

Discussion of
“Financial Fragility with SAM”
by
Greenwald, Landvoigt, and van
Nieuwerburgh

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Summary of the paper

A very well-written paper about the role of alternative mortgage contracts in the recession characterized by house price uncertainty

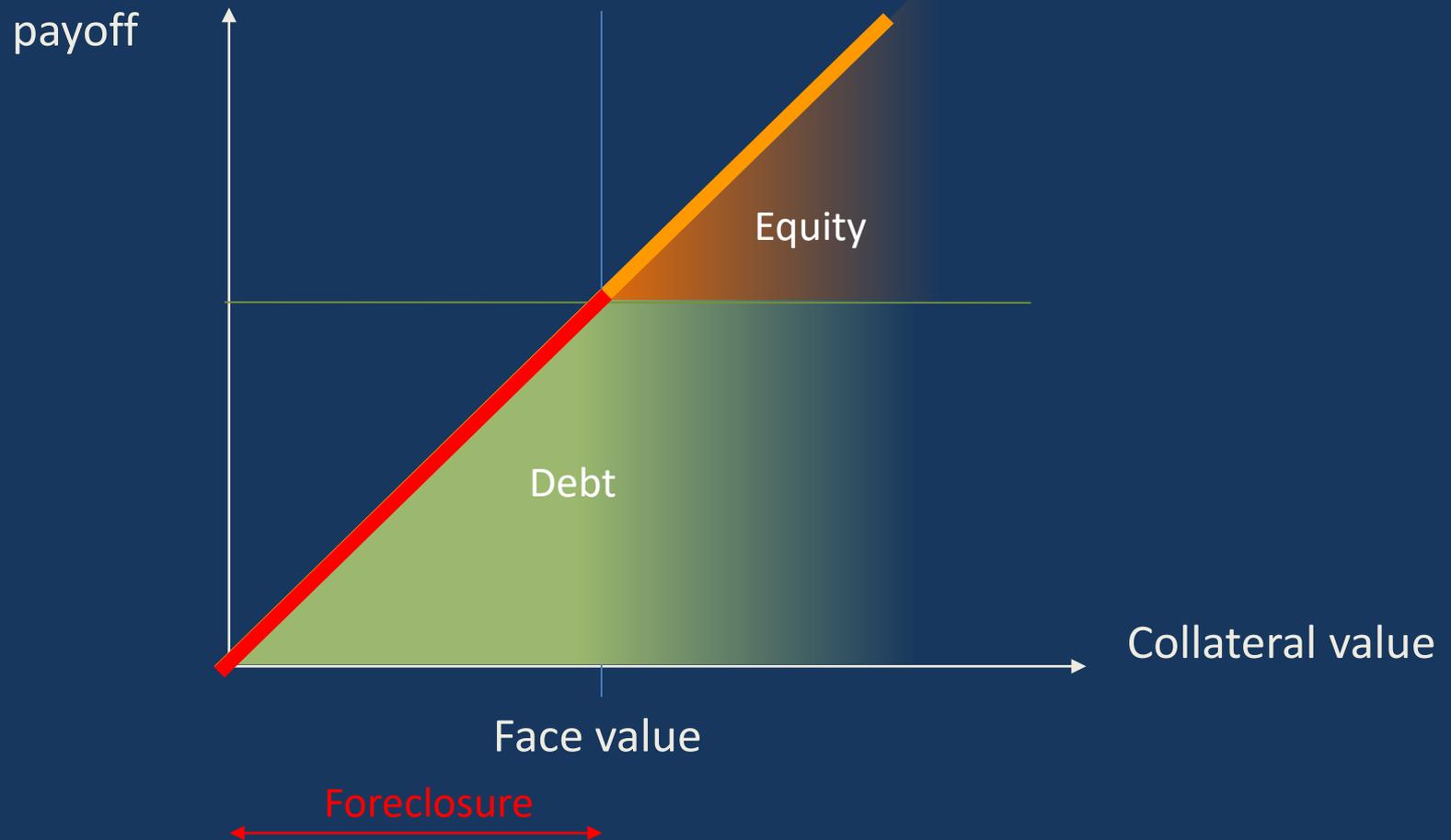
- A quantitative DSGE model that incorporates mortgage markets
- Dead weight loss by mortgage foreclosure and bank failures
- Three mortgage types: (1) standard, (2) SAM with local indexation, and (3) SAM with aggregate indexation

“Local SAM” decreases but “Aggregate SAM” increases fragility.

