“Does Junior Inherit? Refinancing and the Blocking Power of Second Mortgages”

Bond, Elul, Garyn-Tal & Musto:

Discussant Comments by
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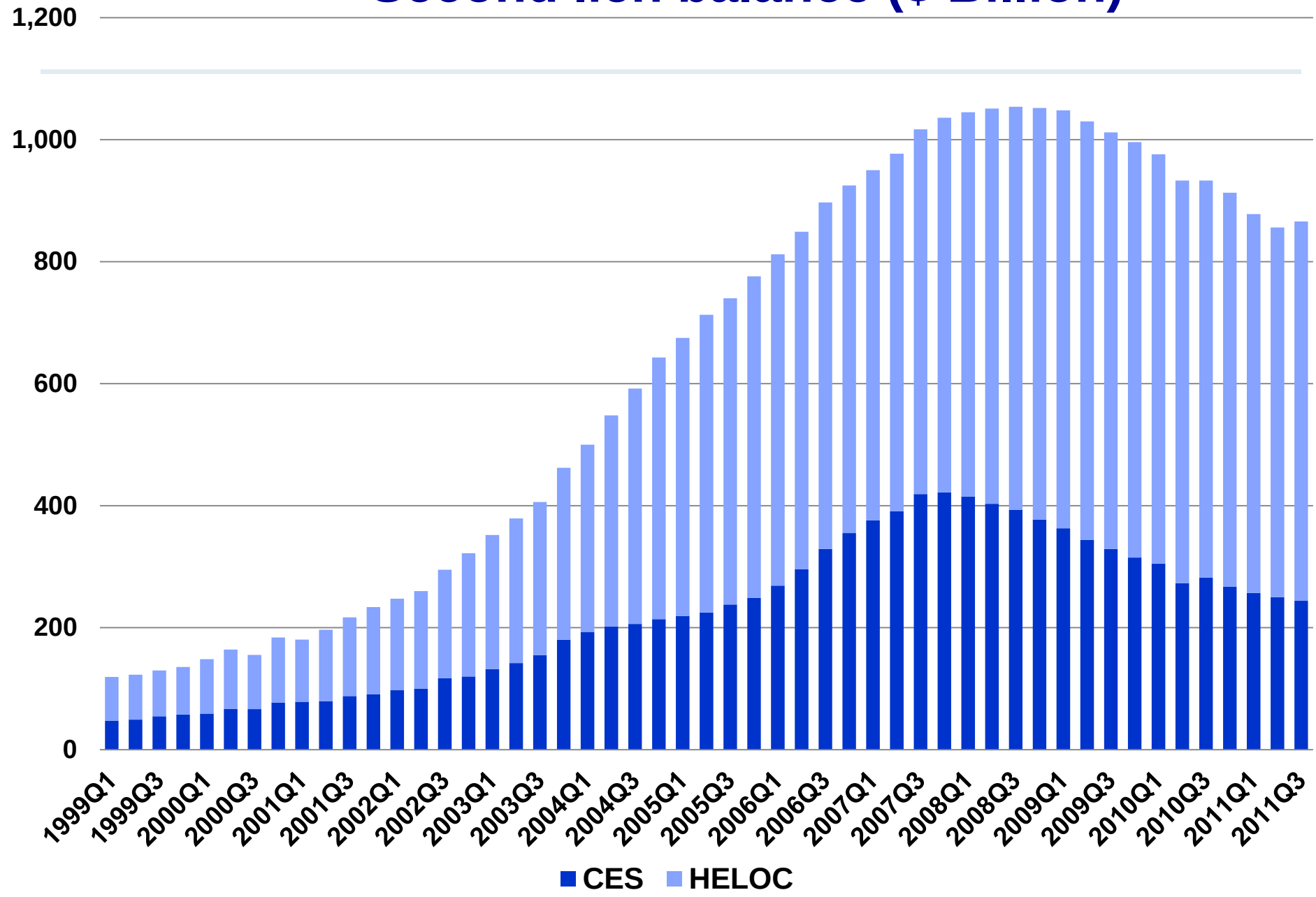
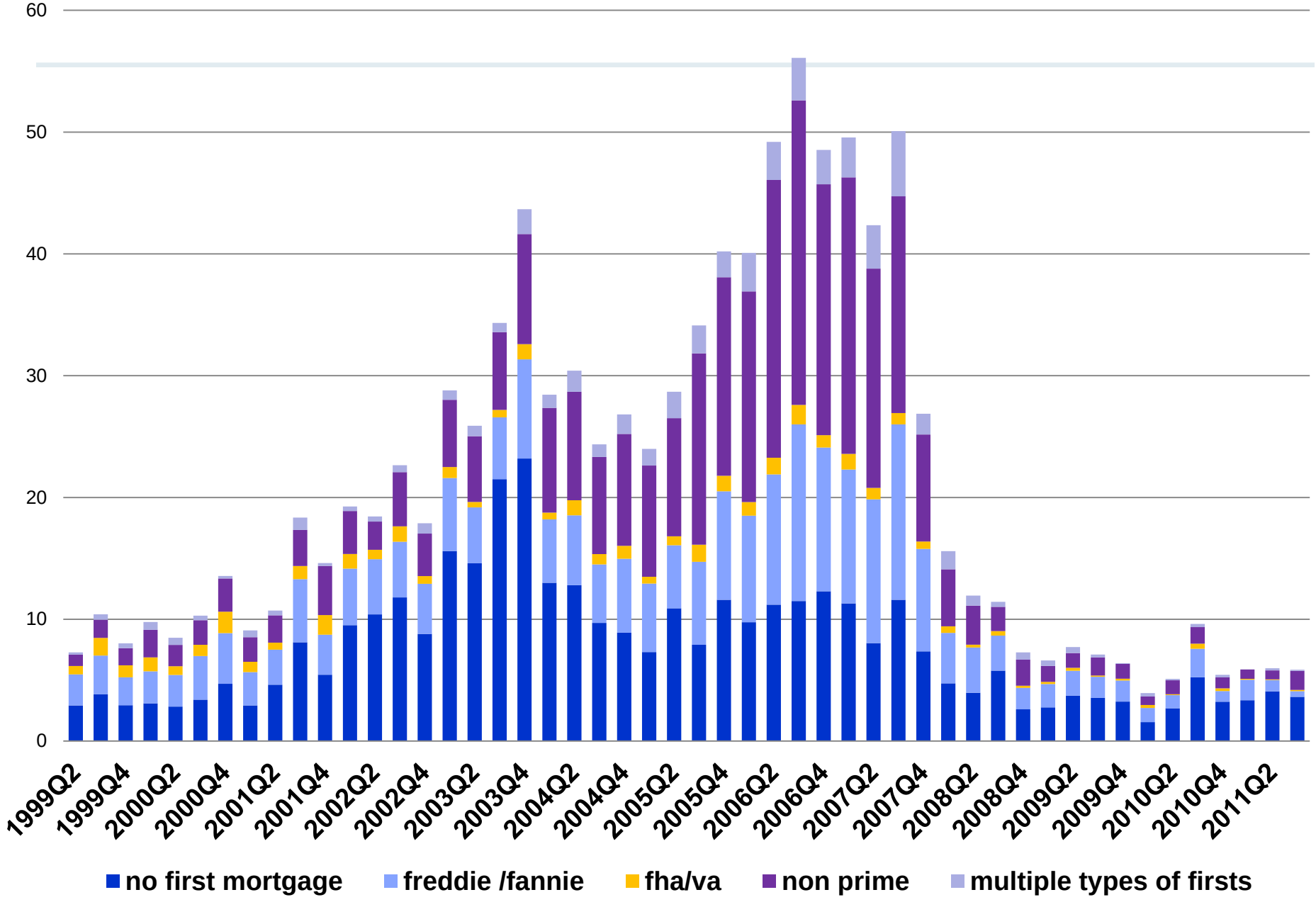
The views presented here are those of the author and do not necessarily reflect those of the Federal Reserve Bank of New York, or the Federal Reserve System

