

# **Housing Markets: Loan Originations and Defaults in the Mortgage Crisis**

## **2008 Financial Crisis: A Ten Year Review**

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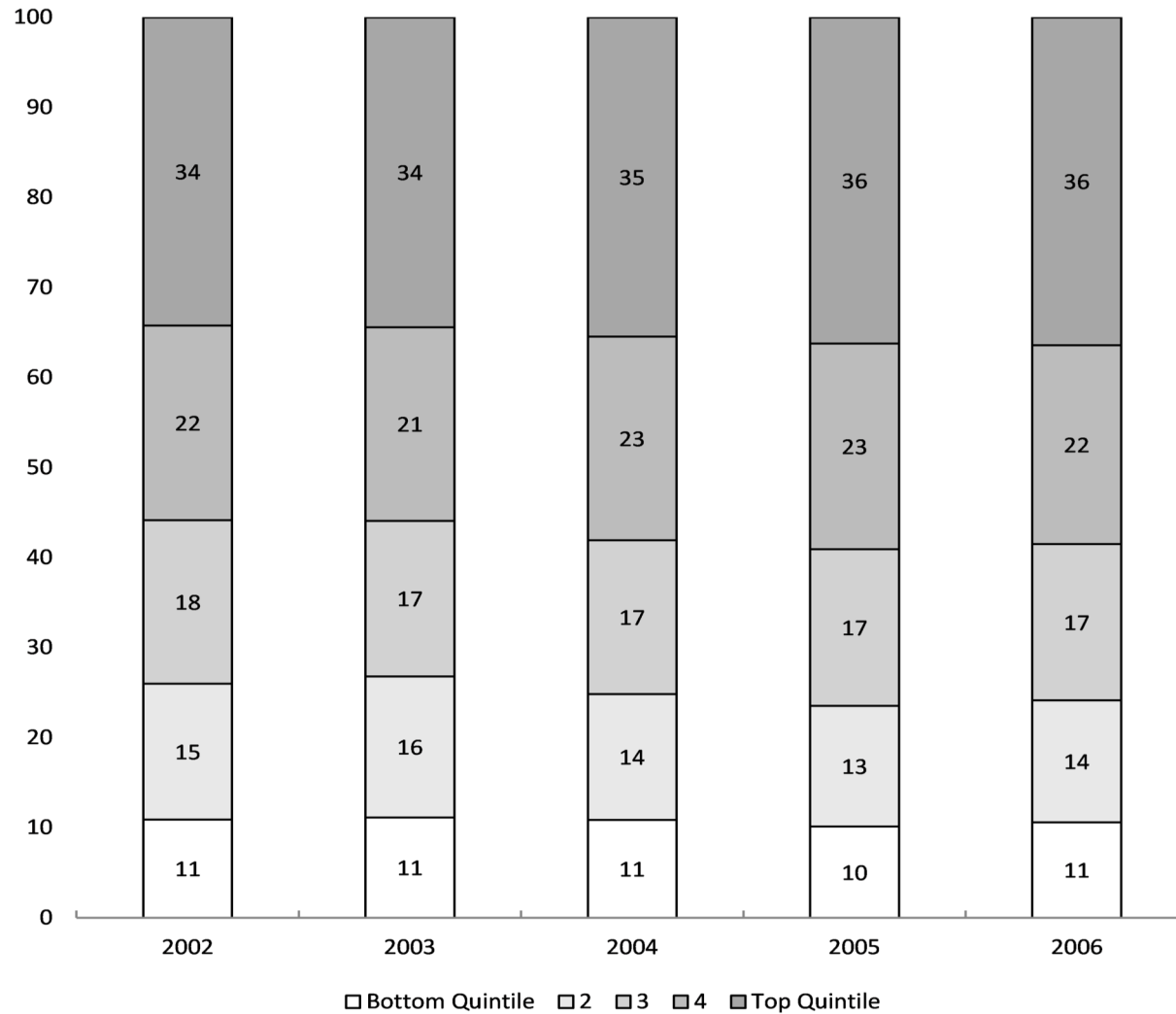
# NEW CONSENSUS OF THE HOUSING CRISIS

