Changing Discount Rates: Equilibrium Asset Pricing Meets Keynes

Yoshitaka Fukui
Aoyama Business School
fukui@gsim.aoyama.ac.jp

February 16, 2012

What to Be Explained Now: Changing Discount Rates

- Undeniable Fact: Asset (stocks, houses etc.) prices change a lot, though their cashflow streams are quite stable

↓

- Equilibrium asset pricing theorists interpret (rationalize) the phenomenon as a consequence of widely changing discount rates (risk premium)
- Cochrane (2011) succinctly summarizes the current state of affairs and suggests a promising way for future macro-financial economic research, but…

Academic Asset Pricing World Finally Caught up Keynes?

- Does not seem to recognize Keynes's prescience on the vital role of risk premium on macroeconomic analysis
- As Meltzer (1981; 1988) showed persuasively, Keynes is more neo-classical than Keynesians make us believe
- *General Theory* is more a precursor of equilibrium macrofinance based on changing risk premium, rather than a policy-oriented short-term disequilibrium analysis
- The *General Theory* is the final result of a long struggle *to make that vision of our age analytically operative*. (Schumpeter 1946)

Keynes as a New Liberal Visionary

- A stationary or slowly declining population may… enable us to raise the standard of life to what it should be, whilst retaining those parts of our traditional scheme of life (Keynes 1937)
- Do not let us overestimate the importance of the economic problem… If economists could manage to get themselves thought of as humble, competent people, on a level with dentists, that would be splendid! (Keynes 1930)

New Liberalism: Freedom and Efficiency Based on Social Control of Investment

- Individualism, if it can be purged of its defects and its abuses, is the best safeguard of personal liberty in the sense that… it greatly widens the field of the exercise of personal choice.
- It is also the best safeguard of the variety of life, which emerges precisely form this extended field of personal choice, and the loss of which is the greatest of all the losses of the homogenous or totalitarian state. For this variety preserves the traditions which embody the most secure and successful choice of former generations. (Keynes 1936, p. 380)

Keynes’s Letter (1944) to Hayek

- Morally and philosophically I find myself in agreement with virtually the whole of it; and not only in agreement with it , but in deeply moved agreement.
- One point which perhaps you might have pressed further is the tendency today to disparage the profit motive… The passage about this on page 97 is very good indeed; could not be better.
- People… are only too ready to believe that the choice is not really necessary, that it is imposed upon them… What they resent is, in truth, that there is an economic problem. (Hayek 1944, p. 97)

Long-Run Equilibrium and Discount Rates

- The first person who formulates the optimal path of stock and flow based on dynamic optimization is none other than Frank Ramsey, Keynes's beloved protégé (Ramsey 1928)
- Under the Ramsey (-Cass-Koopmans) model, the optimal path (and level) of stock and flow depends on discount rates

↓

- The lower (higher) discount rates are, the higher (lower) the stationary level of stock and flow is

Suboptimal Long-Run Equilibrium

- Instead of the marginal efficiency of capital determining the rate of interest, it is truer… to say that it is the rate of interest which determines the marginal efficiency of capital. (Keynes 1937b)
- We oscillate, avoiding the gravest extremes of fluctuations in employment and in prices in both directions, round an intermediate position appreciably below full employment… (Keynes 1936, p. 254)
- The elements that Keynes emphasizes are that output is below the optimum level and that a principal reason is the presence of uncertainty. (Meltzer 1988)

Keynes's Liquidity Premium/Preference = Risk Premium in Modern Asset Pricing

- The dismay and uncertainty as to the future which accompanies naturally precipitates a sharp increase in liquidity-preference – and hence a rise in the rate of interest. (Keynes 1937)
- A liquidity premium… is a payment, not for the expectation of increased tangible income at the end of the period, but for an increased sense of comfort and confidence during the period. (Keynes 1938)

Keynes's Ideal: World of Zero Discount Rate and Zero Marginal Efficiency of Capital

- If I am right in supposing it to be comparatively easy to make capital-goods so abundant that the marginal efficiency of capital is zero, this may be the most sensible way of gradually getting rid of many of the objectionable features of capitalism.
- A man would still be free to accumulate his earned income with a view to spending it at a later date. But his accumulation would not grow.

(Keynes 1936, p. 221)

Keynes's Prescription: Permanent Investment "Boom"

- The remedy for the boom is not a higher rate of interest but a lower rate of interest! For that may enable the so-called boom to last. The right remedy for the trade cycle is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom.
- A boom is a situation in which over-optimism triumphs over a rate of interest which, in a cooler light, would be seen to be excessive. (Keynes 1936, p. 322)

Changing Discount Rates: Controllable or Given?

- Is the stream of discount rates (risk premia)

  a controllable policy variable (Keynes) or

  a given deep parameter (equilibrium asset pricing)?
- Is the fulfilment of these ideas a visionary hope?... I do not attempt an answer in this place. (Keynes 1936, p.383)
- The challenge to economists is to build on that understanding to devise rules and develop institutions that reduce risk to the minimum in a world subject to real and nominal shocks that differ in magnitude and duration. (Meltzer 1988)

References

Cochrane, J. H. 2011. Presidential Address: Discount Rates. *Journal of Finance* 66 (4): 1047-1108.

Hayek , F. A. 1944. *The Road to Serfdom*. University of Chicago Press.

Keynes, J. M. 1936. *The General Theory of Employment, Interest and Money*. Macmillan.

Keynes, J. M. 1937a. Some Economic Consequences of a Declining Population. In *The Collected Writings of John Maynard Keynes, Volume XIV*. Macmillan.

Keynes, J. M. 1937b. The General Theory of Employment. *Quarterly Journal of Economics* 51 (2): 209-223.

Keynes, J. M. 1938. Letter to Hugh Townshend. In *The Collected Writings of John Maynard Keynes, Volume XXIX*. Macmillan.

Keynes, J. M. 1944. Letter to Professor F. A. Hayek. In *The Collected Writings of John Maynard Keynes, Volume XXVII*. Macmillan.

Keynes, J. M. 1972 [1930]. Economic Possibilities for Our Grandchildren. In *Essays in Persuasion*. Macmillan.

Meltzer, A. H. 1981. Keynes's *General Theory*: A Different Perspective. *Journal of Economic Literature* 19 (1): 34-64.

Meltzer, A. H. 1988. *Keynes's Monetary Theory: A Different Interpretation*. Cambridge University Press.

Ramsey, F. P. 1928. A Mathematical Theory of Saving. *Economic Journal* 38 (152): 543-559.

Schumpeter, J. A. 1946. John Maynard Keynes 1883-1946. *American Economic Review* 36 (4): 495-518.