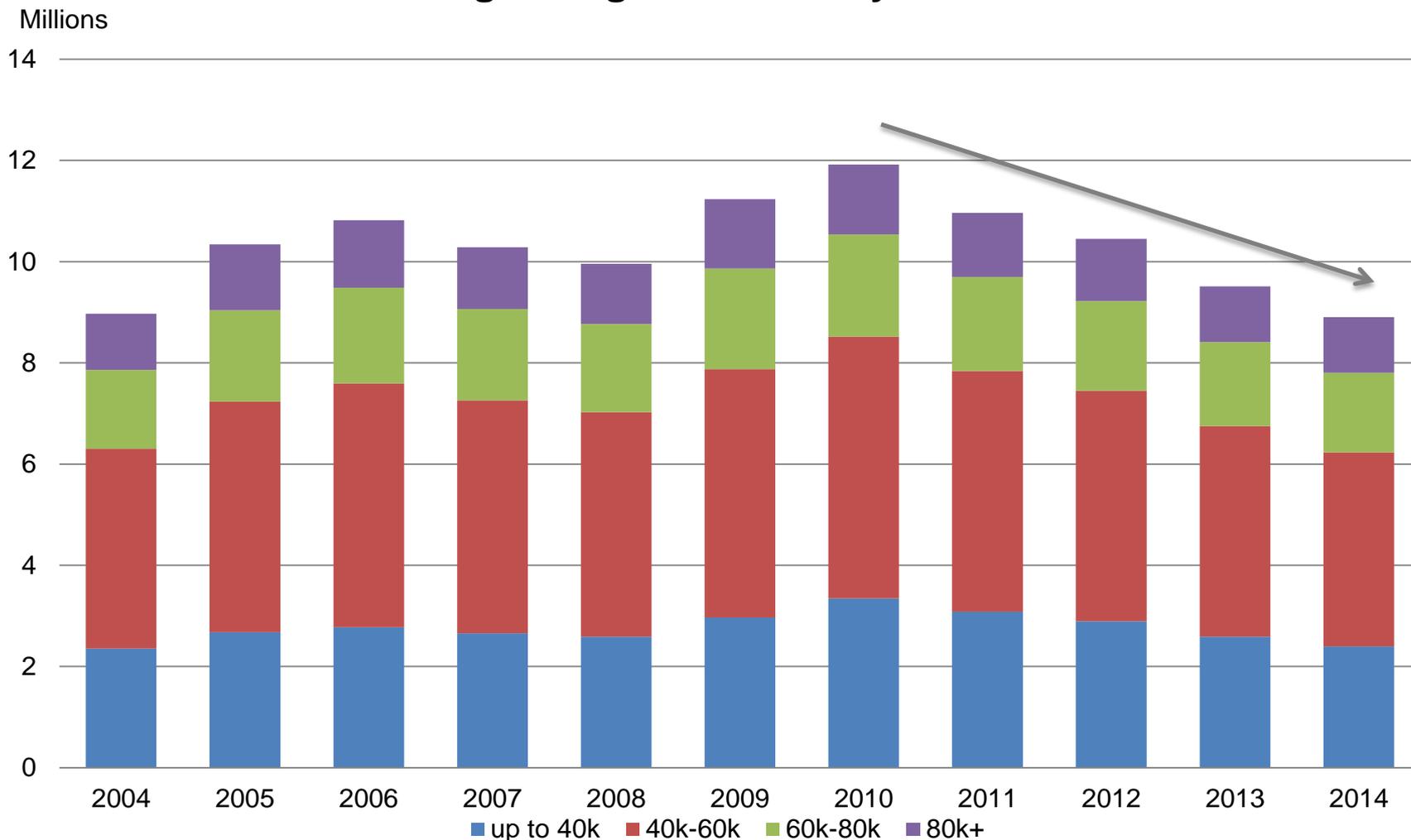
# Number of active borrowers peaked in 2010

- The number of active student loan borrowers peaked in 2010, at about 12 million; now down to about 9 million
  - Half of active borrowers are under age 25
  - After the recession, there was a slight increase in the relative share of new borrowers in their thirties, and a decline in the share of 18-29 year olds
- The Department of Education estimates suggest that there was a modest drop in enrollment between 2010 and 2013, of about 500,000 students
- More importantly, a smaller share of enrolled students has taken out loans since 2010
- Although the number of active borrowers is declining, the aggregate outstanding balance of borrowers overall has continued to grow as repayment rates are very low

