Optimal Monetary and Macroprudential Policy: Gains and Pitfalls in a Model of Financial Intermediation

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March 28, 2014

THEORETICAL FRAMEWORK

- Financial intermediation sector in a standard New Keynesian model.
- Banks intermediate funds from households (with debt and equity) to firms (to fund capital).
- The financial structure of banks is determined by the following assumptions:

1. Tax deductability of interest payments.
   Debt is preferred to equity (pecking order).
2. Costly default on debt.
   This limits leverage because of increasing cost of debt.
3. Raising external equity (negative dividends) is costly.
   This induces precautionary behavior in the choice of debt.

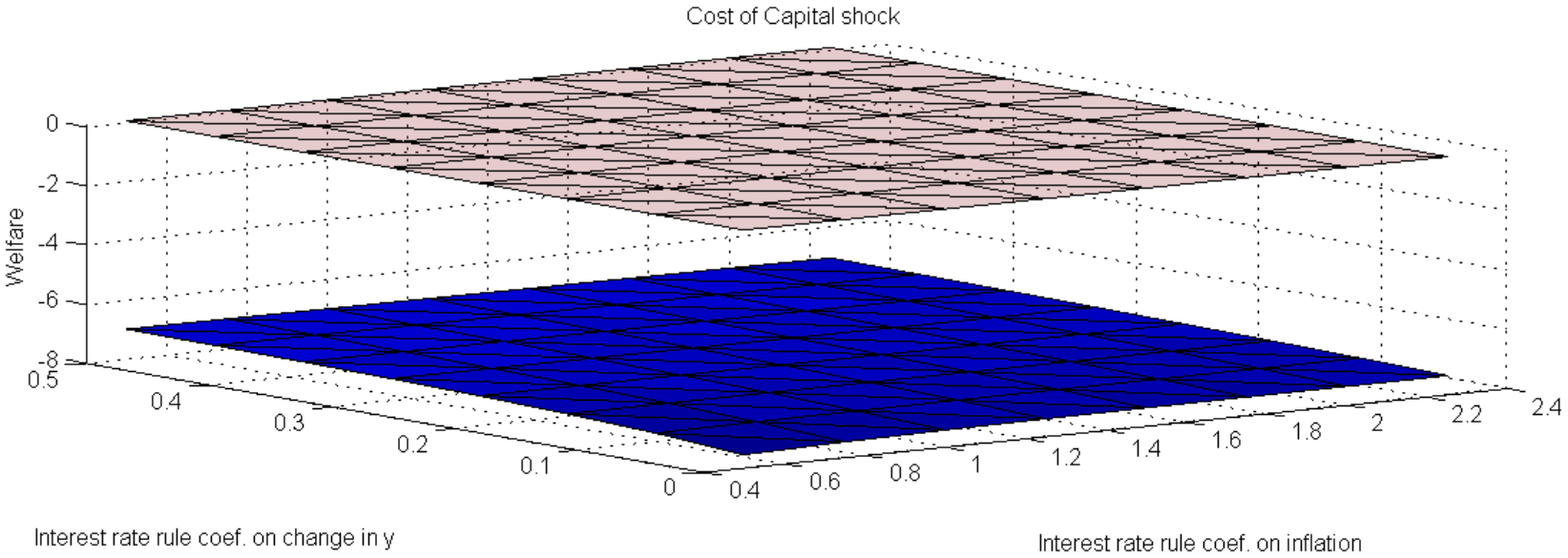
MAIN FINDINGS

1. When the economy is hit by financial shocks, the optimal interest rate policy brings large welfare gains.

2. Augmenting a simple Taylor rule with a reaction to credit does not improve welfare much.

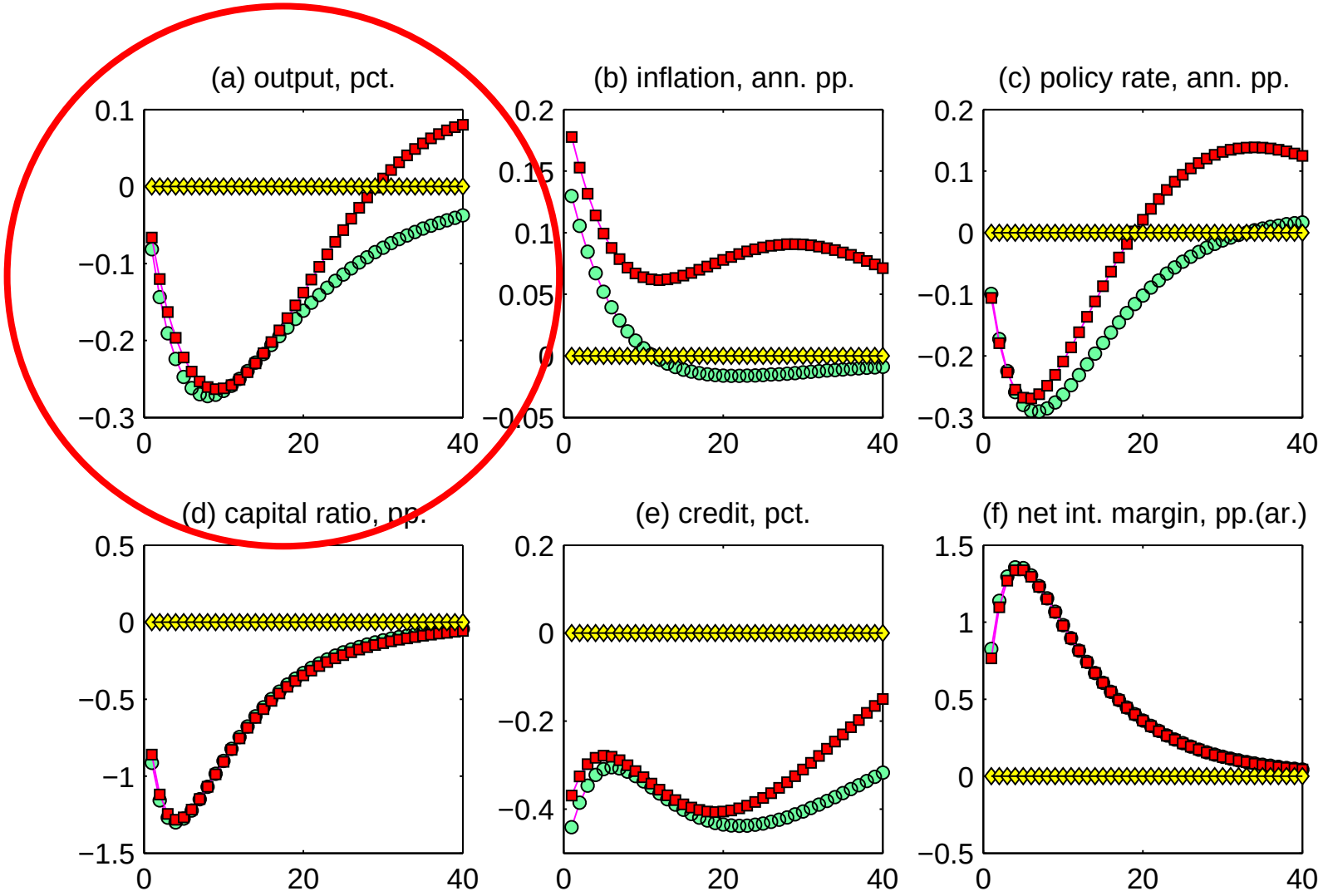
3. With an optimal tax on debt (macro-prudential), an optimal interest rate policy brings much smaller welfare gains.

WELFARE CALCULATION
Simple vs. Optimal Policy



WHY ARE THE WELFARE NUMBERS SO BIG?