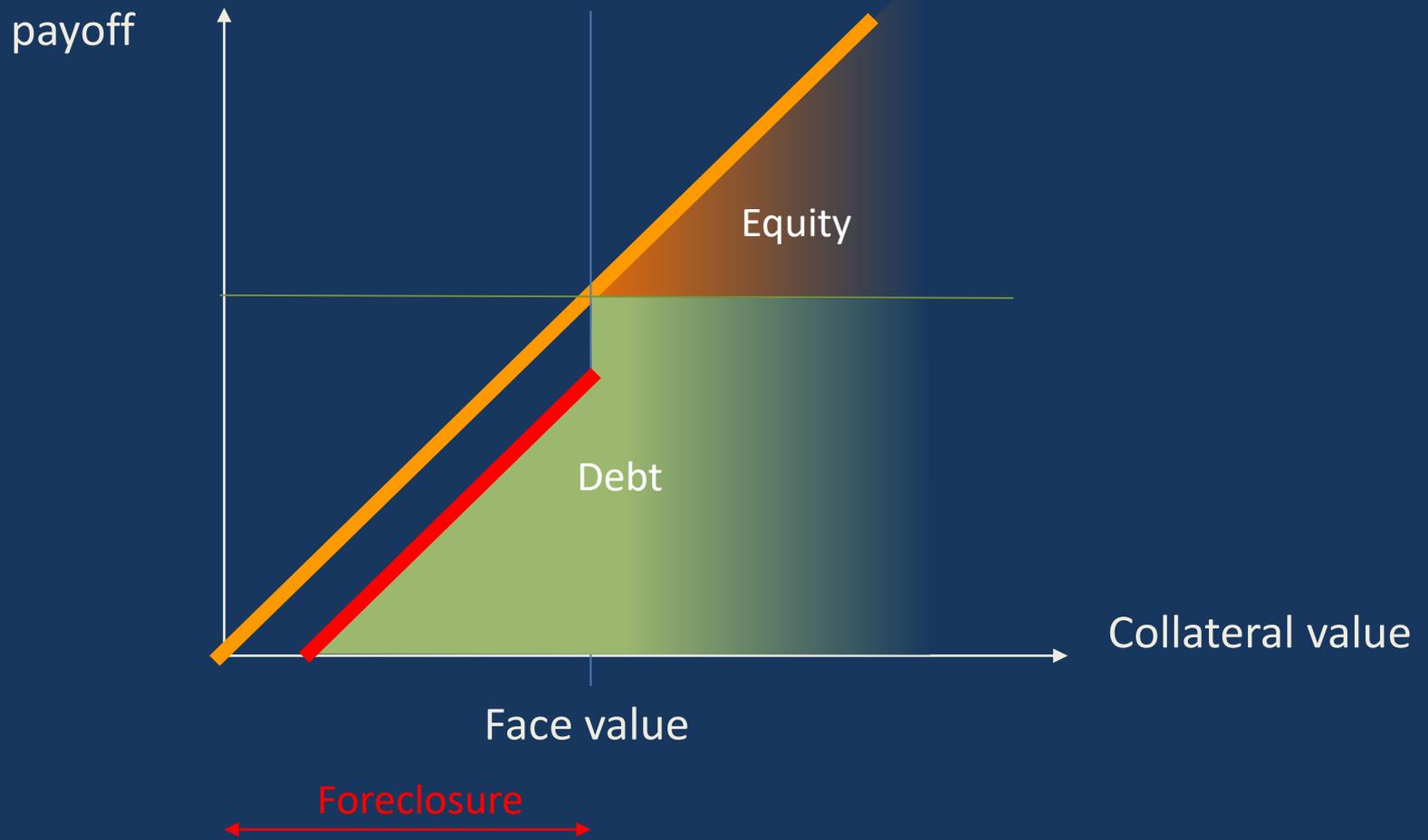
- Aggregate SAM does not (-)foreclosure much because of a basis risk; i.e., although the average risk is transferred, the borrowers on the left tail still default (non-linearity). The bank exposure to housing risk (+)bank failure, (+)tax, (-)consumption.
- Local SAM (-)foreclosure, (-)mortgage rate, (+)home price, (-)bank failure.