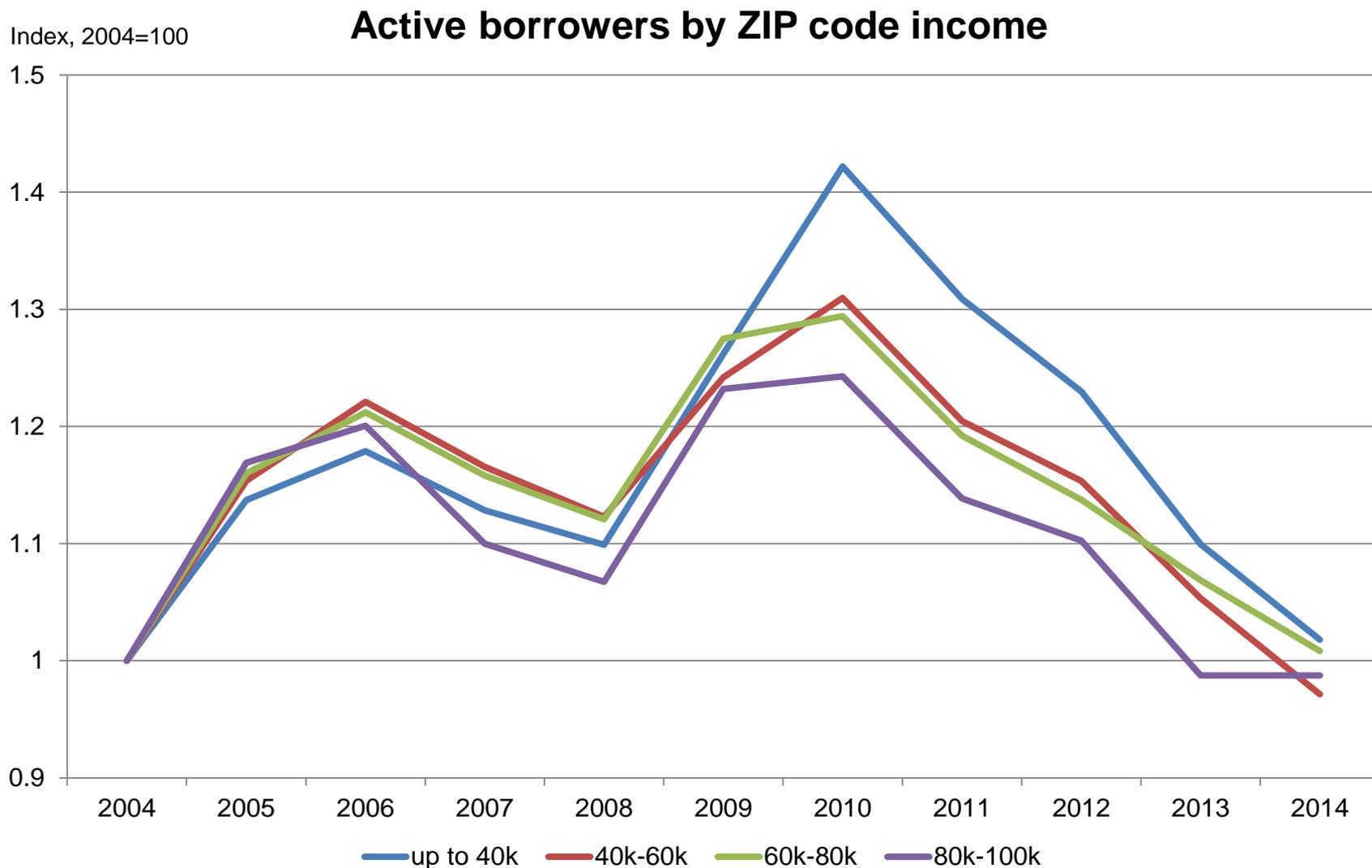


# Increase, then decline in borrowers from lower and middle income areas

## Number of originating borrowers by ZIP code income\*



# Larger rise in level of lower income borrowers following recession



# Increase, then decline in borrowers from lower and middle income areas

- We don't have borrower income, so we assign borrowers to groups based on the average income in the ZIP code they lived in when they originated their first student loan
  - Income data are from IRS and refer to 2010
- Much of the change in borrowing has come from an increase, then decrease, in the number of active borrowers from lower income areas following the recession
- More borrowers from lower and middle-income areas is consistent with the intended purpose of student loan program: to facilitate upward income mobility