IMPULSE RESPONSES TO FINANCIAL SHOCK



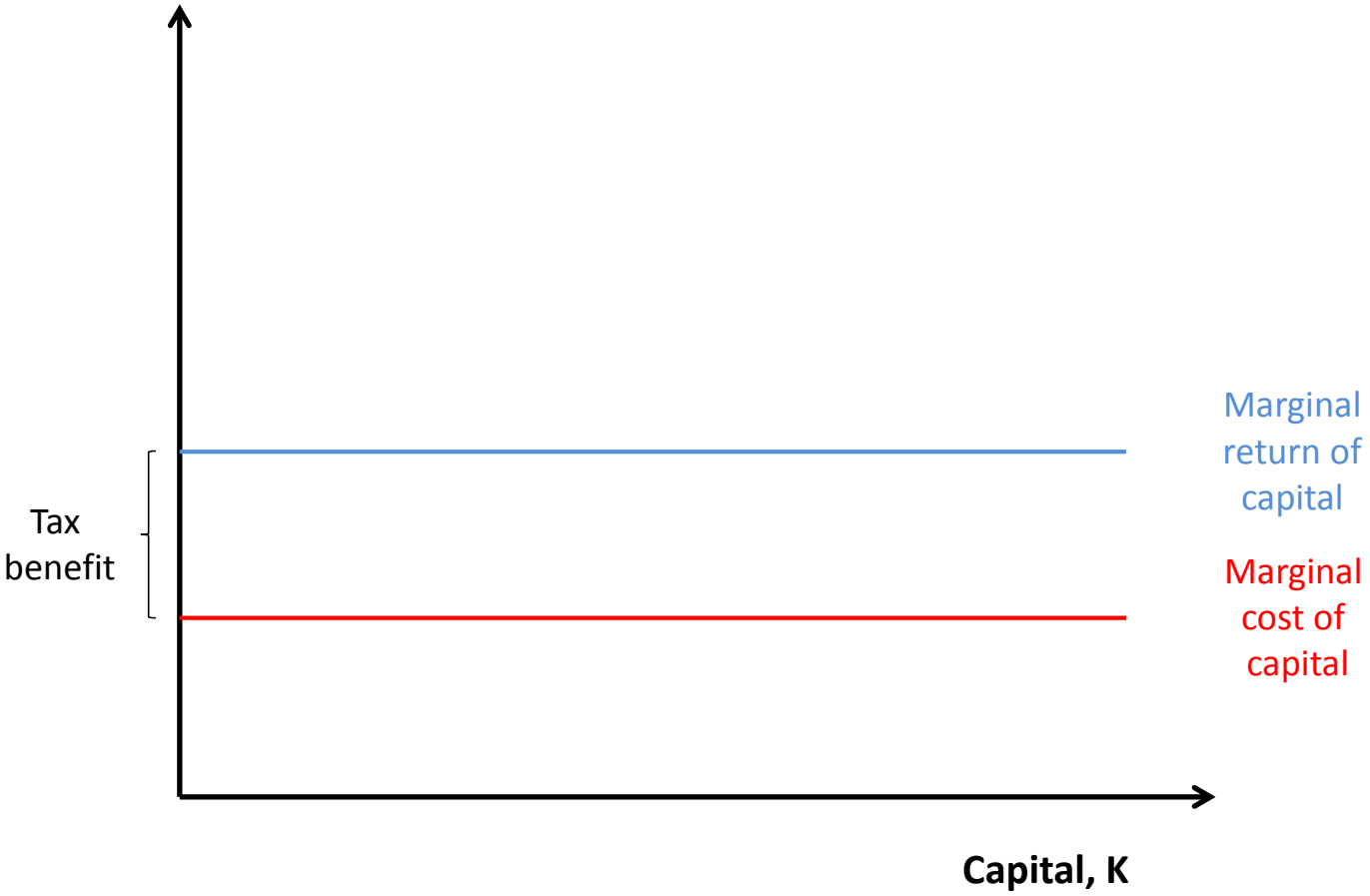
KEY TO UNDERSTAND THE WELFARE CALCULATIONS

- The welfare numbers are calculated by comparing Steady States.