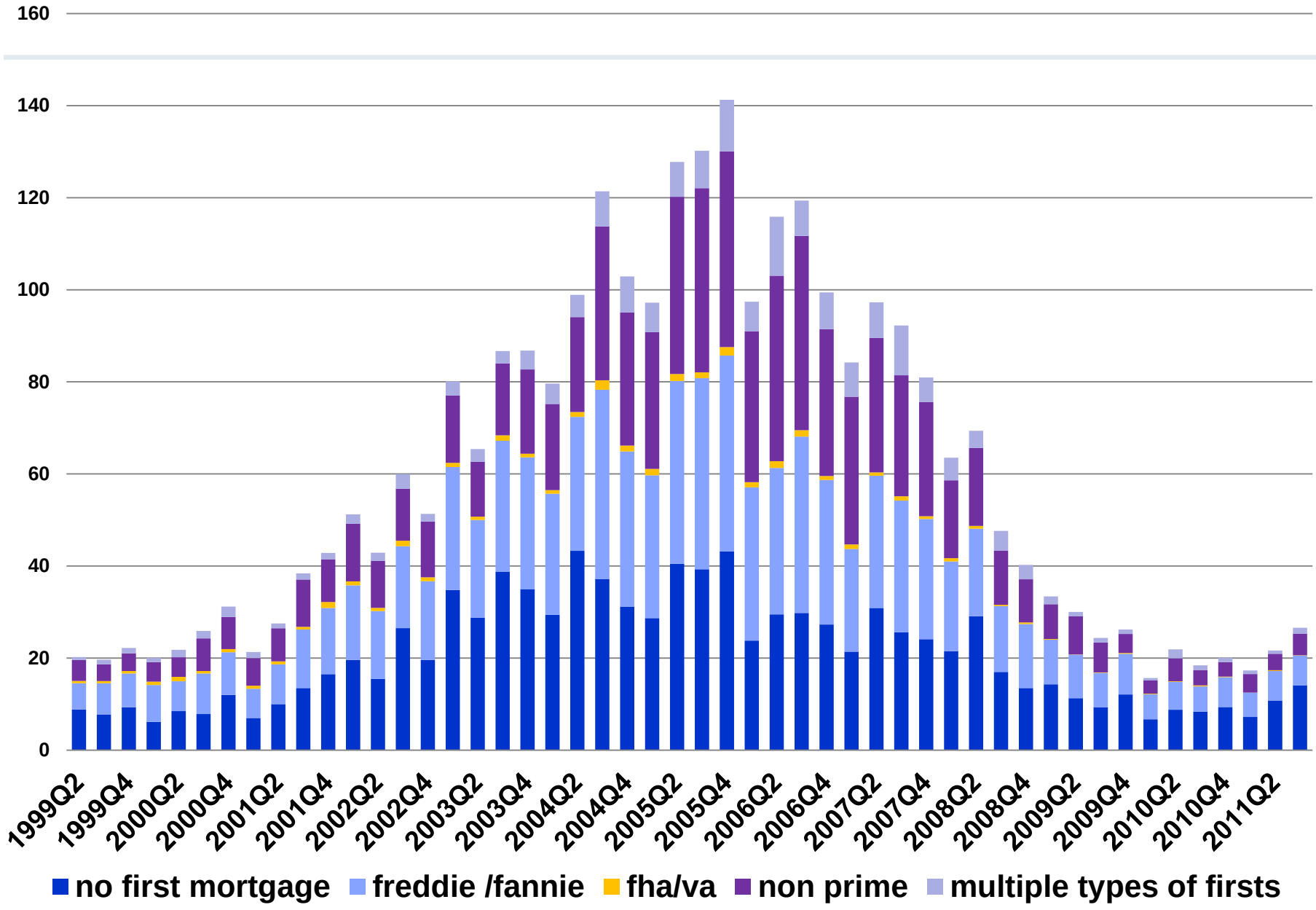
Second lien balance ($ Billion)