# Wrapping up, part 1

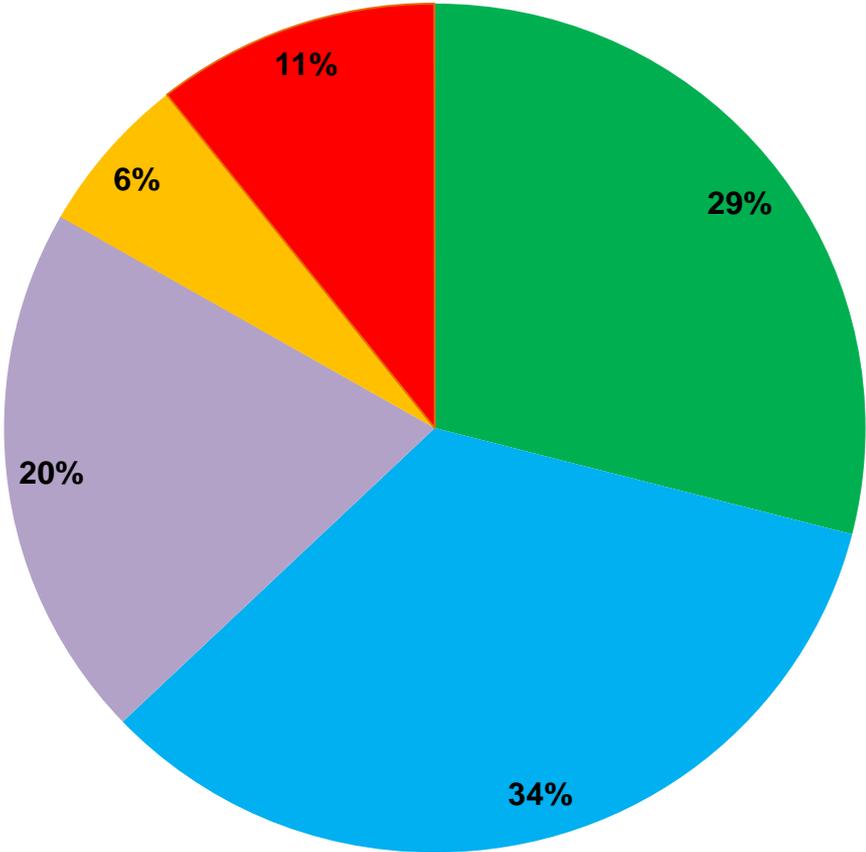
- Student debt continues to increase, especially for older borrowers
  - Increase reflects new borrowers, higher balances and slow repayment
- There is significant heterogeneity in amounts owed
  - Highest balances are owed by borrowers in their 30s
- The number of active borrowers peaked in 2010
  - Significant decline since then
  - Increase and subsequent decline driven by borrowers from relatively lower-income areas



# Student loan default & repayment

# Distribution of payment history

## Snapshot of Borrowers in 2014:Q4



### Percent of Borrowers

- always current, balance decreasing
- always current, balance increasing
- current with previous blemish
- now delinquent
- now in default

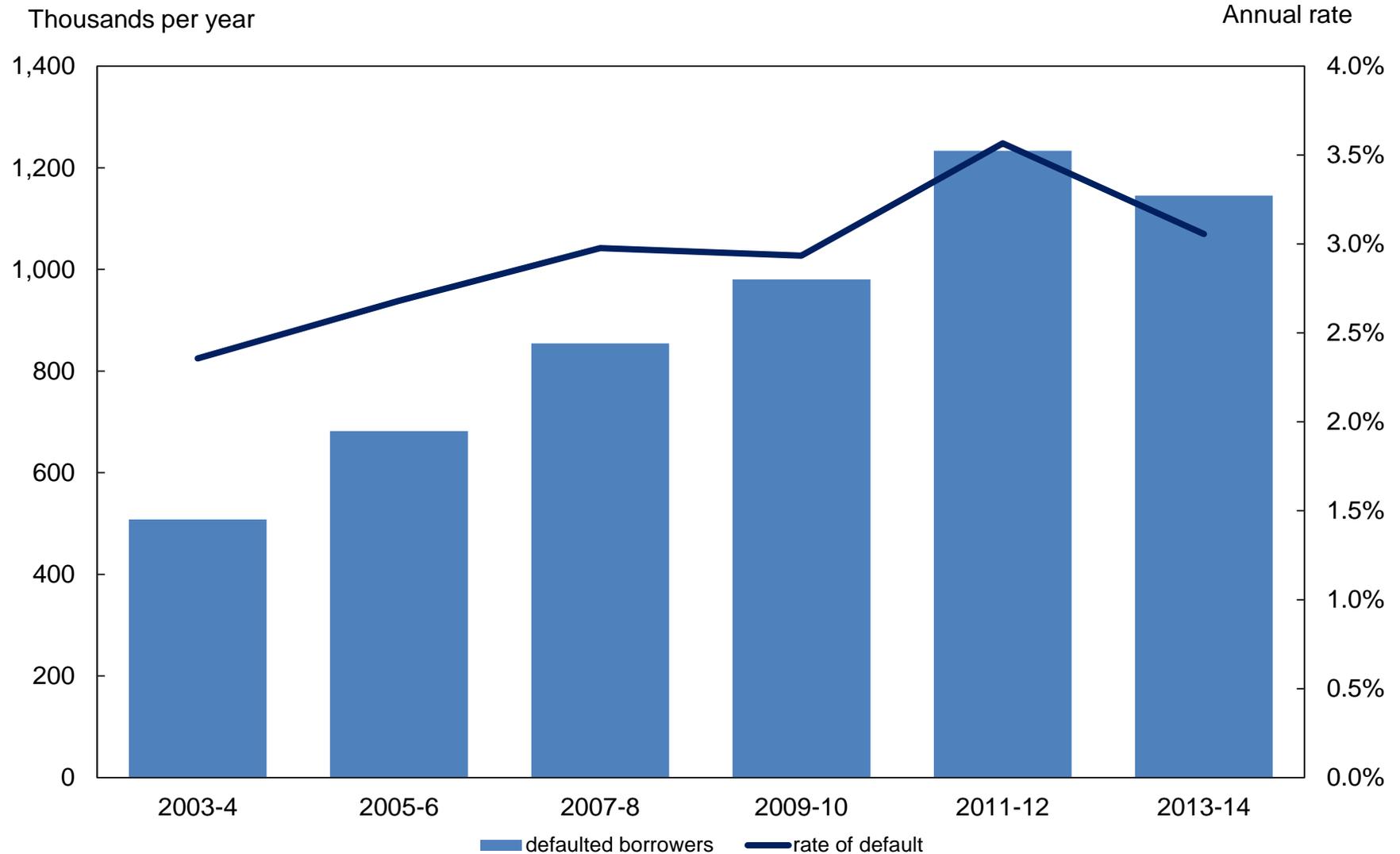
Source: New York Fed Consumer Credit Panel / Equifax