- Housing markets were subject to a classic asset bubble
  - Rising house prices and over-optimistic expectations played a key role in the increase in mortgage debt and defaults
  - Households increased demand for housing and mortgage debt across all income groups, especially middle-class borrowers
  - Banks lent against increasing collateral values and underestimate the risk of defaults
- Not a “subprime crisis” but a middle-class crisis!
  - Financial sector acted as an amplification mechanism for changes in expectations by lending into the bubble
  - No unilateral shift of credit allocation towards marginal or subprime borrowers, Adelino, Schoar, Severino (2015, 2016)

# THE FACTS

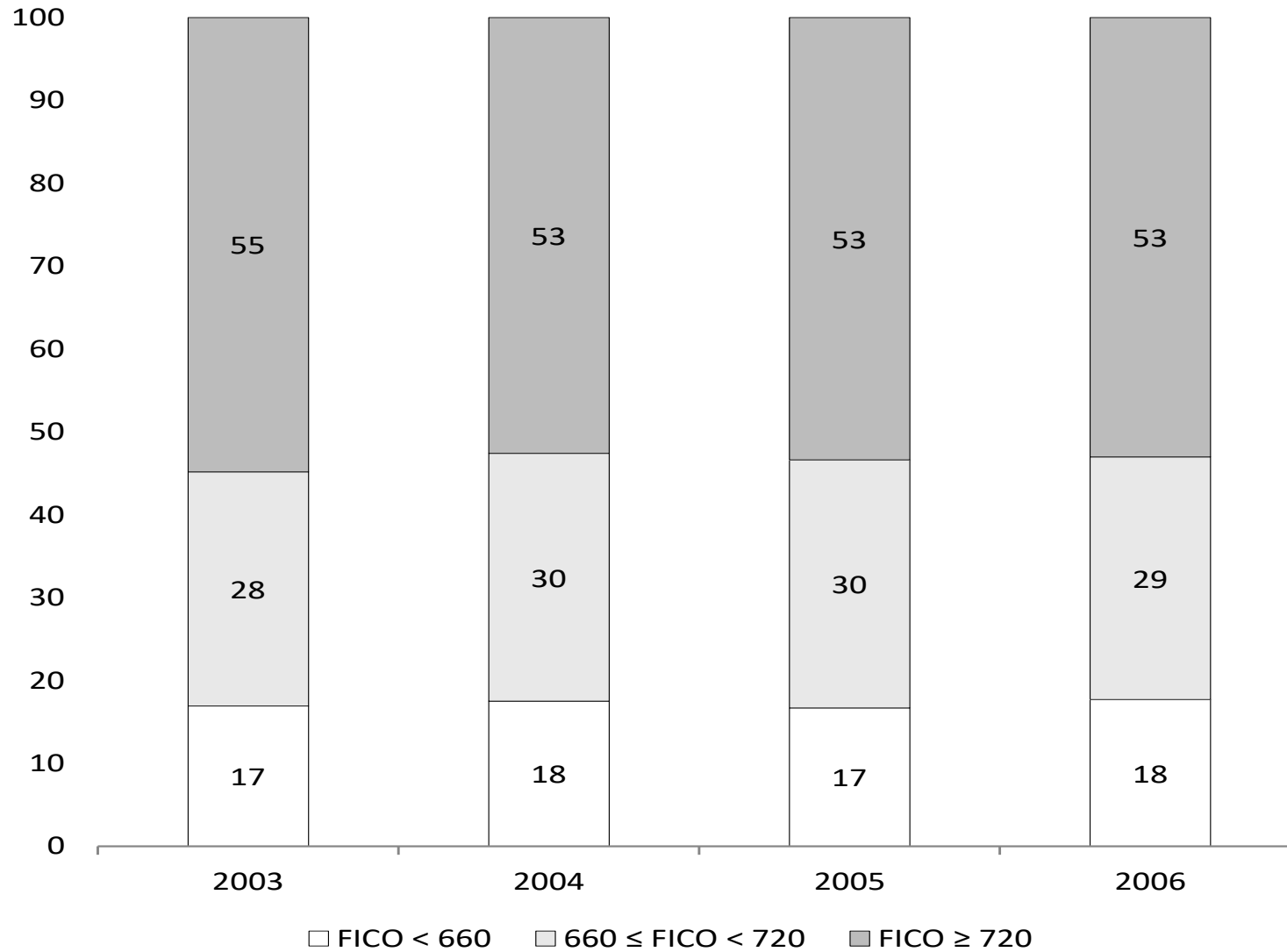
- The Run-up: Credit expanded across the income distribution, not just poor or low FICO borrowers
  - Middle/high income households had a much larger contribution to mortgage debt before the crisis than poor/low FICO borrowers
  - Debt-to-income levels (DTI) went up for all income groups
  - Loan-to-Value distribution stayed constant before the crisis
  - Faster churning of houses leading up to the crisis
  - Ownership rates went down for subprime and low income households before the crisis
- The Aftermath: Sharp increase in delinquencies for middle class and prime borrowers after 2007
  - Middle class and high FICO borrowers made up much larger share of defaults, especially in areas with high house price growth