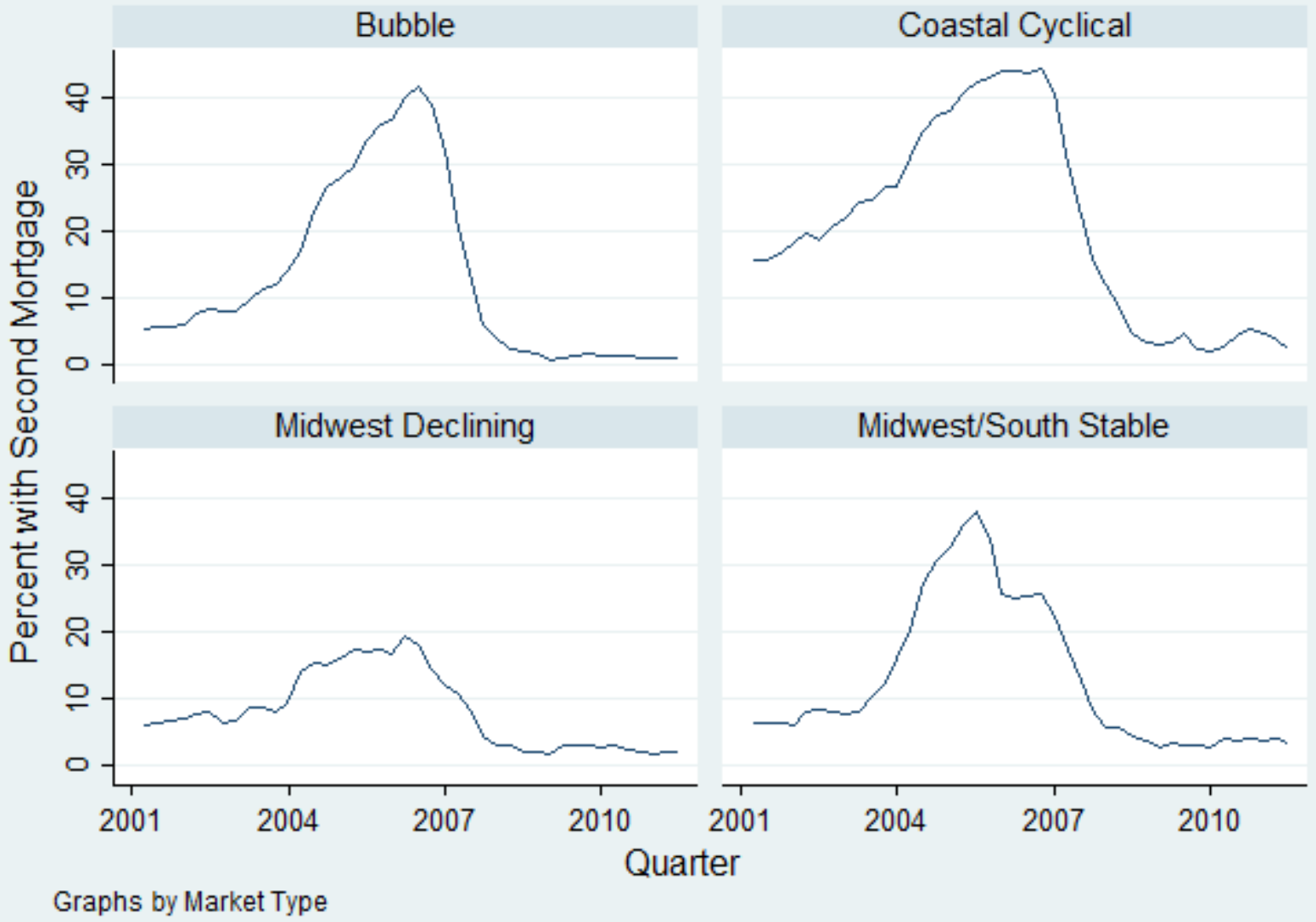
CES originations with respect to the first



