Does Quantitative Easing work?

- Woodford, 2012, Jackson Hole
  - "Central bankers [have been] attracted to proposals that offer … additional monetary stimulus while (i) not requiring the central bank to commit itself with regard to future policy decisions, and (ii) … avoid [the central bank] involving itself in decisions about the allocation of credit. Unfortunately, the belief that methods exist … depend to a great extent on wishful thinking."
- UK QE, in contrast to US QE1, focused on buying government debt, not private sector securities, and has been criticised as a result.

Gertler and Karadi

- Banks take deposits, and with these and its equity buy long term government debt (bonds) or make loans to firms.
- Bank may divert a proportion θ of loaned funds by paying excessive dividends or bonuses, and depositors can only claim the residual value of bank, which includes its equity.
- They can also do this for their holding of bonds, but to a lesser extent (by a fraction Δ)
- This places a limit on leverage

$$Q_t s_t + \Delta q_t b_t \quad = \quad \phi_t n_t \text{ if } \lambda_t > 0;$$

- But the bank still arbitrages between the excess returns on bonds and loans

$$E_t \tilde{\Lambda}_{t,t+1}(R_{bt+1} - R_{t+1}) = \Delta E_t \tilde{\Lambda}_{t,t+1}(R_{kt+1} - R_{t+1})$$

Central Bank (CB) asset purchases

- CB acting as a bank, but with no deposit risk
  - If CB was as good as private banks in selecting assets, welfare would be improved by abolishing banks, because excess returns would be eliminated
  - Inefficiency parameters appear but disappear – only relevant for fiscal cost and welfare?
  - Optimal size of QE in normal times?
  - Governments can cheat, through default or inflation.
- CB asset purchases of any kind forces down long term interest rates, but purchases of government debt are less effective (per $) at doing so
  - But is effectiveness per $ important from the policy makers point of view?
  - Is there a significant efficiency cost for central bank bond holding? – motivation for focus on this type of QE in UK and in US QE2 (it could be optimal).
  - Result depends crucially on invariance of Δ parameter. Possible deeper microfoundations (loan default)? What happens if CB asset purchases mean banks hold no government debt?

Modelling crisis and response

- Calibrated model produces plausible and significantly positive numbers for QE impact
  - Results are 'Keynesian' in the sense that they work through normal interest rate channels, but without signalling any change in future policy in setting short term interest rates.
- Models crisis itself as a temporary bank asset quality shock
  - Lack of persistence may reflect absence of housing sector and household/firm balance sheet effects, but no explicit role for any shift in risk perceptions.
  - Is there a case for thinking about the crisis as in part a change in the agency parameter θ, reflecting past undervaluation of risk (e.g. Peyton Young QJE 2010)
  - Could even stronger QE have eliminated impact of shock?
- Paper clearly shows DSGE can 'do' financial crises
  - Progress in microfoundation modelling involves finding tractable 'parables' that can approximate real world complexity, without being too vulnerable to the Lucas critique. Does this model provide this for financial crises and subsequent policy responses?