# MORTGAGE ORIGINATION ACROSS INCOME GROUPS STAYED STABLE

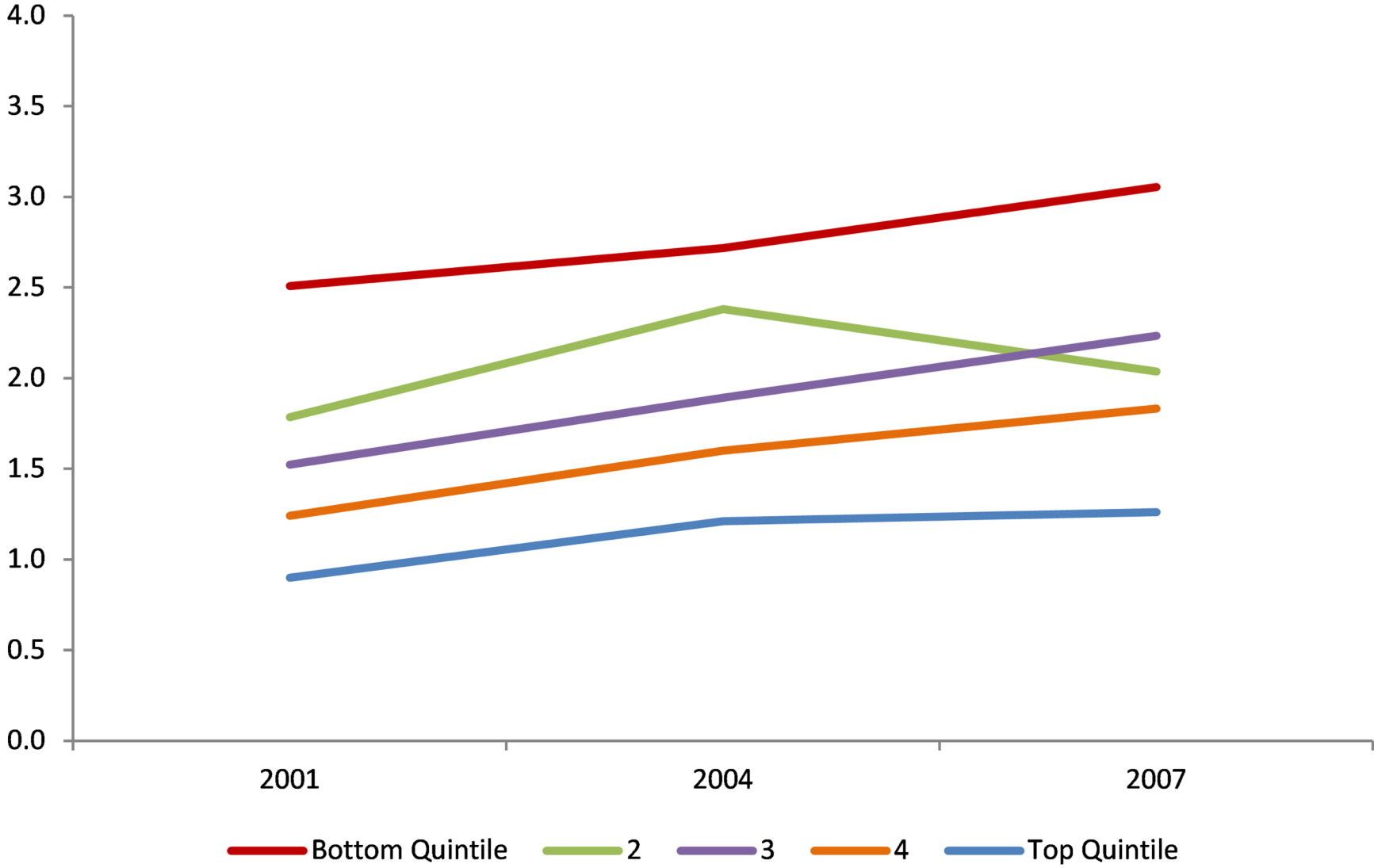


Fraction of mortgage dollars originated per year by income quintile (HMDA)