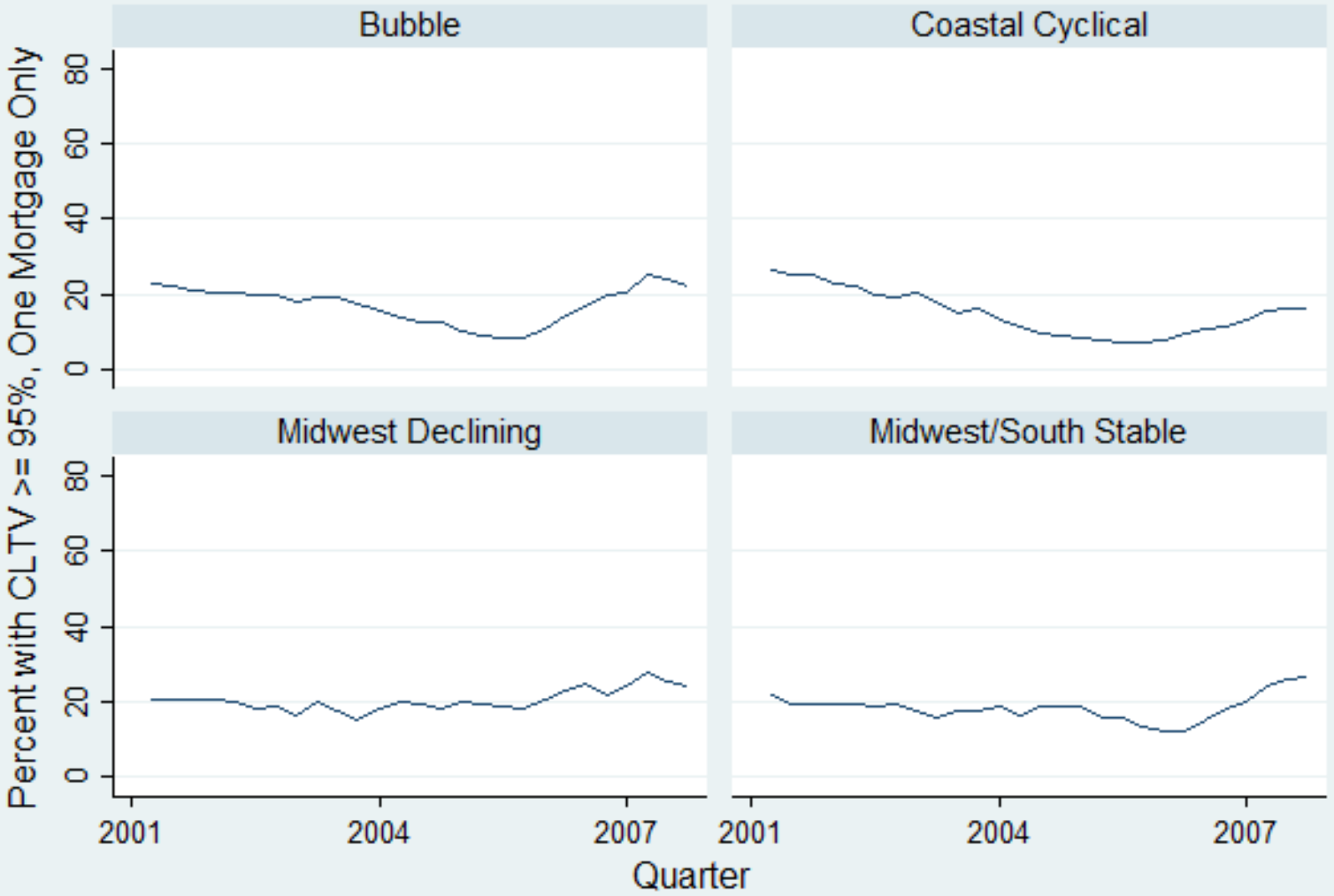
HELOC originations with respect to the first