# Understanding repayment outcomes

- We will compare several groups to better understand the determinants of repayment outcomes:
  - Those who left school before, during, and after the Great Recession
  - Younger borrowers and older borrowers
  - Borrowers from higher income and lower income areas



# Defaults and default rate

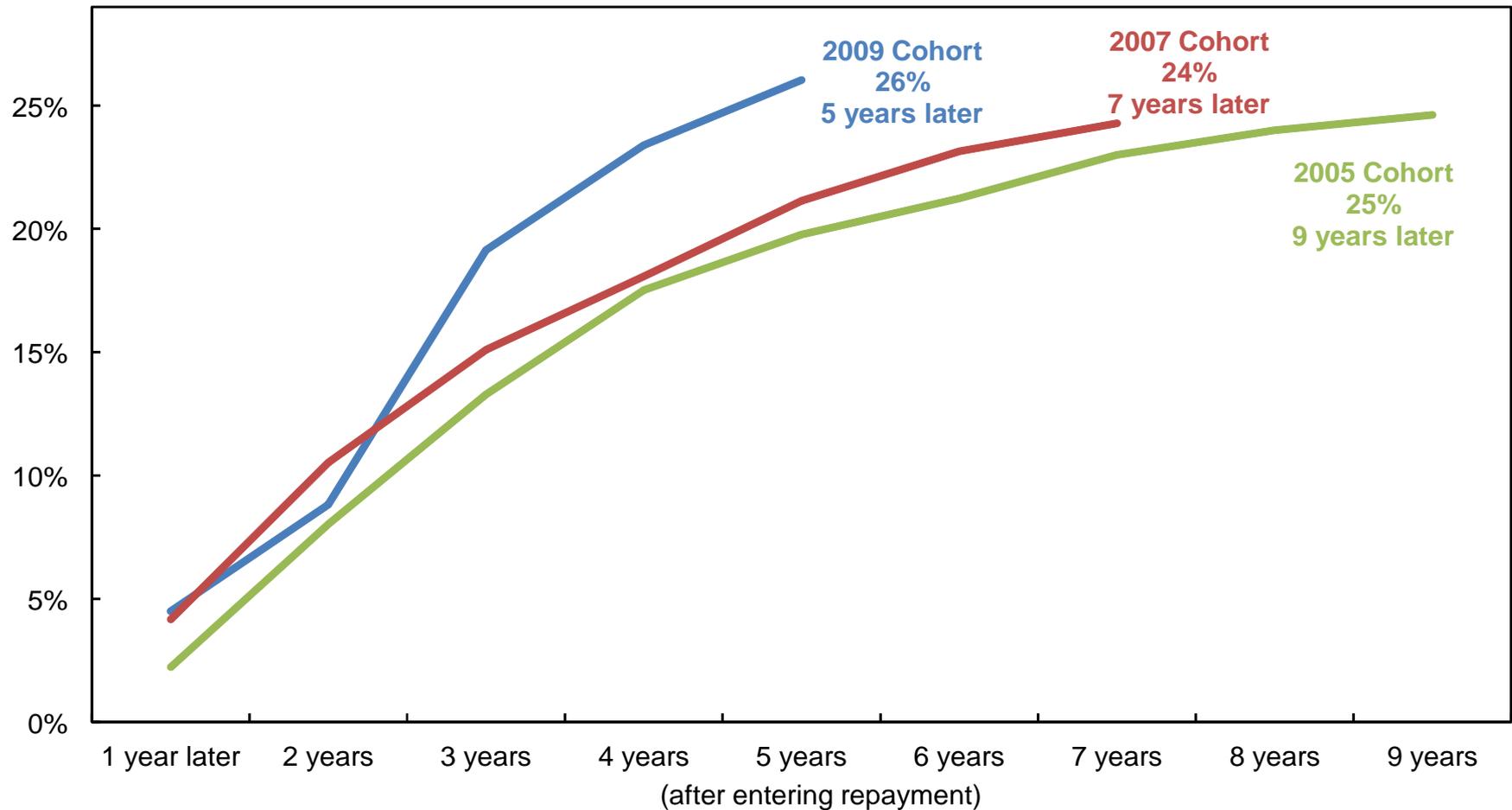


# Defaults and default rate

- The number of borrowers who default each year (defined as at least 9 months past due) increased from about half a million ten years ago to 1.2 million annually in 2011 and 2012
- The number of borrowers who default has declined a bit in the last two years
- The rapid increase in the defaults is partly due to the increase in the number of borrowers, but even after accounting for the increase in the borrowers, the rate of default increased over time from 2.4% in 2004 to 3.6% in 2012