# ORIGINATION BY FICO SCORES

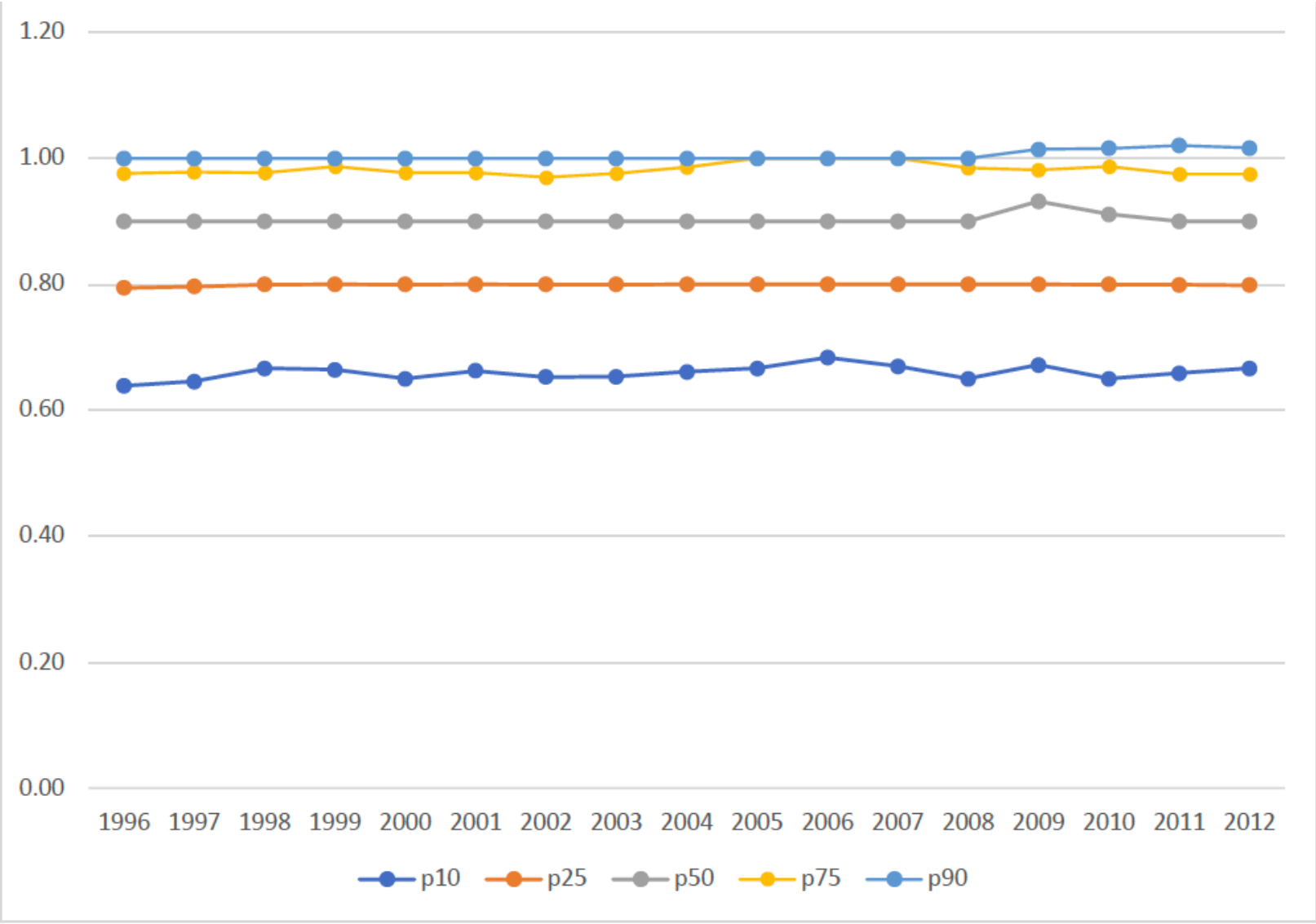


# MORTGAGE DEBT EXPANDED PROPORTIONALLY



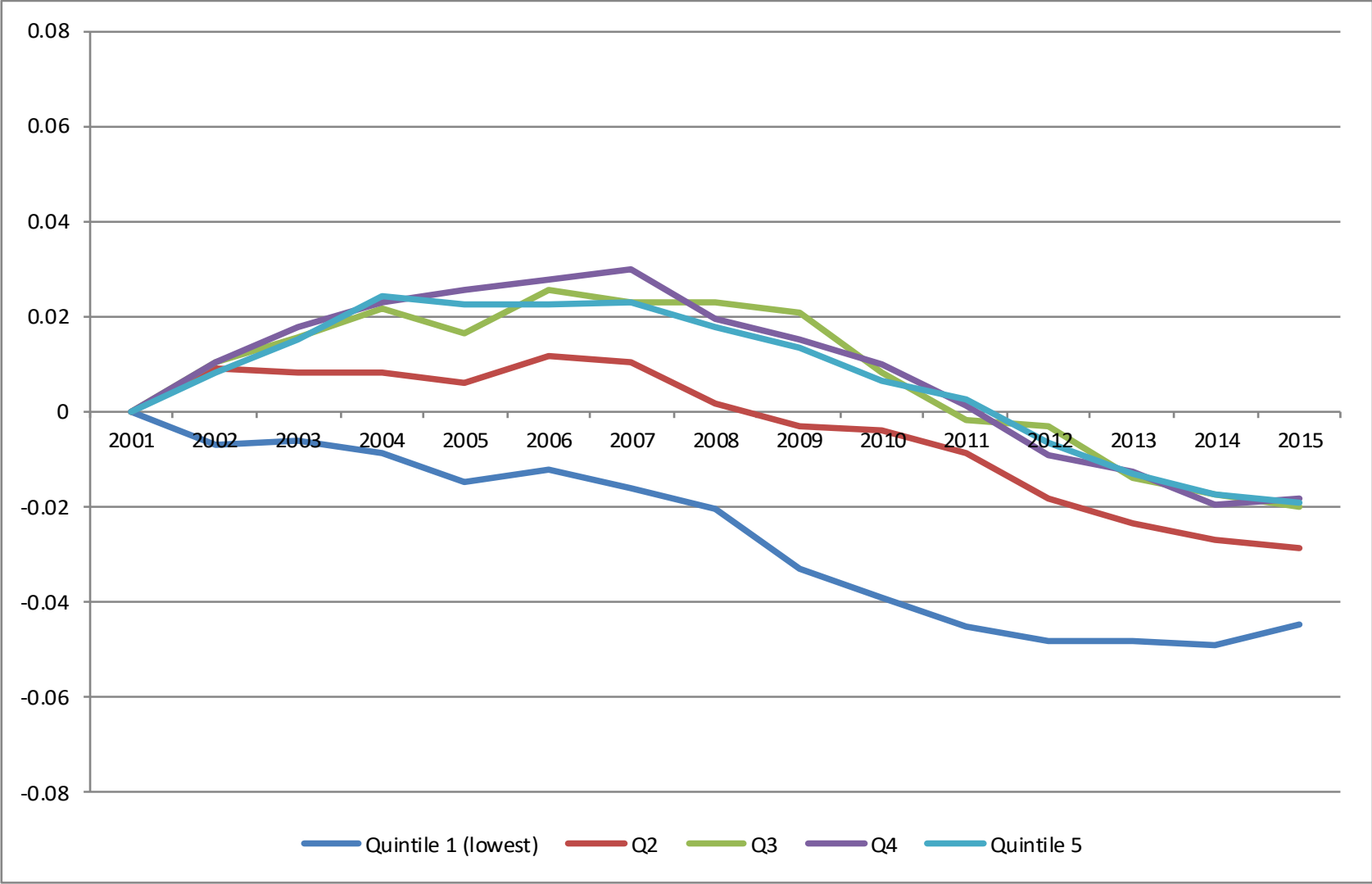
Data from SCF, own calculations

# COMBINED LOAN TO VALUE DISTRIBUTION AT