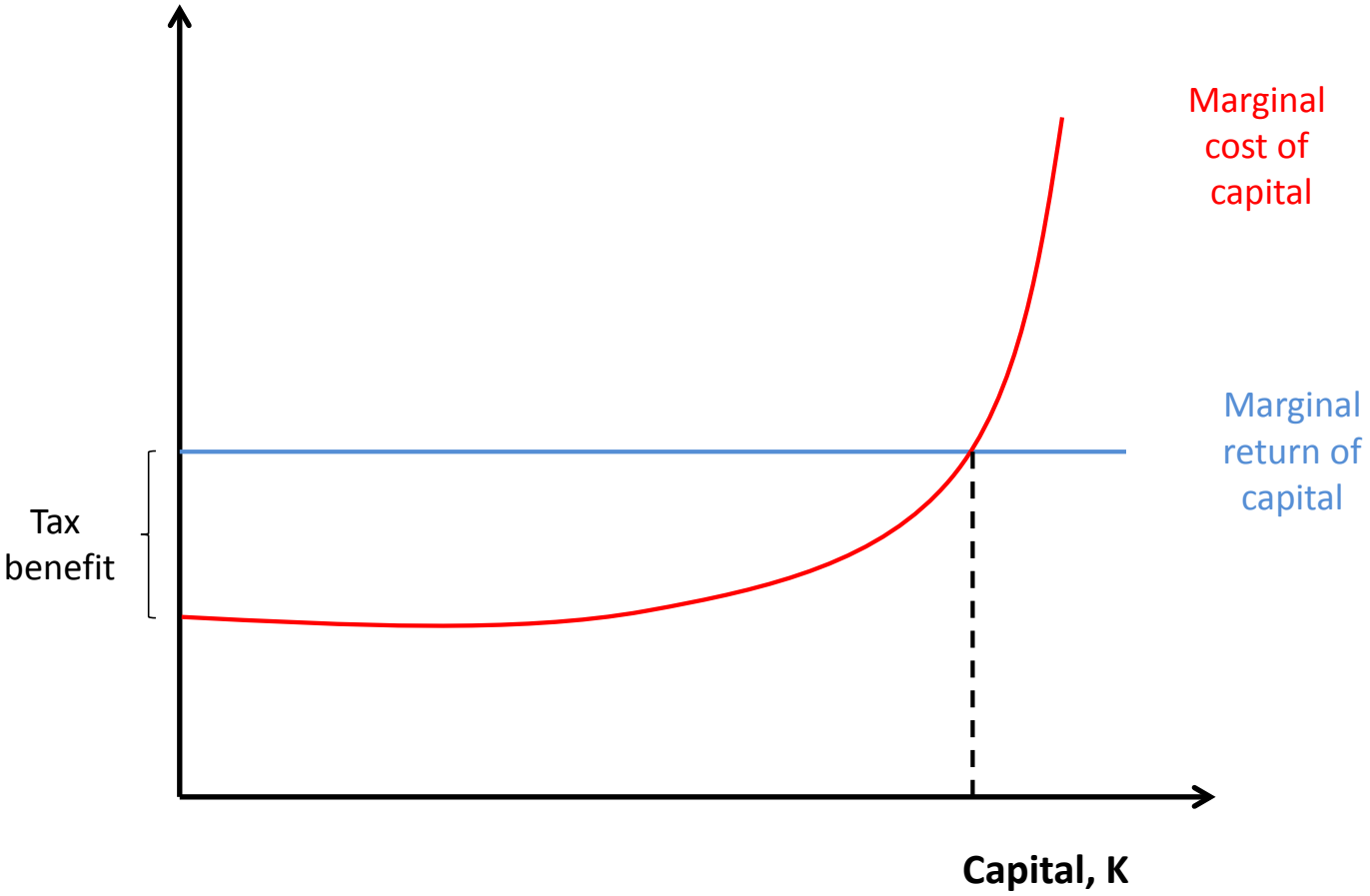
- My conjecture is that in the steady state with the optimal policy there is a higher stock of capital.

- If my conjecture is correct, the welfare calculations are not very informative.

