

# Credit Risk Transfers and Financial Fragility

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## Introduction

- Historically the Government Sponsored Enterprises (GSEs) held the risk of borrowers defaulting on their mortgages.
- Crippling losses in 2008 led the Federal Housing Finance Agency (FHFA) to place the GSEs in conservatorship and the Treasury extended credit to cover GSEs' losses.
- To reduce risks for taxpayers, since 2013 the GSEs transfer some of the credit risk to investors via "Credit Risk Transfer (CRT) securities".
- CRTs are structured securities with multiple tranches that rank the losses in case of mortgage defaults.
- Multiple proposals suggest to use CRT yields to price the GSE's guarantee fees.
- We analyze the CRT in a quantitative general equilibrium model with endogenous mortgage spreads and housing prices.

## Model

- Lenders pay a guarantee fee (G-fee) to the GSEs, which cover lenders' credit losses in case of borrower default.
- The GSEs sell CRT to pass those risks to the markets. We analyze different pricing kernels and different risk absorbing tranches.
- The GSEs, through the government, have access to distortionary taxation.
- The mortgage rate is banks' cost of funds (the deposit rate and origination costs) plus a mortgage spread that depends on the G-fee and on the mortgagor's credit risk.
- There are idiosyncratic depreciation shocks that proxy for house value shocks.
- There are aggregate productivity shocks and shocks to the cross-sectional standard deviation of house values. These fluctuations govern aggregate mortgage credit risk.
- A drop in aggregate productivity and an increase in cross-sectional dispersion of home values lead to lower output and house prices.
- Financial intermediaries face binding constraints during a crisis. Becoming effectively more risk averse, they demand higher spreads to continue holding mortgages.