- The default rate declined somewhat after 2012 to 3.2%

# Default rate by school leaving cohort

## Share ever defaulted by years after leaving school



Source: New York Fed Consumer Credit Panel / Equifax

# Cohort default rates deteriorate

- Default rates for the 2005, 2007, and 2009 school-leaving cohorts have all now reached roughly 25%.
  - Cohort default rates continue to increase even beyond the third year of loan repayment
- There is a pronounced worsening of the cohort default rate schedules over time
  - Default rates are higher for later cohorts at virtually all durations

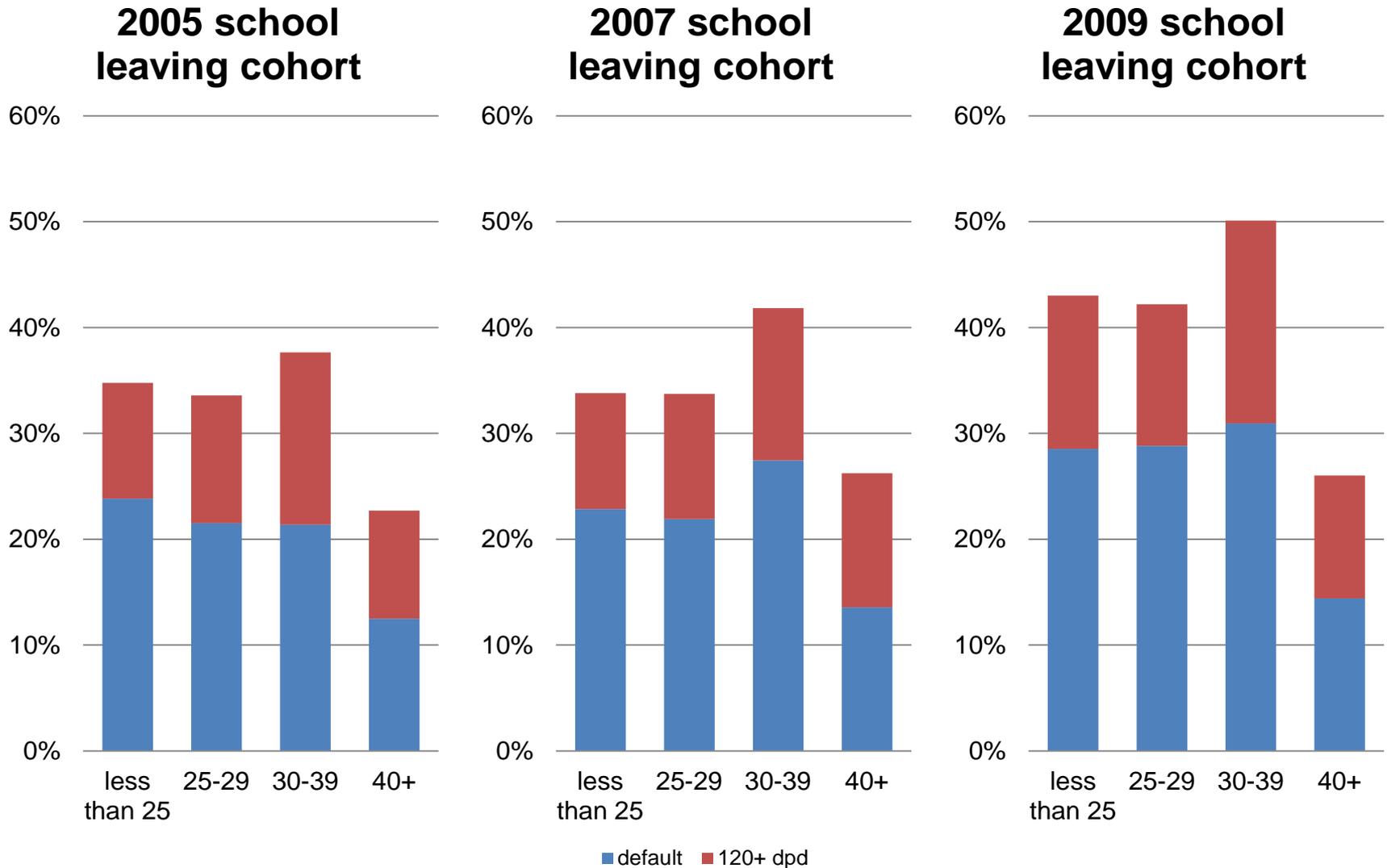
# 5-year cohort default and delinquency rates by ZIP income



