

# Questions for Panel

- Do we need completely new models or are minor adjustments sufficient?
- To what extent is empirical evidence influencing economic theory/models?
- To what extent can these new models help us forecast the next recession any better?
- Could policy have been designed any better in this crisis if the forecast had been better?
- Would we have believed the forecasts?

# Evolution or Revolution in Models?

- History of modelling has been evolution although sometimes portrayed differently
- *Small is beautiful, less is more.* Wise not to depart from Shumacher's maxim unless strong reasons
- “Credit crises come along every 15 years” - Glenn Stevens at RBA 50<sup>th</sup>. Should make us cautious about building models to fight the last crises.
- Case Study Australia: credit crises in 61, 74 and early 90s. Maybe 2008.

# Evolution vs Revolution 2

- Response to 74 crisis was huge expansion in size of models to capture bank/ nonbank behaviour. Made model unmanageable and was eventually jettisoned and replaced by a few interest rates and constant premia ( arbitrage was key idea)
- Doesn't mean we shouldn't adapt but in pasimonious way. If so maybe just augment models for policy analysis or have a separate model for policy and forecasting in crisis times
- Having discussion of how to do first now.

# Evolution vs Revolution 3

- Role of any new model is to define new shocks and introduce data that enables us to measure and interpret them
- To date have seen mainly *explicit* introduction of a financial sector – Monacelli, Beaudry-Lahiri, Gertler-Kiyotaki etc do this.
- These have varying degrees of complexity and question has to be whether they are really there to explain one event – the GFC. Do we want to over-load the model based on an event happening every 15 years? Or use when indicators like inter-bank spread suggest emerging problems?
- A variety of models may be best response

# Evolution vs Revolution 4

- So far I think we have managed to handle financial issues in a relatively parsimonious way
- Of course we are building models and so never capture all the micro facts. Comments that deposits are less important to retail banks are true but will it affect aggregate outcomes if we ignore this?
- In same way there is credit rationing and so no external finance rate for those individuals. If this constraint really bites we would need to treat premium as latent and use some measure of tightness of credit to capture the missing variable
- But I think we have techniques to do this already

# Evolution vs Revolution 5

- Exception is if we have to model volatility and VaR is key to leverage.
- To handle this probably need agent based models. This would be more of a revolution. Work has been done on it but still well away from being capable of being used in practice

# Responsiveness to Data

- Has been pretty good among policy modellers
- Questions still exist over numbers for some of new models  
e.g. Tommaso has a 2% contraction for a 35 basis point spread and this seems an enormous effect.
- Have to be careful about what data and theory to respond to.  
Do you respond to volatility? Do you get hung up on “correct” behavioural responses based on surveys of individuals?
- Often might be better to handle complications using add-ins.

# Would Models Improve Recession Forecasts?

- I doubt it, as explained in lecture
- Recessions are about future shocks and models have little to say about these. Doesn't mean you can't see possible vulnerabilities e.g. rising spreads, but these not likely to be explained very accurately by model.
- Better survey data could help but even then micro agents have rarely been able to predict recessions. Believe we should be asking if we can predict the event  $\Delta y(t) < 0$  i.e. binary variable  $1(\Delta y(t) < 0)$ . Stops arguments about what is a recession



# Could Policy Have Been Better?

- Big variety of responses depending on individual situations
- Common were fiscal responses and interest rate cuts. Quantitative easing less common.
- Well known inertia problems with fiscal policy were encountered. When rushed you get other problems. Support for industries (autos), banks ( deposit guarantees), insurance too rushed and had negative effects
- Issue raised by Morten is whether the fiscal effects were best handled by existing models. The multiple equilibria has also been a feature of other papers in same vein e.g Farmer

# Would We Have Believed the Forecast?

- Need to explain
- *Why* a crisis might occur
- *How* a crisis might occur
- *When* a crisis will occur
- None of these are easy ( cf Asian crisis). Yet crucial to convincing people to take action.
- Fact occurs every fifteen years is a problem. Will get another but...

# Forecast and Policy

- Problem is like earthquakes. Lots of symptoms but impossible to predict when it will happen
- Only solution is to make buildings robust to earthquakes, constant emergency drills etc
- In same way we need to design economy to be robust to crises rather than think we can predict them
- Run surpluses in good times, make sure prudential systems are strong, encourage global co-operation...