

**Title:** HACKING REVERSE MORTGAGES

**Speaker:** DEBORAH J LUCAS  
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**Importance:** Why this matters:  
Reverse mortgages are loans made by the private sector, but are guaranteed by the federal government. Lucas used them to illustrate the types of conflicting objectives and mispriced options that can be embedded in these and similar hybrid investment vehicles.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."  
Lucas described reverse mortgages (Home Equity Conversion Mortgages – HECMs), highlighted their potential importance in unlocking retirees' wealth that is tied up in home equity, and their limited utilization in practice – the "Reverse Mortgage Puzzle".  
She created a valuation model, and ran simulations to value the mortgages. Her conclusion is that they are unnecessarily expensive. The average borrower loses a fair net present value of -\$27,000, which is -18.6% of the line of credit (LOC); while the private lender gains a net present value of \$31,000, 21.4% of the LOC; and the government loses \$4000, -2.8% of the LOC.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?  
Lucas created a Monte Carlo simulation to model cash flows over the life of a loan, which allowed her to vary borrower type, mortality, moving rates, and drawdown behavior.  
She then discounted the cash flows at a risk-adjusted rate to look at the economics, and used government discounting rules to compute the reported budgetary cost.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. Because of government rules that mandate high fees to lenders, impediments to competition and misplaced incentives, reverse mortgages are expensive to the borrower, and the embed options (guarantees) tend to be mispriced. By assertion the options in similar government backed vehicles, are likely to be mispriced as well.
2. There is a "Ruthless" HECM strategy that has a positive net present value to a borrower, but it would not meet the capital/income needs of borrowers that need to access the capital in their homes.
3. HECMs and other government credit programs cost more than what is reported on the federal budget.

**Audience rating: 4.03**