# Cohort default, delinquency rates by income

- Default and delinquency rates higher in lower-income areas
- Default and delinquency rates for borrowers from higher income areas (with mean income over \$60K) have remained remarkably stable across the three cohorts

# 5-yr Cohort default and delinquency rates by age



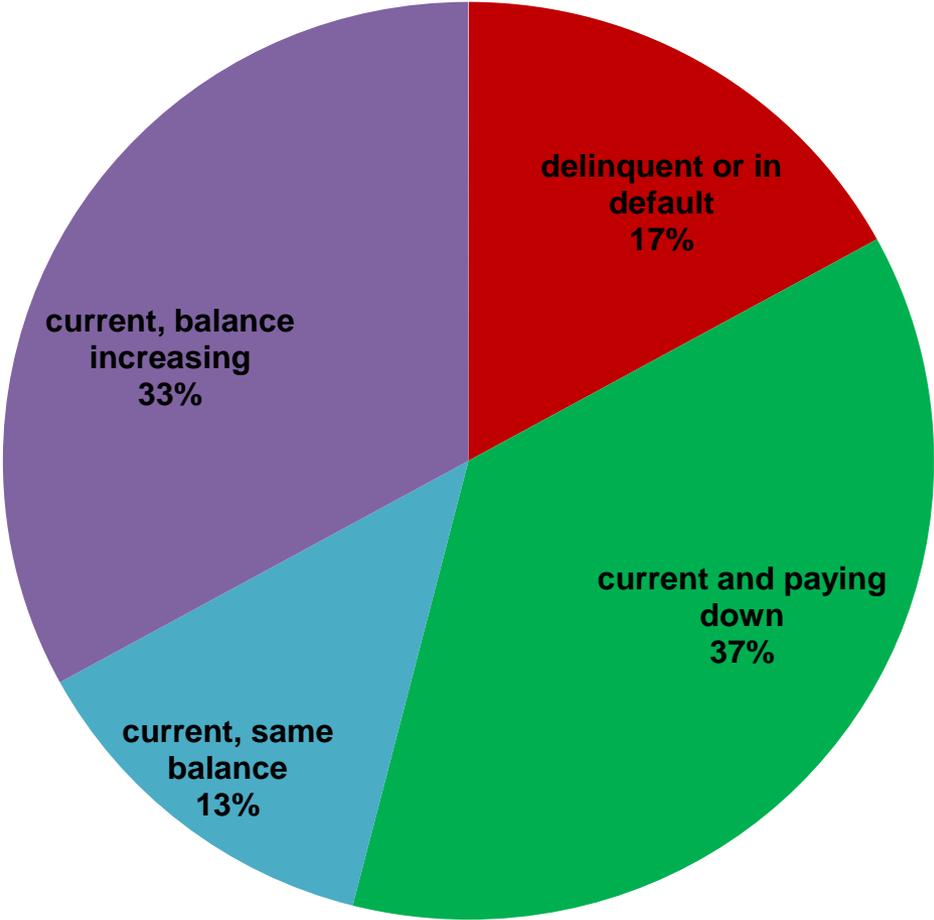
Source: FRBNY Consumer Credit Panel/Equifax

# Cohort default, delinquency rates by school-leaving age

- The 5-year-default rate increased for all age groups, and it is somewhat elevated for those who left school between age 30-39
- About half of the 2009 cohort borrowers in this age range had gone through defaults or severe delinquency in the subsequent 5 periods