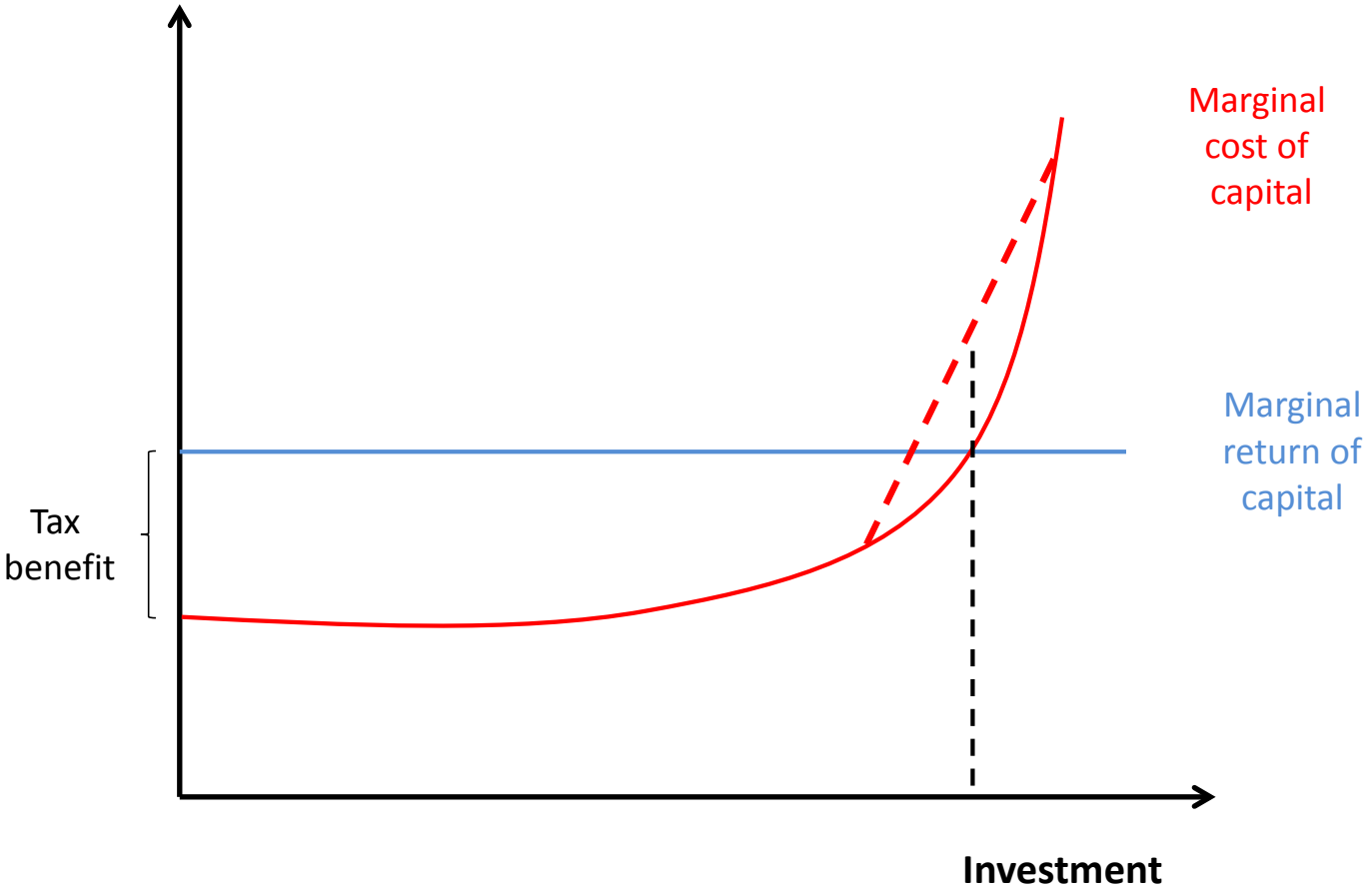
MODEL WITHOUT FINANCIAL FRICTIONS



MODEL WITH FINANCIAL FRICTIONS AND NONSTOCHASTIC COST OF FINANCING



MODEL WITH FINANCIAL FRICTIONS