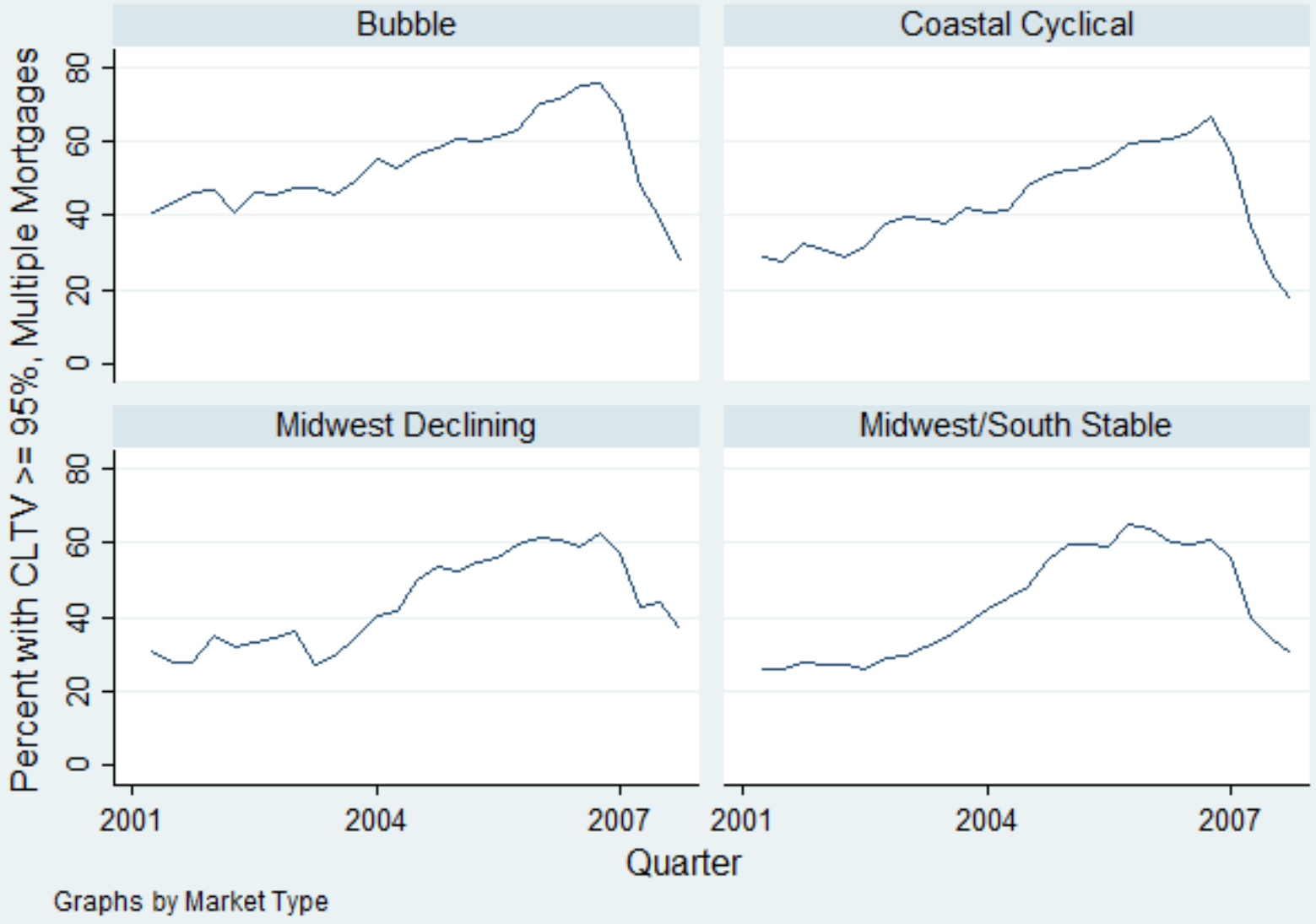
Share of purchases with a first mortgage and piggyback 2nd-lien



