Comments on John Major's
Connections between Froot-Stein and the de Finetti Optimal Dividends Models

Ken Froot

Limitations

- Tinker toy models of comparative statics
  - Vs
- Richer more dynamic models with long lived horizons

The Score

The Score

- Froot   0

The Score

- Froot 0
- Major 1

The Score

- Froot   0
- Major   1*

      – * However, the client's equity trades below book value

The move to a dynamic model

- Harder!
- Attractive to have many periods
  - Nice that realizations *and* decisions are contemporaneous and happen continuously
  - More like real life
  - Allows for more meaningful specification of risk distributions
- Idea of connecting dividend models with models of capital raising
- Greater number of M&M Irrelevance relations
  - Financing decisions for investment and vice versa
  - Risk management
  - Intertemporal timing of dividend payments and capital raising

The move to a dynamic model

- What shall we ask of a model with more periods?
  - More accurate comparative statics
  - Richer dynamics
- Obtaining richer dynamics seems a good goal, but only if they match reality AND are driven by real intertemporal optimization. Hard to find these among major empirical tendencies, e.g.,
  - Slow adjustment of prices, investment or other corporate choice variables such as adjustment of capital ratios to "target" levels
  - Insurance pricing cycles
- Old models of optimal dividends had built in decreasing returns to scale, so capital above required is returned W exceeds requirements

The move to a dynamic model

- Major, older optimal dividend models, and virtually all corporate finance models (including FS)
  - No dynamics
  - Just comparative statics
  - Need not be so in Major
    - Example: C(e) is linear rather than convex. Implication: If funds inside company earn the external fair rate of return, then if capital providers will wish to add funds, they are indifferent between doing so now vs. later. If C(e) is convex, capital providers will tend to "smooth" inflows, much as dividends are "smoothed" outflows
    - Some evidence in growth companies, but besides that probably not worth modelling
- Some consolidations become necessary
  - In FS, financing and investment are distinct -- C(e), F(I) – yet become related (scrimping on investing happens with some attempts to sell assets and raise external capital)
  - Modern separation between investment and financing is retained in post-modern finance at least as a signifier. Dispensed with altogether here.
    - Economies of scale and fixed factors
    - Agency issues and the financing pecking order
    - State variables for μ need to be rich: I, e, W, etc.
  - In Major, C is linear in e, so if internal returns are competitive, financing and dividends have bang-bang solutions
  - Example on page 14 – interpreting μ

Ease of Calibration is Useful

- Figures 6 and 7.
    - What is sensible for Kappa?
- No bankruptcy trap – i.e., figure 4.
- Key feature is discount rate (fair external cost of capita) vs rate of return on internal funds, μ.