ORIGININATION



Corelogic, own calculations

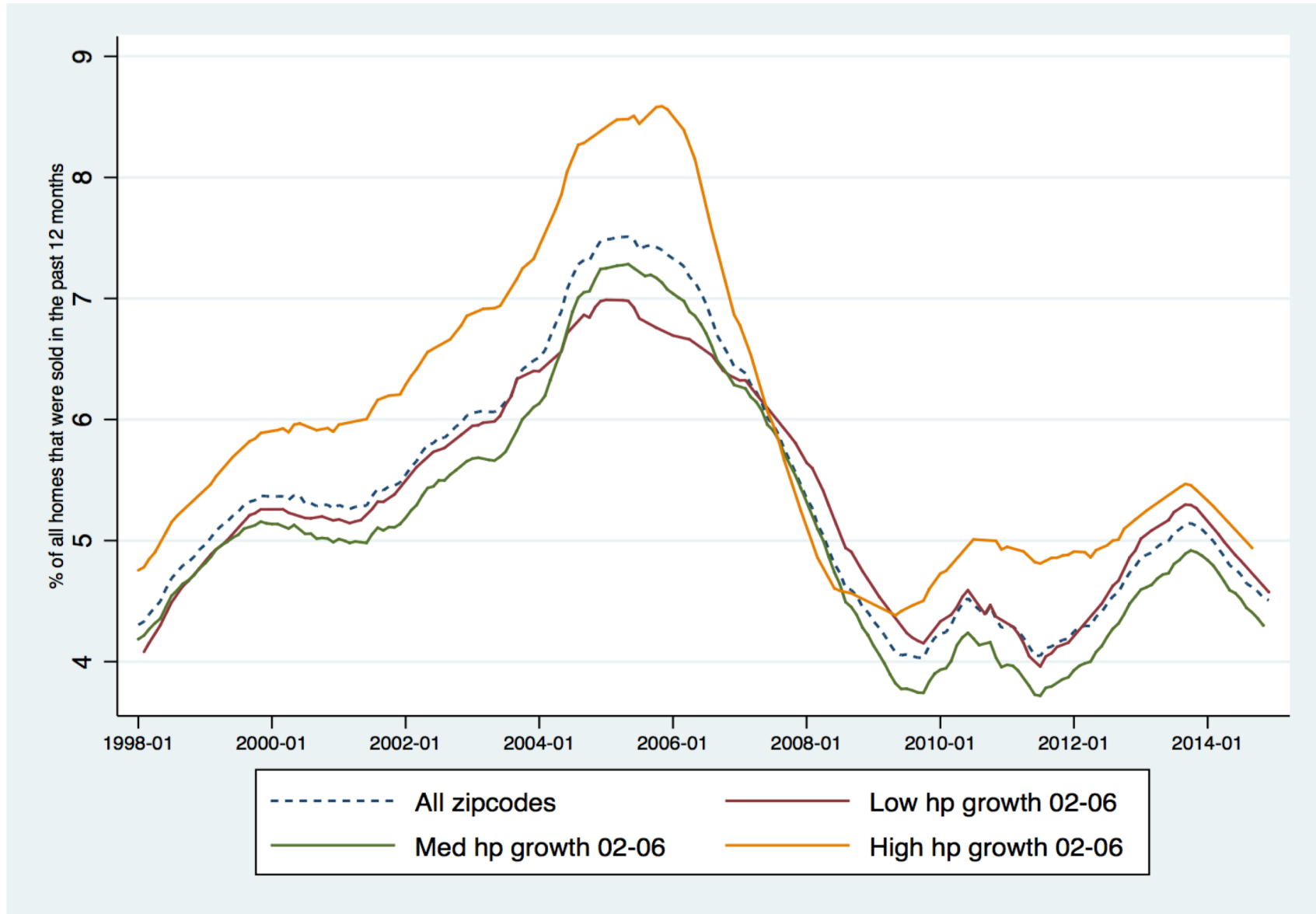
# DROP IN HOMEOWNERSHIP FOR LOW INCOME HOUSEHOLDS



Data from ACS, own calculations

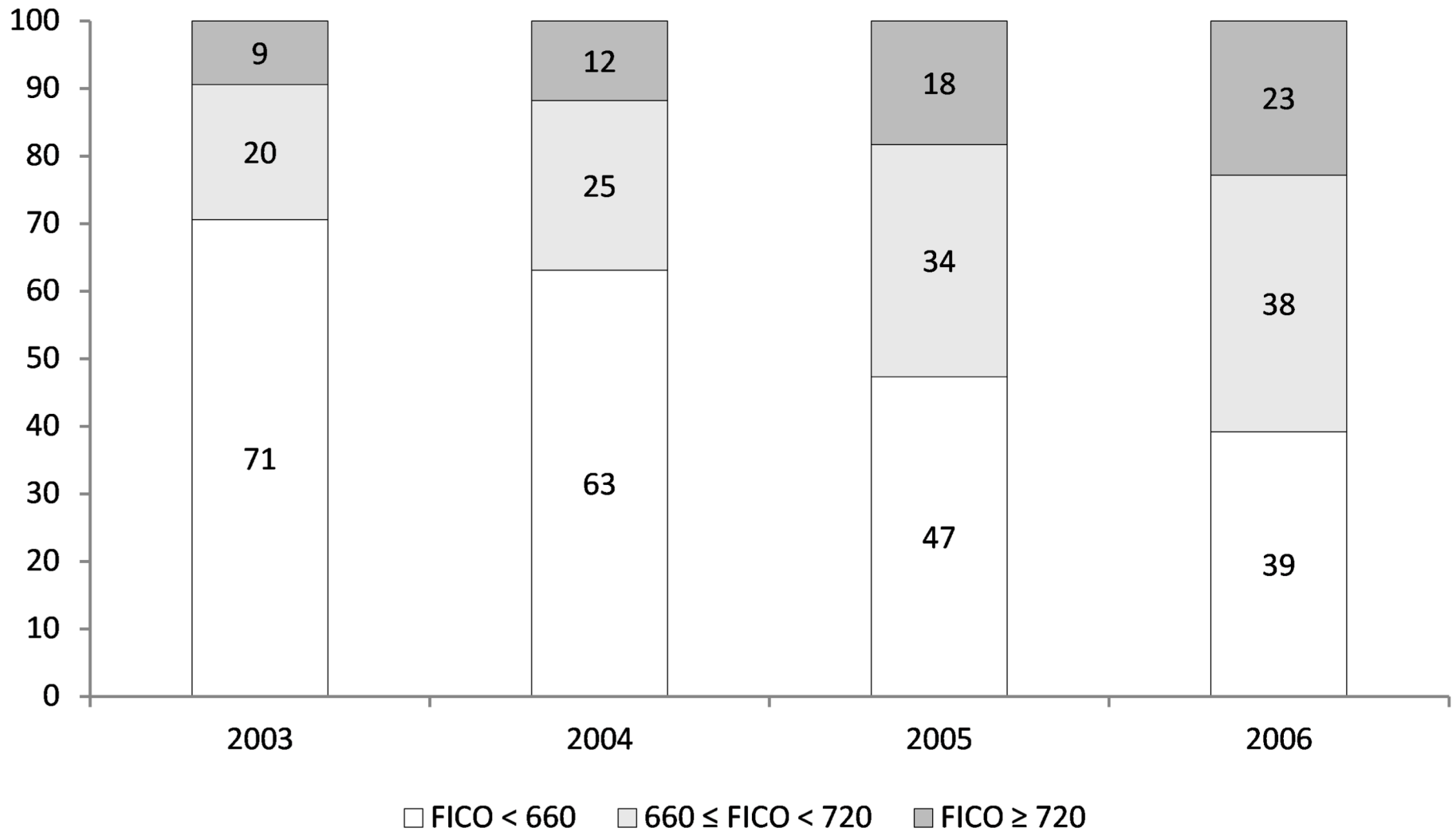