# Student loan repayment behavior

## Student Loan Repayment Status in 2014



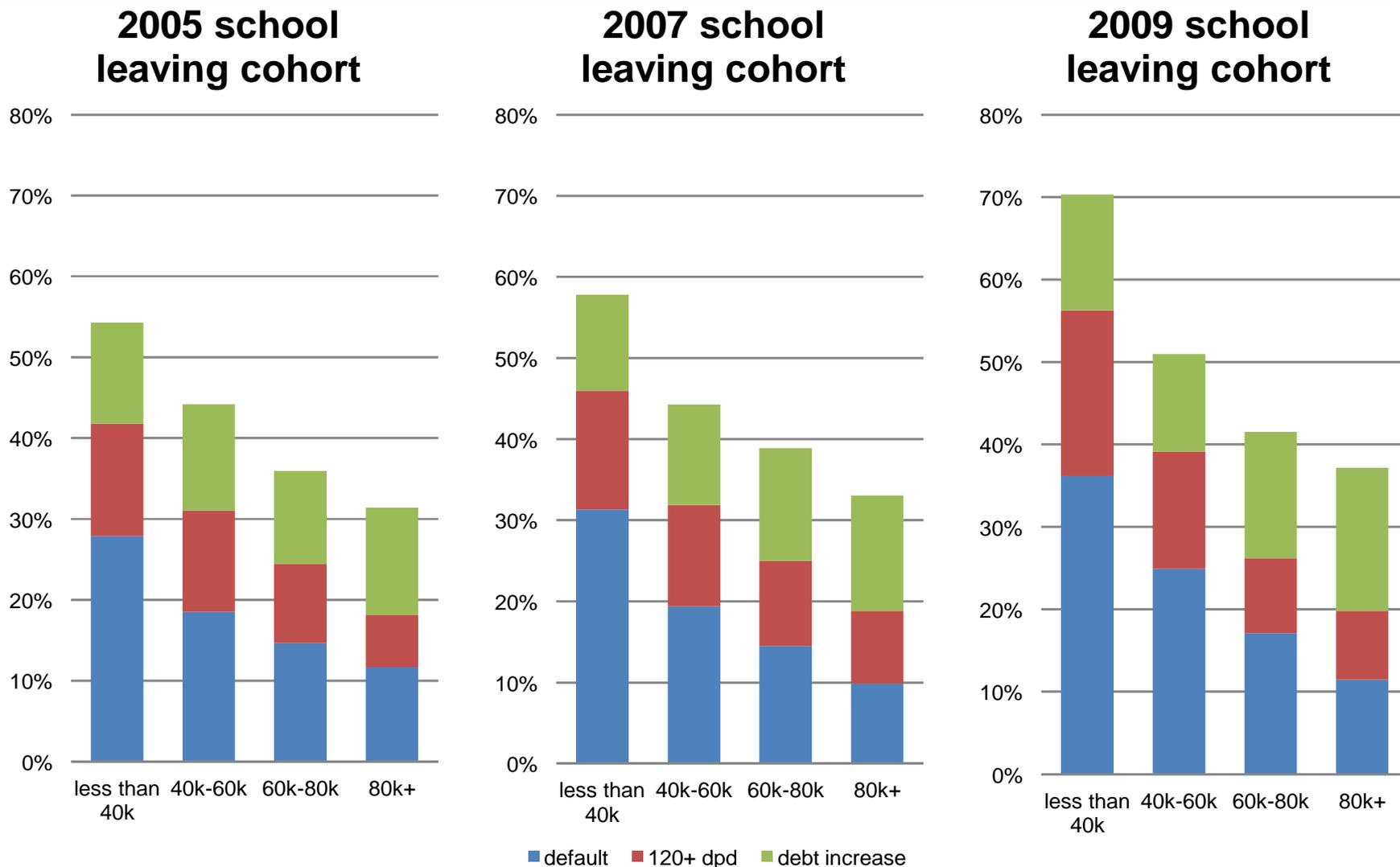
Source: New York Fed Consumer Credit Panel / Equifax

# Nearly half of borrowers are not yet repaying

- 17% of the borrowers are in default or in delinquency
- Only 37% of borrowers are current on their loan and actively paying down
- 46% of borrowers are current on their loans but are not in repayment