AND STOCHASTIC COST OF FINANCING



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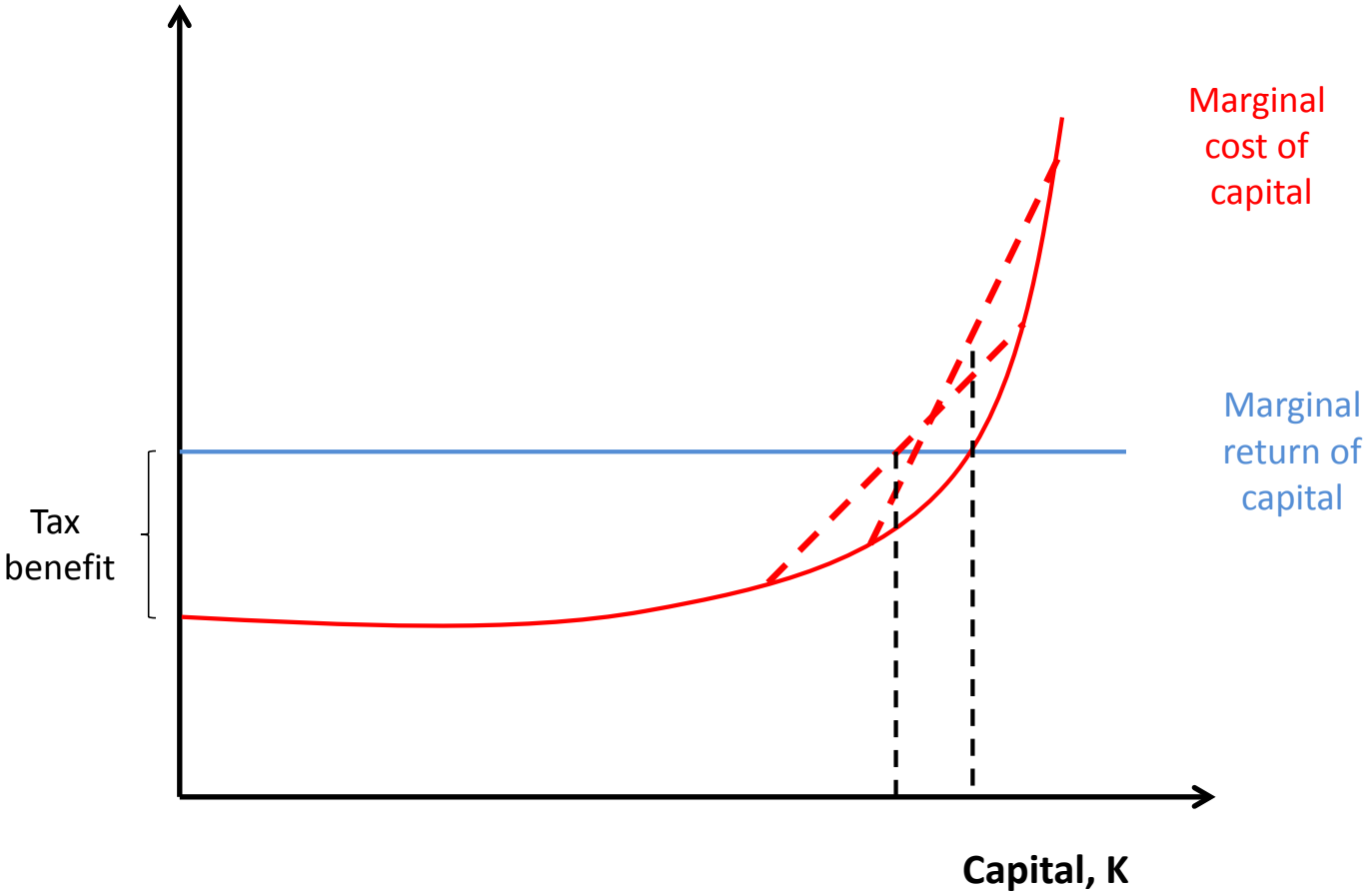
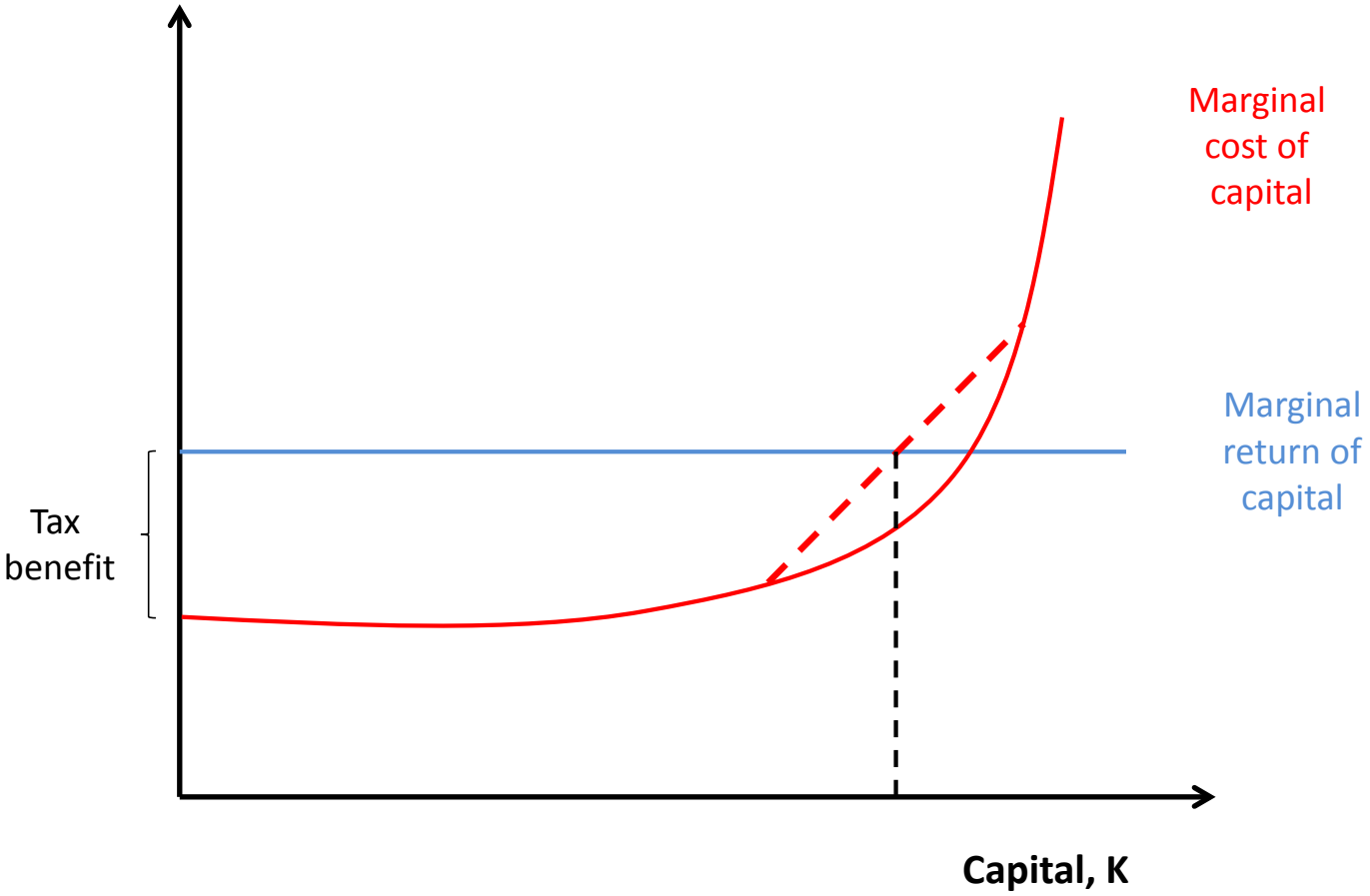