SAM's characteristics

Theoretical debt contract



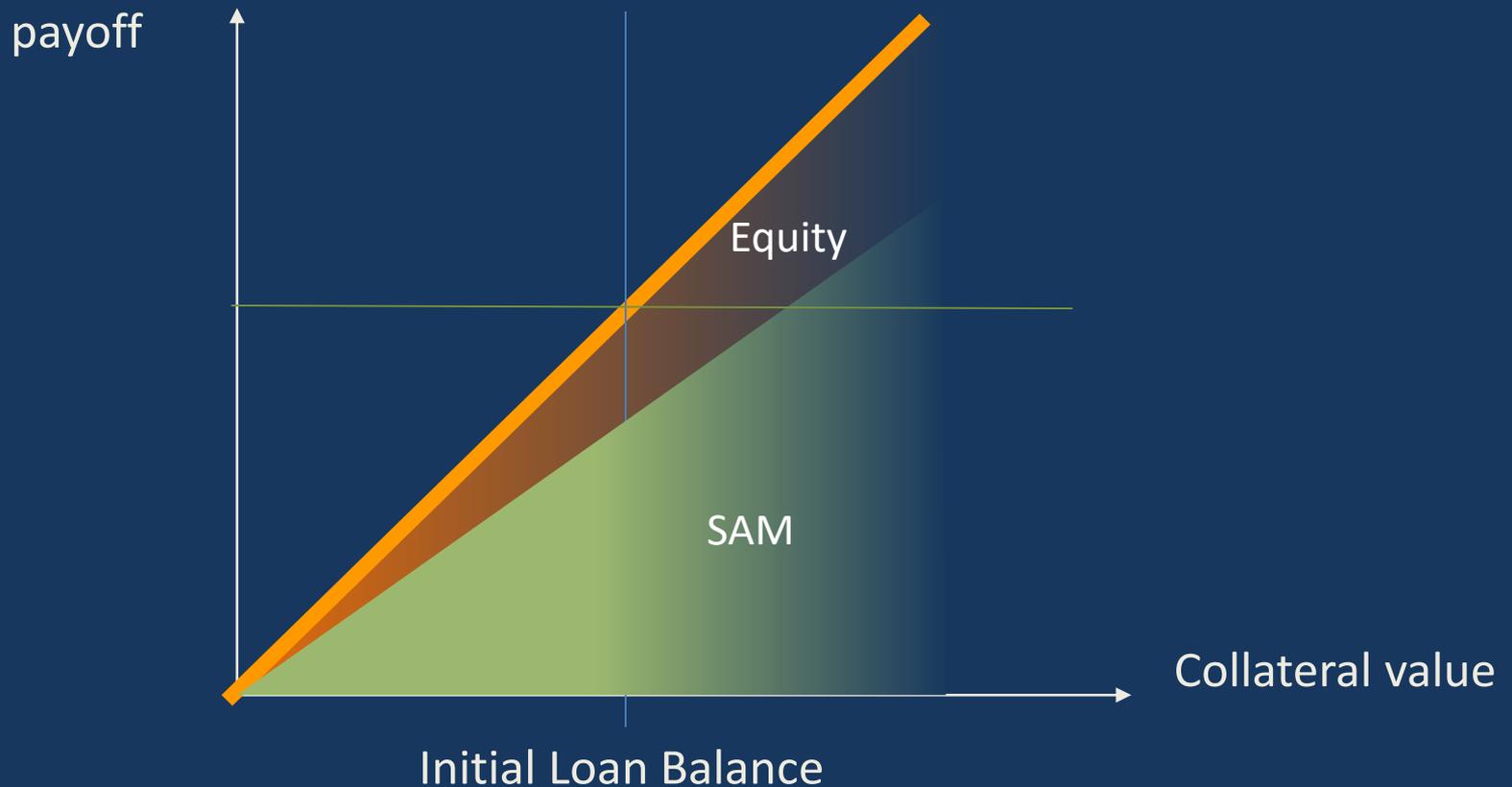
In reality, foreclosure is costly



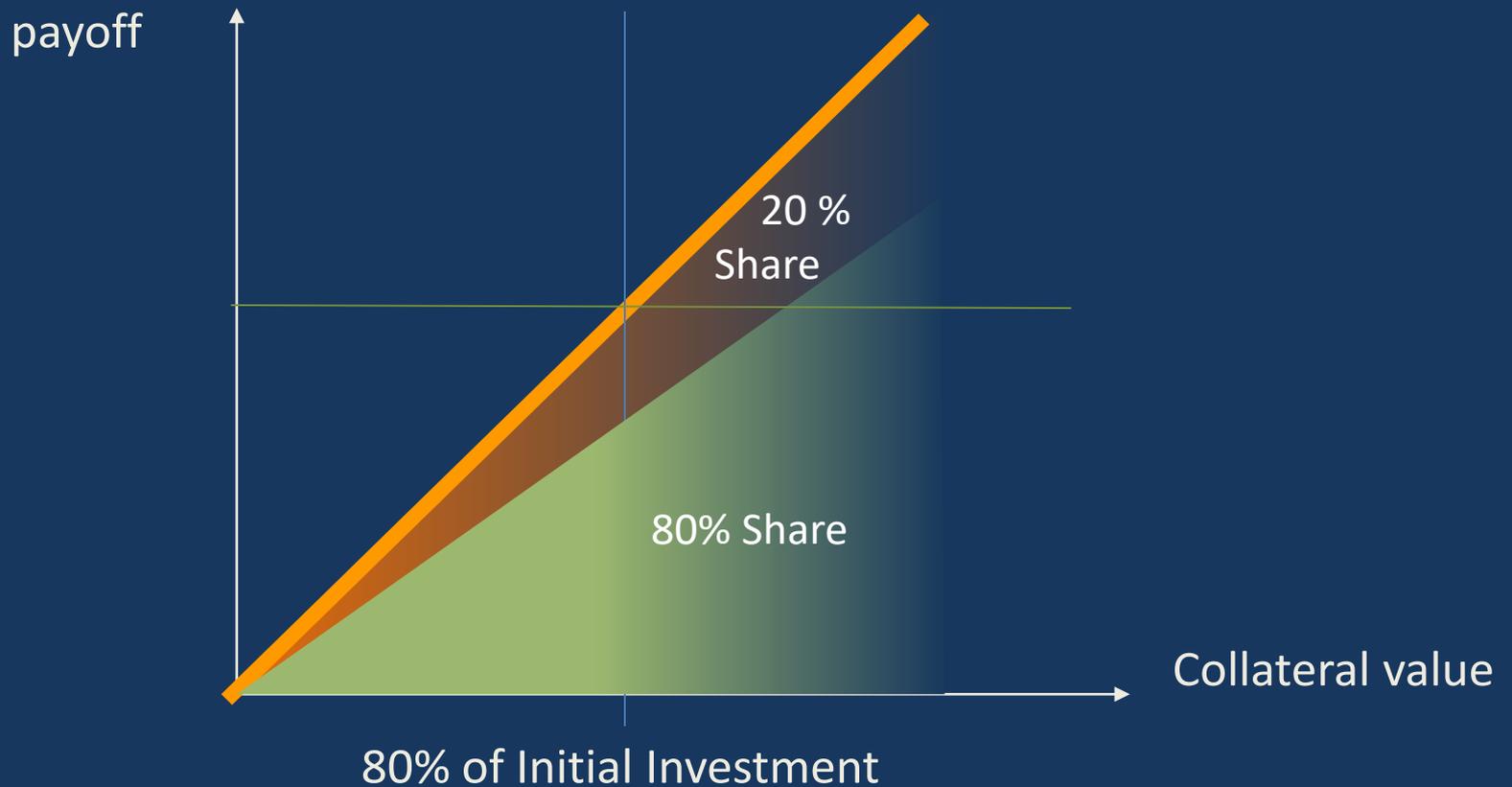
DWL in the model

- DWL from mortgage foreclosures
 - Periodic maintenance cost: REO 2.4%/qr > HH 0.6%/qr
 - As a result, REO housing price is 24% lower than normal
- DWL from bank failures
 - Resource constraint: $Y=C+G+DWL$
 - 9% of bank assets

SAM with Complete Risk Sharing (not analyzed in this study)



Equity (pro rata share)



Comment 1:

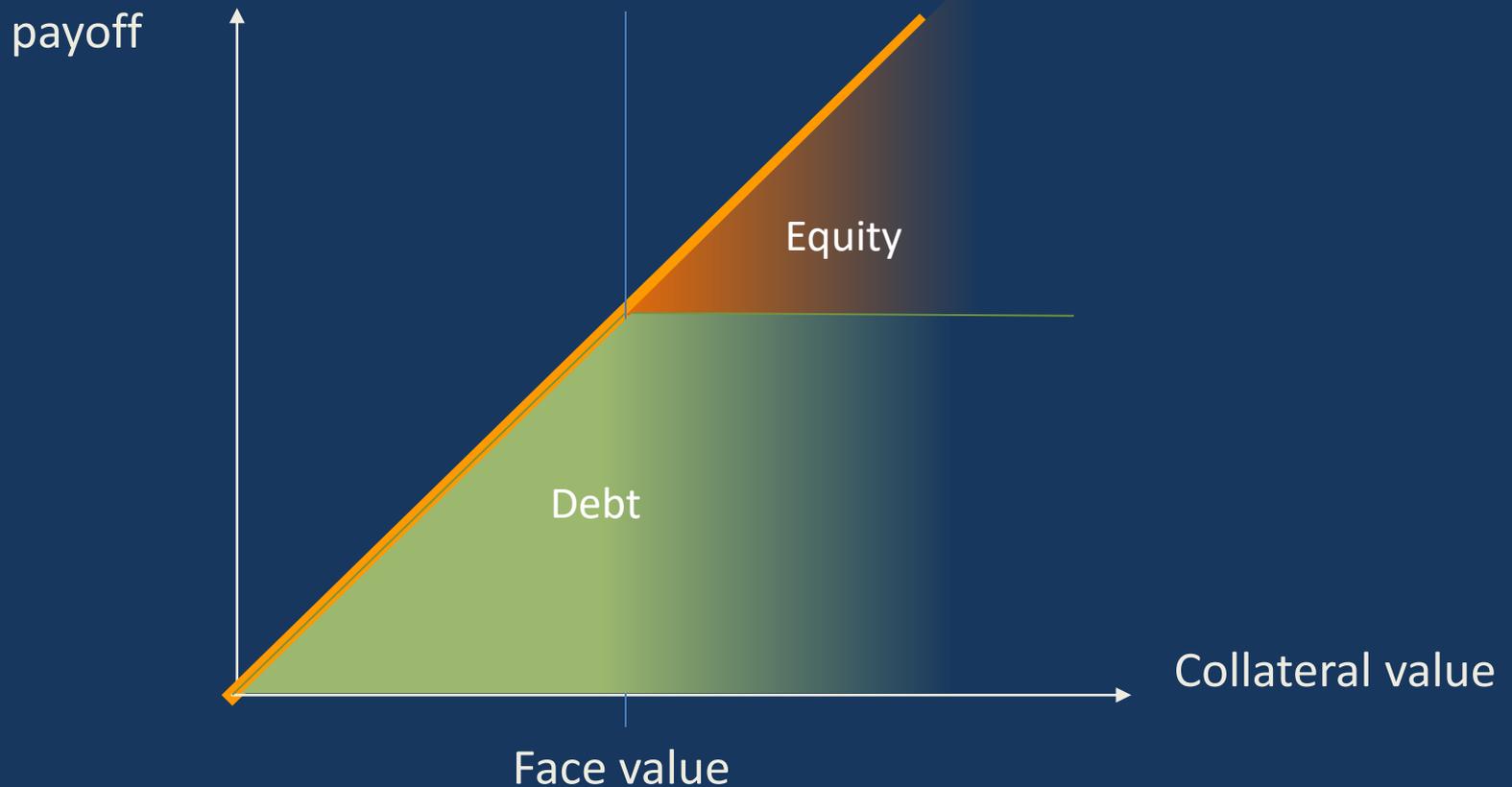
SAM does two things

1. Providing an equity-like risk sharing arrangement
2. Eliminating foreclosure costs

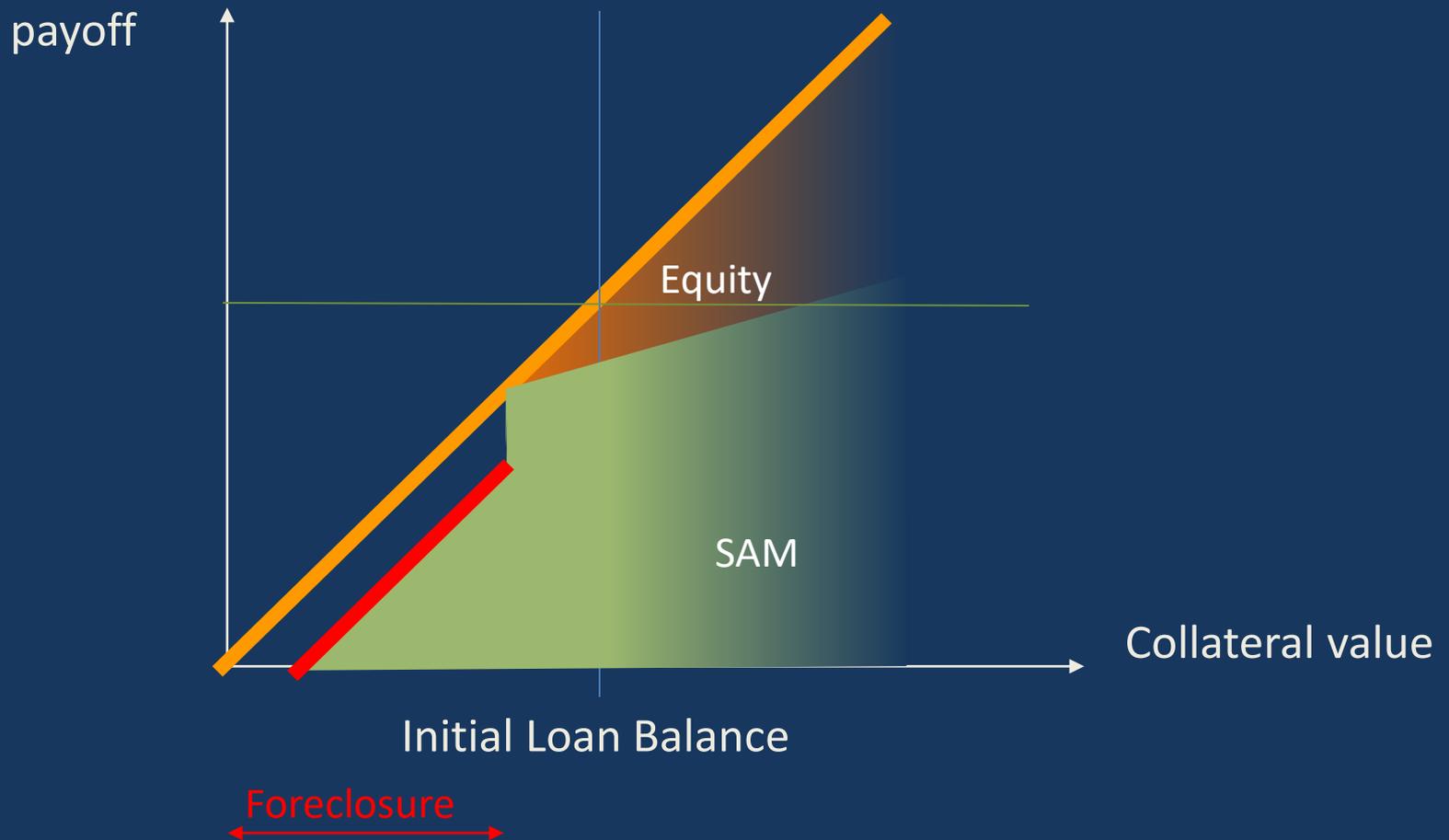
Disentangling these two effects is helpful.

- First, ABM can be used as a benchmark that does only #2.
- Second, a perfectly indexed SAM can be compared with ABM.

Adjustable Balance Mortgage proposed by Ambrose and Buttimer (2012)