Figure 1. Example of CRT Structure

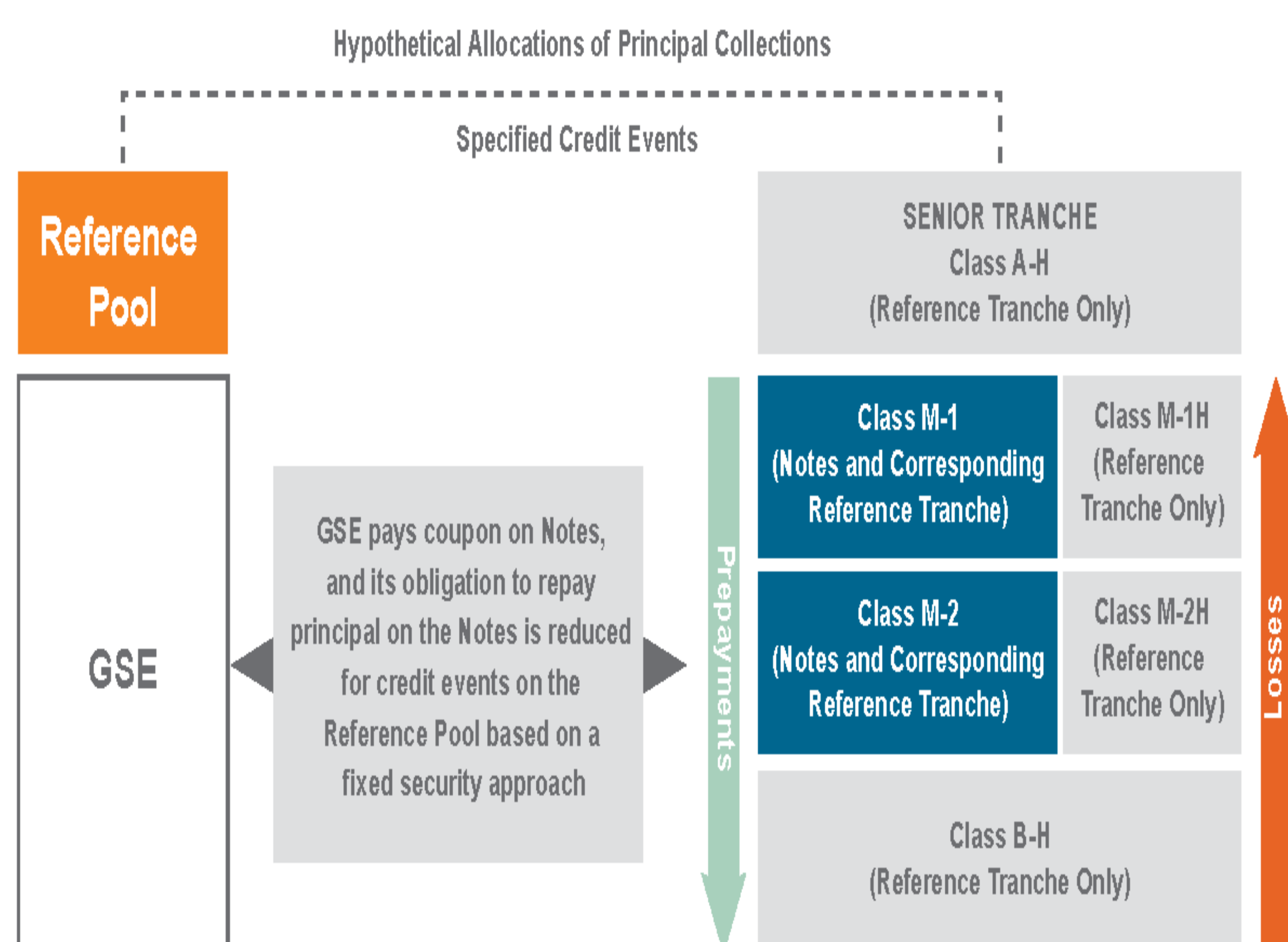
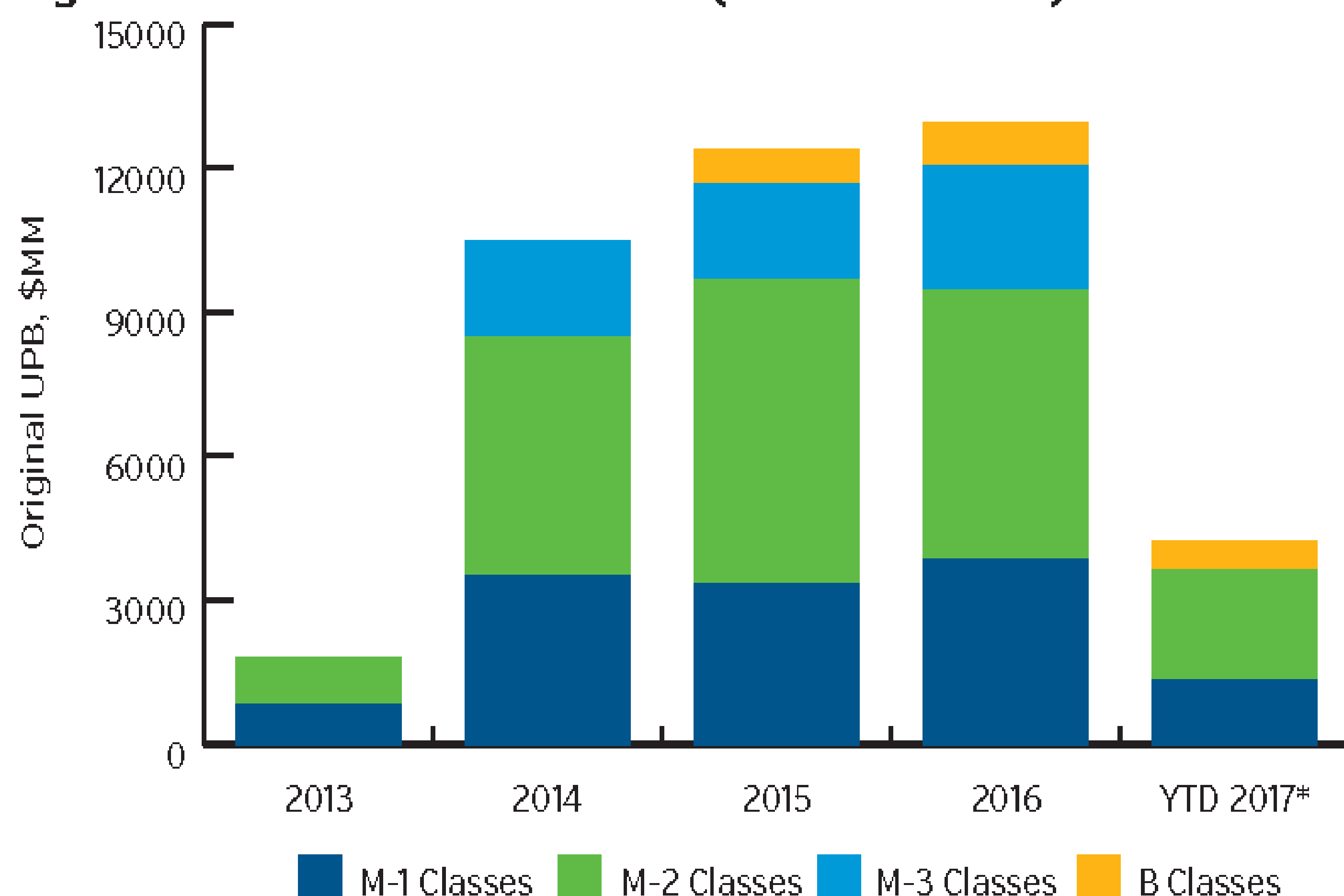


Figure 2. CRT Securities Issuance (CAS and STACR)



\* As of 2/28/17

Source: NEAM, Bloomberg

## Results

- CRT are procyclical, like capital markets.
- If G-fees are inferred from CRT then they become procyclical.
- Linking G-fees and CRT amplify booms in credit and house prices. CRT may end up exposing GSEs to larger risks.
- The tradeoff between distortionary taxation and differences in risk aversion determine how much risk the GSEs should transfer.

## Contact

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