WHAT DOES THE OPTIMAL POLICY DO?

MODEL WITH FINANCIAL FRICTIONS AND STOCHASTIC COST OF FINANCING



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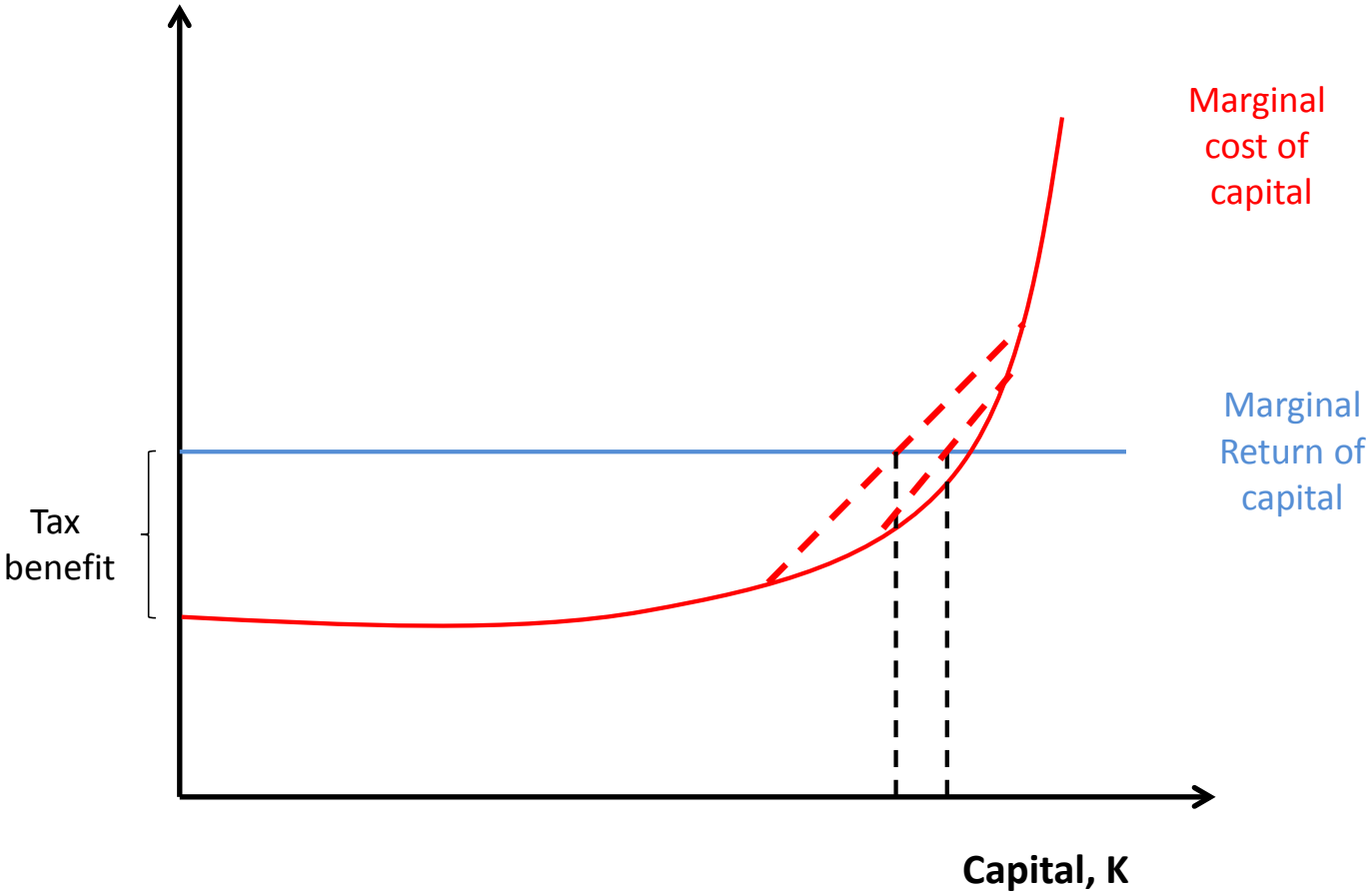