Share of purchases with one mortgage with an LTV>=95%



Share of purchases with multiple mortgages with a CLTV>=95%



Does the presence of a 2nd-lien create frictions?

- Frictions could limit the ability to address borrower stress
  - Refinance 1st-lien (focus of this paper)
  - Modification of 1st-lien (interest rate / principal reductions)
  - Short-sales
- What is the nature of the frictions?
  - Incentive – implied by the paper title, “blocking power”
    - Need to write out a model of detailing the incentive problems
    - Do incentive conflicts impact some interventions more than others?
  - Information – was it difficult for 1st & 2nd-lien holders to communicate?
- Distinction is important in terms of how best to alleviate friction
  - Information frictions could be addressed through a national registry system
- Equitable subrogation deals with both types of frictions so does not help to distinguish between them

Data construction

- Merge of LPS & Equifax data
  - Use the merge to get origination LTV
  - Merge on the basis of date, balance and ZIP code
    - Unique merge rate: 1/3
    - Questions:
      - Given possible recording lags, how closely do the dates have to match?
      - Does the merge sample appear to be random relative to non-merge sample?
- Identification of 2nd-liens
  - HELOCs identified by “revolving” account type
  - Equifax not always clear on distinction between a 1st-lien and CES
    - Narrative codes
      - Freddie, Fannie, FHA & VA treat as 1st-liens
        - Only about 80% of agency mortgages properly identified
      - home equity, home improvement and second mortgage coded as 2nds
      - How are mortgages w. unclassified narrative codes treated?
  - If borrower has multiple 1st-liens, which is the 2nd matched to?

Data construction -- continued

- Identification of refinances
  - LPS data provides “loan purpose” code but Equifax does not
  - Criteria used to identify a refinance vs sale
    - Borrower did not move in a one-year window after the mortgage prepays
    - New mortgage appears within 3-months of the prepayment date
  - Questions:
    - How do your refinance rates compare to published data?
    - If borrower has multiple 1st-liens, a sale of an investment property and purchase of new investment property could look like a refinance.
    - How do you deal with credit files that have PO box as address?
      - Borrower can move within the local housing market and not change PO box.
    - Footnote #7: correctly identify 80% of refinances and 75% of purchases
      - What were the type I error rates?
      - Did these error rates differ by geography?