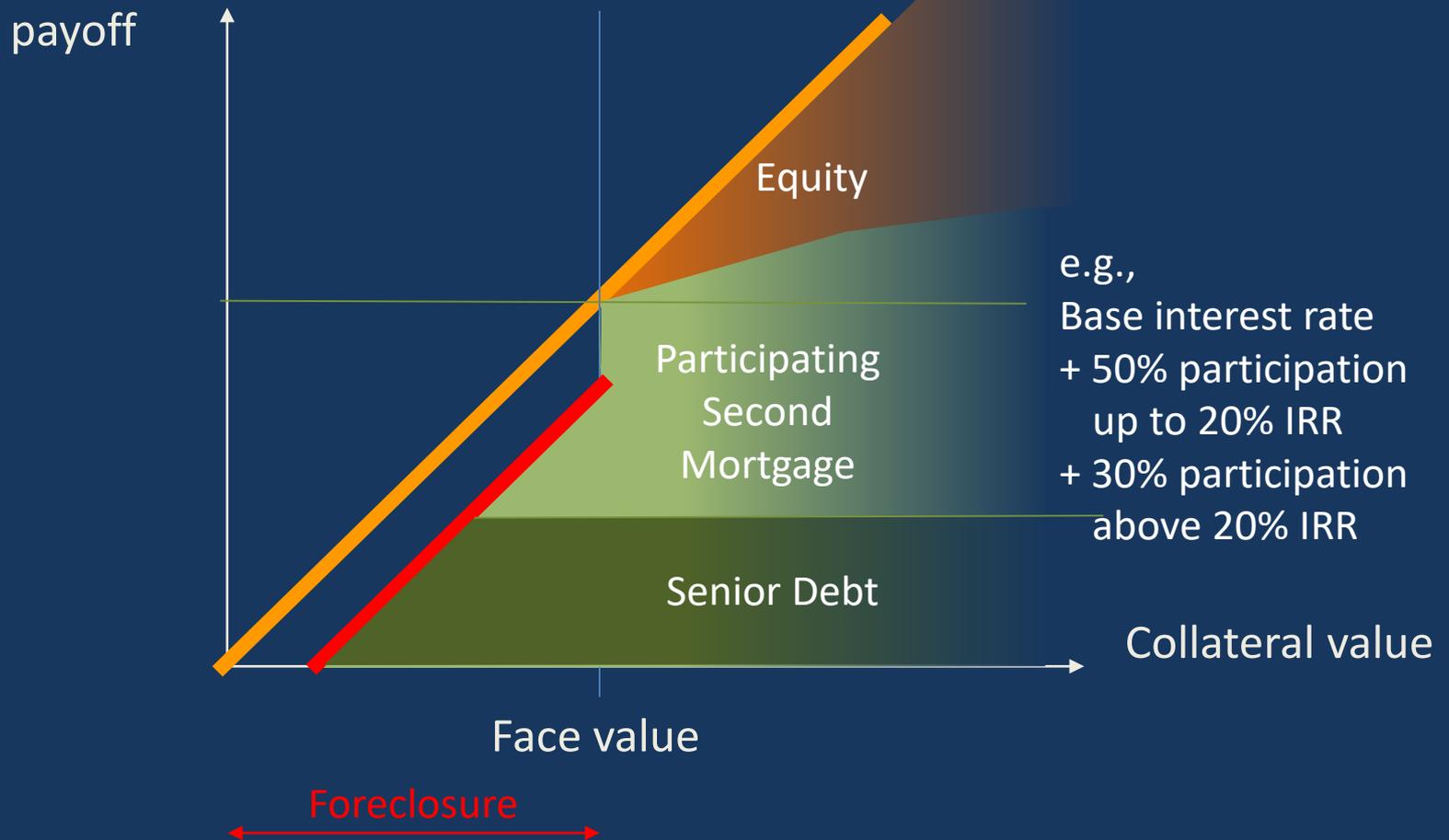


SAM with incomplete risk sharing (analyzed in this study)

