Policy with Dispersed Information

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The views expressed in this discussion need not represent those of the BIS.
Placing the paper in context

- The paper employs a framework with:
  - heterogeneous information
  - strategic complementarities \textit{(to consider a special case)} \[ u_i = U(k_i, K, \sigma_k, \theta) \]
  - social aversion to non-fundamental volatility
  - social aversion to dispersion

- Inefficient use of available information
  - overreaction to public information
  - too much non-fundamental volatility relative to dispersion

- Growing literature on the welfare implications of public information:
Contribution of the paper

- Attack the inefficiency (in the use of information) directly!
- Confronted with …

\[ k_i = \mathbb{E}[(1 - \alpha)\kappa(\theta) + \alpha K|\omega_i] \quad \text{where} \quad \alpha > \alpha^* \]

- … introduce taxes

\[ u_i = U(k_i, K, \sigma_k, \theta) - T(\tilde{k}_i, \tilde{K}) \]

- … in order to align \( \alpha \) with \( \alpha^* \): \( T_{12} \) counteracting \( U_{12} \) & increasing in \( (\alpha - \alpha^*) \)

- The optimal tax is implementable under additive noise in \( k_i \)
- The role of the tax is bigger in a dynamic setting with learning
- With the tax implemented: more information always improves welfare
A hidden pro-transparency argument?

- The effectiveness of the optimal tax rate is predicated on a clear-cut trade-off between (i) dispersion and (ii) non-fundamental volatility.

\[ \kappa_i = E[(1 - \alpha)\kappa(\theta) + \alpha K|\omega_i] \]

- Needed: \( \omega_i \) containing pure private and public signals: \( x_i \) and \( y_i \). But:
  - \( x_i = \theta + \xi_i + \varepsilon^x \) Morris, Shin and Tong (2006)
  - \( y_i = \theta + \xi^y_i + \varepsilon \) literature on rational inattention

- Similarity between \( x \) and \( y \) reduces the welfare effect of taxes.

- A transparent authority could enhance the effectiveness of taxes by:
  - releasing information about a common bias in private assessments
  - leaving less room for idiosyncratic interpretation of its actions

Blinder (1998)
Limited scope of the policy proposal

- Suppose again that there is excessive non-fundamental volatility. **Paper’s prescription**: marginal tax is to increase in aggregate investment.

- Suppose, however, that asset supply is inelastic:
  - The price adjusts:
    - it is common knowledge (actions can be conditioned on it)
    - this effectively rules out strategic interactions
  - Non-fundamental volatility (of the price) might be excessive, depending on social preferences
  - A tax that reflects aggregate investment cannot correct for this (trivially)
  - An optimal tax (reacting to the price level):
    - cannot influence individual players’ weights on public information (no hidden aggregate action matters to players)
    - needs to incorporate knowledge of the public signal

- Analysis would be more convincing if it adopted a GE approach.
Applicability limitations

- The paper demonstrated that the optimal tax is implementable even under imperfect knowledge of private actions

\[ \tilde{k}_i = k_i + \eta + \nu_i \]

- Assumptions that noise is additive, zero mean, independent of all other shocks to the economy: probably too strong in general.

- In addition, there are increasingly important special cases
  - Unregulated investors (e.g. hedge funds) whose investment positions are simply unknown
  - Given the status quo, it seems unrealistic to expect that hedge funds would disclose positions which will be taxed.
Related policy arguments

- **Macro-prudential dimension of financial stability**
  - Capital to depend not on portfolio risk per se but on contribution of portfolio to systemic risk

- **Policy proposal to correct for inefficient use of information**
  - Tax to depend on individual investment and aggregate market volume

- **Conceptual issue**: real time knowledge of potentially unstable parameters
- **Practical issue**: players view themselves as separate entities and see a violation of the level playing field condition