# INCREASED SPEED OF HOME SALES



# THE AFTERMATH ...

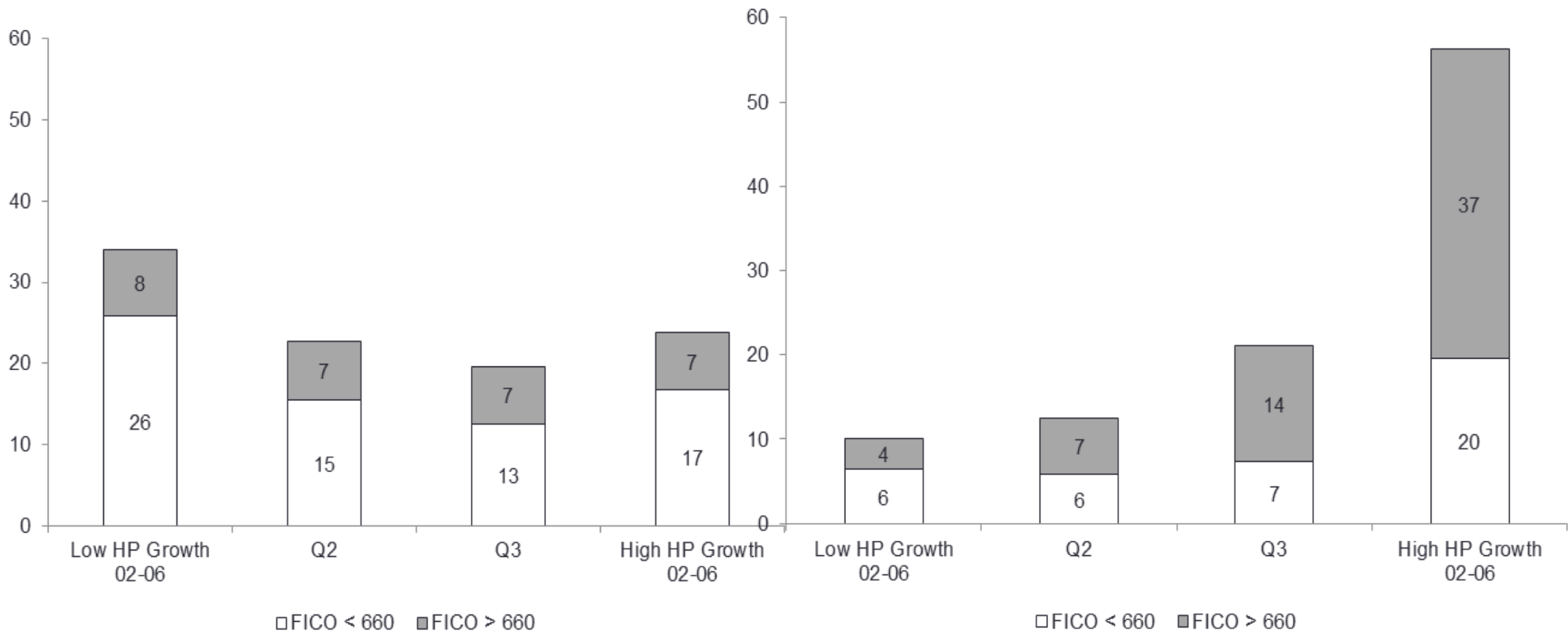
# SHARE OF DELINQUENT MORTGAGES (3 YRS OUT)



# SHARE OF DELINQUENT MORTGAGES BY FICO AND HOUSE PRICE GROWTH

## 2003 Cohort

## 2006 Cohort



# IMPORTANT POLICY IMPLICATIONS

- (Optimistic) house price expectations played a major role in the expansion of credit and delinquencies
- Important focus on macro-prudential implications
  - Systemic build up of risk can lead to losses across the financial system, e.g. strategic responses to house price drops
  - Protect functioning of financial system when crisis occurs
  - How to build provisions against losses across financial institutions once a crisis occurs