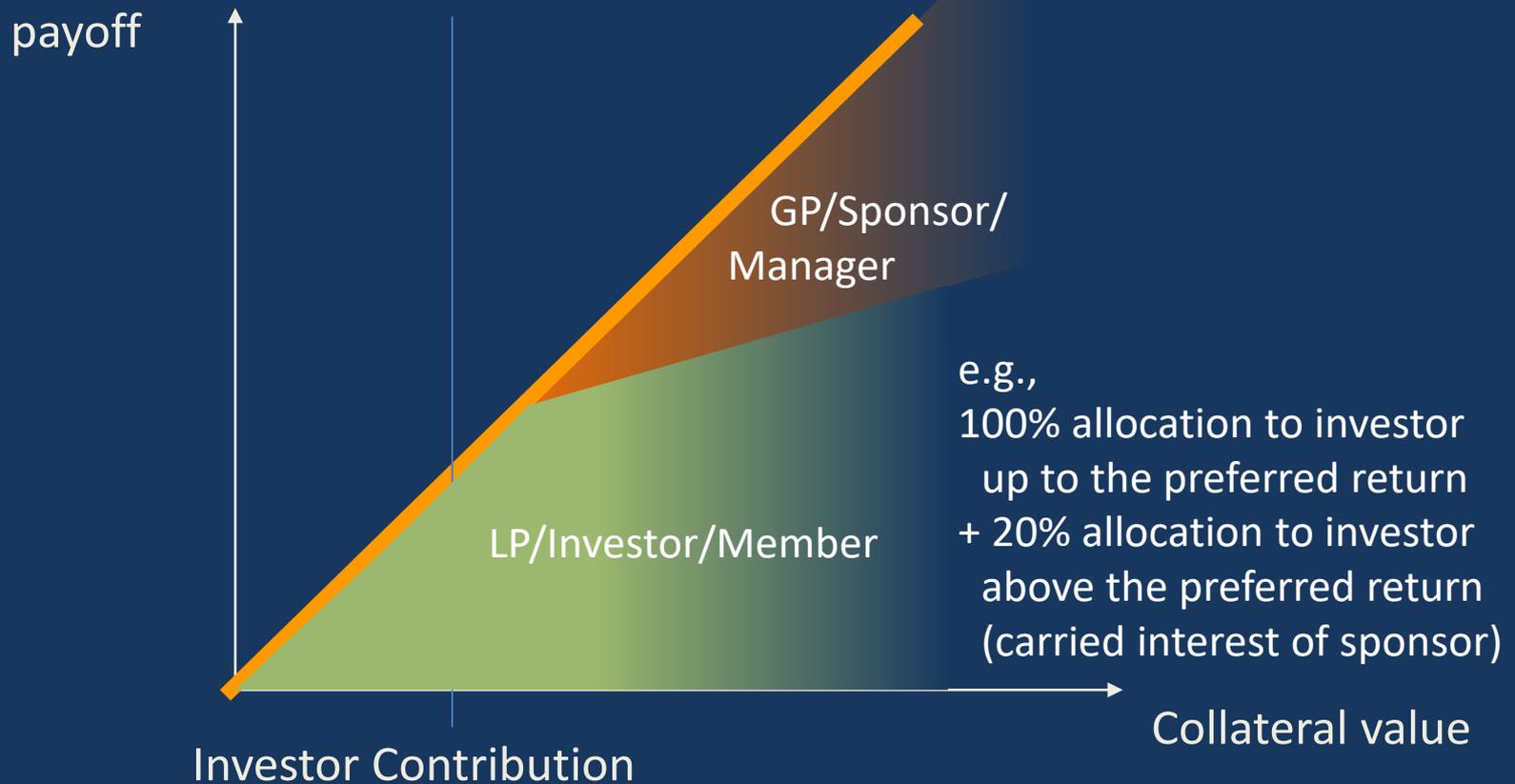


There are contracts that offer the same risk sharing arrangement as SAM

Participating Second Mortgage



LP/LLC Equity with Waterfall Allocations



Comment 2:

SAM is equivalent to equity at the abstract level.

- Perfect risk-sharing corresponds a pro rata share
- Imperfect risk-sharing corresponds to the waterfall structure in LP/LLC

This study essentially demonstrates the advantage of LP equity financing for homeownership.

Comment 3

Is SAM (i.e., the all-equity finance) optimal?

- When the borrower has private information, standard debt can be optimal.

E.g., Costly state verification model by Gale and Hellwig (1985)

- The prevalence of standard debt rather than SAM/LP may imply the advantage of debt.
(Then, ABM has an advantage over SAM)

Comment 4

In the model, housing is the sole bank asset.

The actual risk for banks depends on:

- (1) the importance of housing in the bank asset,
- (2) the relation between housing and other bank assets
- (3) the regional correlation of housing prices,

The housing price is negatively correlated with the stock price (e.g., Atlanta, New Orleans) where housing supply is elastic (Yoshida, 2016). Then, banks are better off by taking more housing risks.

Comment 5

The government does not dynamically stabilize the economy

- The bank bailout cost is funded by an immediate tax change (a static loss distribution)
- No dynamic distribution through public debt

In data, the private debt is transferred to the government during severe recessions.

- The effect of the following stabilization program?
 - A risk-sharing contract between the bank and the bond-issuing government (pro rata equity, waterfall equity, put option, etc.)
 - An international risk sharing program (SWF investments, interbank sharing, inter-government sharing, etc.)

Typos

- Equation (5)

$$Z_{A,t} = l_{\omega} \int_{\bar{\omega}_t} \omega d\Gamma_{\omega,t} + (1 - l_{\omega}) \left(1 - \Gamma_{\omega,t}(\bar{\omega}_t)\right)$$

- Page 29. “We a non-financial...”

Summary of Comments

- SAM is an equity-like contract with a possibility of foreclosure.
- Comparing with ABM will clarify SAM's important characteristics.
- Limited partnerships can be an interesting alternative to the home mortgage.
- SAM may not be optimal under asymmetric information.
- The bank risk is different if other assets are introduced.
- The result can be different if the government dynamically stabilizes the economy.