# 5-year cohort repayment difficulties, by ZIP income



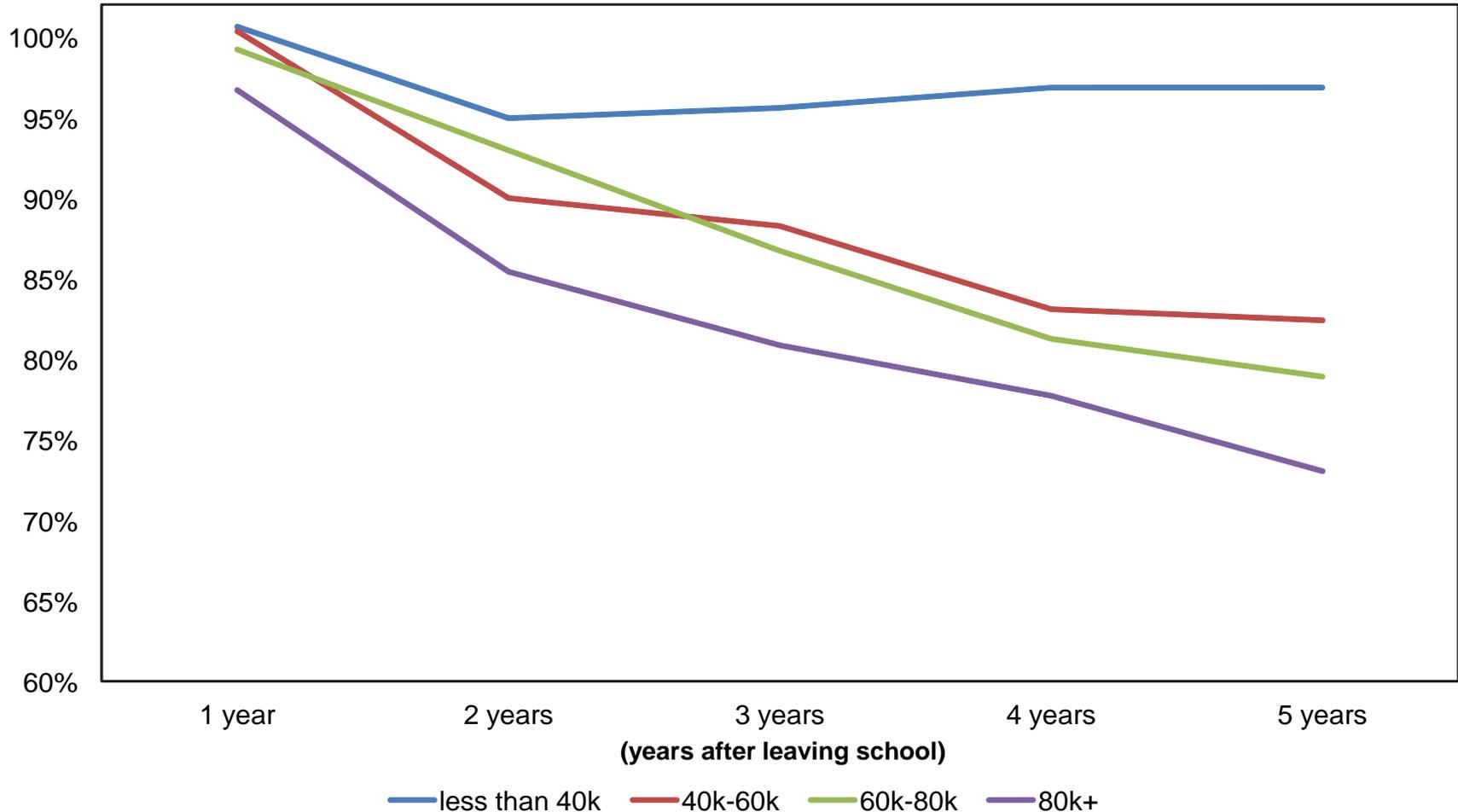
Source: FRBNY Consumer Credit Panel/Equifax

# Proportion of borrowers with payment problems by cohort and income

- While default and delinquency rates were stable for higher income area borrowers across the three cohorts, more recent cohorts from higher income areas had a larger proportion who had not paid down
- About half of the 2009 cohort are having payment difficulties on their loans (having either defaulted, gone delinquent or made no progress paying off their balance)
  - Repayment difficulties are particularly prevalent in borrowers from lower-income areas, where about 2/3 of borrowers have had some sort of repayment difficulty
  - In contrast, just over 1/3 of the borrowers from the highest income areas have had repayment difficulties

# 2009 cohort repayment rates by income

## Proportion of balance remaining by ZIP income



# Little repayment progress by borrowers from lower-income areas

- We look at the net progress that borrowers from each income area have made in paying down their student loan balances
- The borrowers from the lowest income areas have made practically no progress on paying down their loans
  - The aggregate balance, five years after leaving school, is still at 97% of where it was when they left school
  - This is a sharp contrast with the borrowers from higher-income areas, who have paid down nearly 30%



# Wrapping up

- These results are further evidence of the important heterogeneity we see in the outcomes of higher education investments financed with student debt
  - Borrowers who left school in the Great Recession had particular difficulty with their student loan repayment, with many defaulting, becoming seriously delinquent, or not being able to reduce their balance
  - Borrowers from lower and middle-income areas as well as borrowers who originated loans in their 30s are also at greater risk of default and delinquency
- The low overall repayment rate helps explain the steady growth in aggregate student debt, now at nearly 1.2 trillion dollars