Model specification:

- Pool across mortgage & investor types
  - FRM & ARM; subprime
  - Private, Gov't (FHA/VA), Agency (GSE), portfolio (?)
- Is pooling supported by the data?
- Narrow down the focus:
  - Few 2nd liens for w. FHA – little lost if drop this group
  - Private securitized and portfolio can do a rate/term modification instead of a refinance – no new underwriting

Econometric specification

- Logit coefficients:

β_E = Easy; β_S = 2nd; $\beta_{75\text{–}100} = \text{CLTV} \in (75,100]$; $\beta_{100+} = \text{CLTV} \geq 100$; $\beta_{E,S}$ = Easy & 2nd

$\beta_{75\text{–}100,E}$ = CLTV $\in (75,100]$ & Easy; $\beta_{100+,E}$ = CLTV ≥ 100 & Easy

$\beta_{75\text{–}100,S}$ = CLTV $\in (75,100]$ & 2nd; $\beta_{100+,S}$ = CLTV ≥ 100 & 2nd

$\beta_{75\text{–}100,E,S}$ = CLTV $\in (75,100]$ & Easy & 2nd; $\beta_{100+,E,S}$ = CLTV ≥ 100 & Easy & 2nd

	1st Only			1st & 2nd	
CLTV	Easy	Hard		Easy	Hard
Low: < 75	β_E			$\beta_E + \beta_S + \beta_{E,S}$	β_S
Med: 75-100	$\beta_E + \beta_{75\text{–}100} + \beta_{75\text{–}100,E}$	$\beta_{75\text{–}100}$		$\beta_E + \beta_S + \beta_{75\text{–}100} + \beta_{E,S} + \beta_{75\text{–}100,E} + \beta_{75\text{–}100,S} + \beta_{75\text{–}100,E,S}$	$\beta_S + \beta_{75\text{–}100} + \beta_{75\text{–}100,S}$
High: 100+	$\beta_E + \beta_{100+} + \beta_{100+,E}$	β_{100+}		$\beta_E + \beta_S + \beta_{100+} + \beta_{E,S} + \beta_{100+,E} + \beta_{100+,S} + \beta_{100+,E,S}$	$\beta_S + \beta_{100+} + \beta_{100+,S}$

Econometric specification

- Identification cleanest if "as if" the law was randomly assigned
  - Easy vs Hard differences indicated below should be zero
  - Implications: $\beta_E = 0$; $\beta_{75\text{–}100,E} = 0$; $\beta_{E,S} = 0$
  - Estimates: $\beta_E = -0.4$**; $\beta_{75\text{–}100,E} = -0.035$**; $\beta_{E,S} = -0.049$
  - How is β_E estimated given including state fixed effects?

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High: 100+	$\beta_E + \beta_{100+} + \beta_{100+,E}$	β_{100+}		$\beta_E + \beta_S + \beta_{100+} + \beta_{E,S} + \beta_{100+,E} + \beta_{100+,S} + \beta_{100+,E,S}$	$\beta_S + \beta_{100+} + \beta_{100+,S}$

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Friction: CLTV 75-100 & 2nd – Easy vs Hard =

Must rely instead on identification by the triple difference

Marginal effects:

- Table 3 indicates “Coefficient” and “SE”
  - Text suggests that marginal effects are reported instead
  - Important difference – consider a continuous RHS variable

$$\mathrm{ME}_X = P(1-P)\beta_X = 0.05*0.95\beta_X = 0.0475\beta_X$$

  - For indicator variables, better to use difference method

$$\mathrm{ME}_{I_x} = P(I_x = 1) - P(I_x = 0)$$

  - Average treatment effects – who to average over?
    - Treatment on treated – average over 1st & 2nd liens not whole sample
- Additional test: Are borrowers with equity more likely to pay off 2nd when refinance 1st in Hard vs Easy states?
- Informational frictions may have been resolved over time
  - In this case, would expect refinancing rates to become less impacted over time by presence of a 2nd – extend data to test