Discussion of "Evaluating the Cost of Government Credit Support: The OECD Context" by Deborah Lucas

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  - Enhance transparency, accountability, limits moral hazard
  - Fiscal sustainability, financial risk and sovereign risk

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- Bottom line: official measures largely **underestimate costs**
- Complements other studies focused on:
  - Fannie Mae and Freddie Mac, student loans, TARP): Lucas & Moore (2010), Lucas (2012),Veronesi & Zingales (2009)

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- Deborah Lucas approach:
  - Taxpayer ultimately bears the risk

    Discount flows at $\Rightarrow$ market-based return
  - Relies on complete markets, Modigliani Miller

Methodology

- Estimate probability distribution of future cash flows
- Compute present discounted value using market-based return
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- Abstracts from:
  - Differences between private and social risk diversification
  - Market failures, externalities, general equilibrium effects, etc.

A Simple Model

- Illustrate:
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- Illustrate:
  - 'Right' discount rate to evaluate government support
  - Cost, bailouts, and optimality
- Bottom line: cost of government support may be the wrong welfare measure during financial crisis

- **Households** problem:

$$\max_{c_1, c_2, b,} \quad c_1 + c_2$$

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- **Banks** ($\bar{z}$ mean return on risky assets in unit fixed supply):

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$$\begin{aligned} s.t. \quad k + qa_2 &\leq a_1 q + b \\ b &\leq \bar{B} \end{aligned}$$

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- Introduce Government
  - At $t = 1$, issues debt and buys risky asset a_2^g at arbitrary price $\tilde{q}$

$$Gov. \quad IBC \quad :: \tilde{q}a_2^g + b^g \leq a_2^g z + b^g + T$$

- Introduce Government
  - At $t = 1$, issues debt and buys risky asset a_2^g at arbitrary price $\tilde{q}$
  - At $t = 2$, repays debt, collects return of assets and return proceeds to households

$$Gov. \quad IBC \quad :: \tilde{q}a_2^g + b^g \leq a_2^g z + b^g + T$$

- **Households** problem (using $R = 1$):

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- Optimality conditions:

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- **Non-binding** borrowing constraint (Large $\hat{B}$ case)
- All returns are equalized

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Asset price is given by

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- NPV for gov. credit support is negative iff $\tilde{q} > q$

- **Binding** borrowing constraint (low $\hat{B}$ case)
- Recall $q = \frac{\bar{z}}{(1+\mu)}$

Remarks:

- Gov. credit support relaxes borrowing constraint ($\downarrow \mu, \uparrow q$)
  - Holmstrom and Tirole (1998), Woodford (1990), Kiyotaki and Moore (2008), Gertler and Karadi (2011), Gertler and Kiyotaki (2011), Bianchi (2012)

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- **Effects** on asset prices and investment are **increasing** on $\tilde{q}$ and decreasing on government return
- Bottom line: government losing money is good for the economy (but taxpayers here are still hurt)

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Net Present Value

- NPV for private sector

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- NPV for private sector

$$\frac{\bar{z}}{1+\mu} - q = 0$$

- NPV for government

$$\bar{z} - \tilde{q} = ?$$

- Government discounts at lower rate...
- ... but buys at inflated prices
- $\Rightarrow$ Fair value could be lower or higher than accounting value

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- Quantitative model that trades-off benefits of credit support with costs:
  - Households unwilling to do unilateral transfer to businesses
  - Distortionary costs from taxation
  - Moral hazard effects
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- Bianchi (2012): Optimal bailout about 1 percent
- Also role for international bailouts: Fornaro (2014), Farhi Werning (2013), Brunnermeier and Sannikov (2014)

Final Remarks

- Important paper, sheds light on pressing policy issues!
- Adjust methodology to reflect different liquidity premium by the government?
- Would be interesting to find ways to measure empirically social value of government support including GE effects