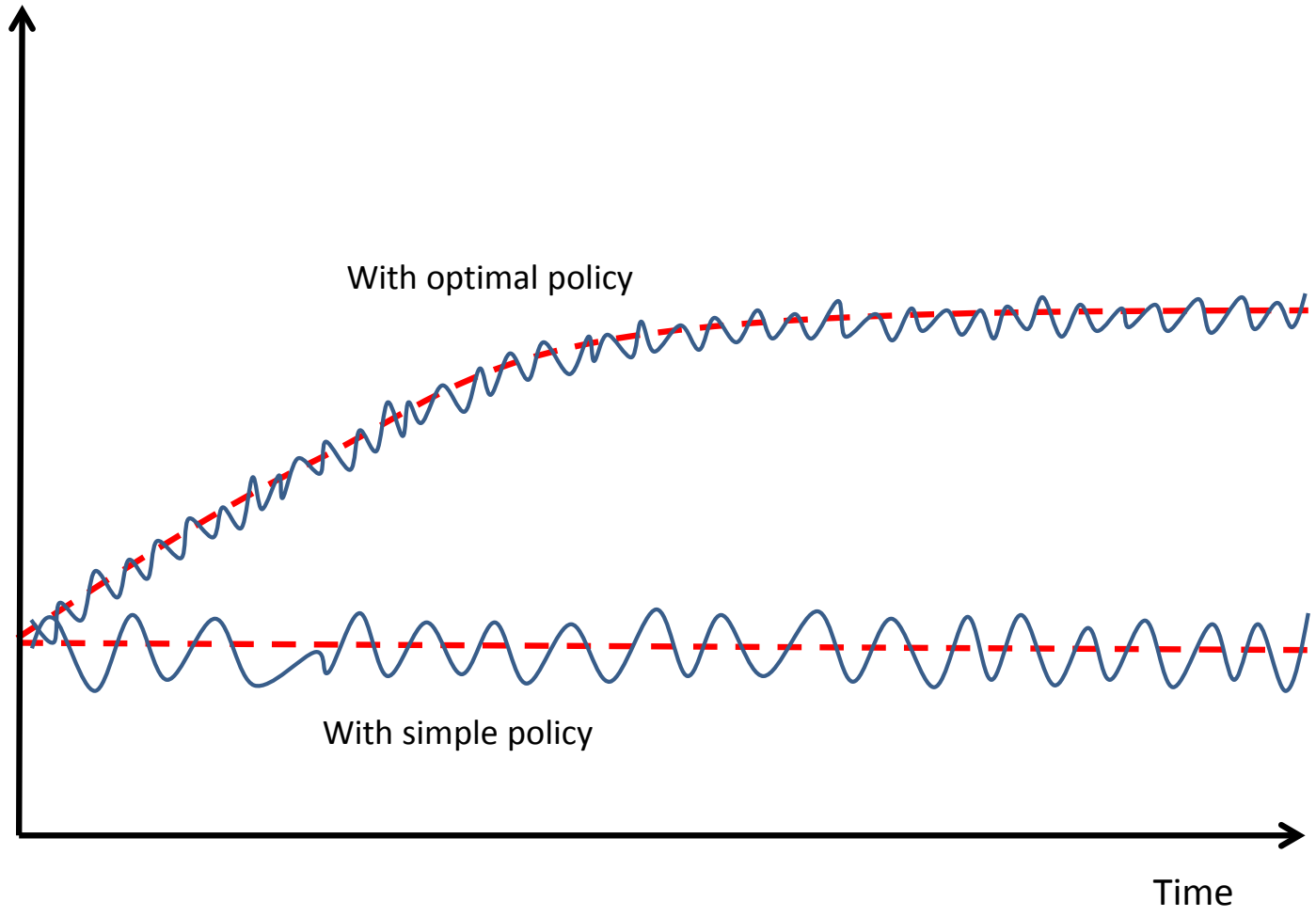
CAPITAL STOCK IN STEADY STATE (STYLIZED CONDITION)

$$\alpha K^{\alpha-1} = \frac{1}{\beta}(1-\tau)(1+p)$$

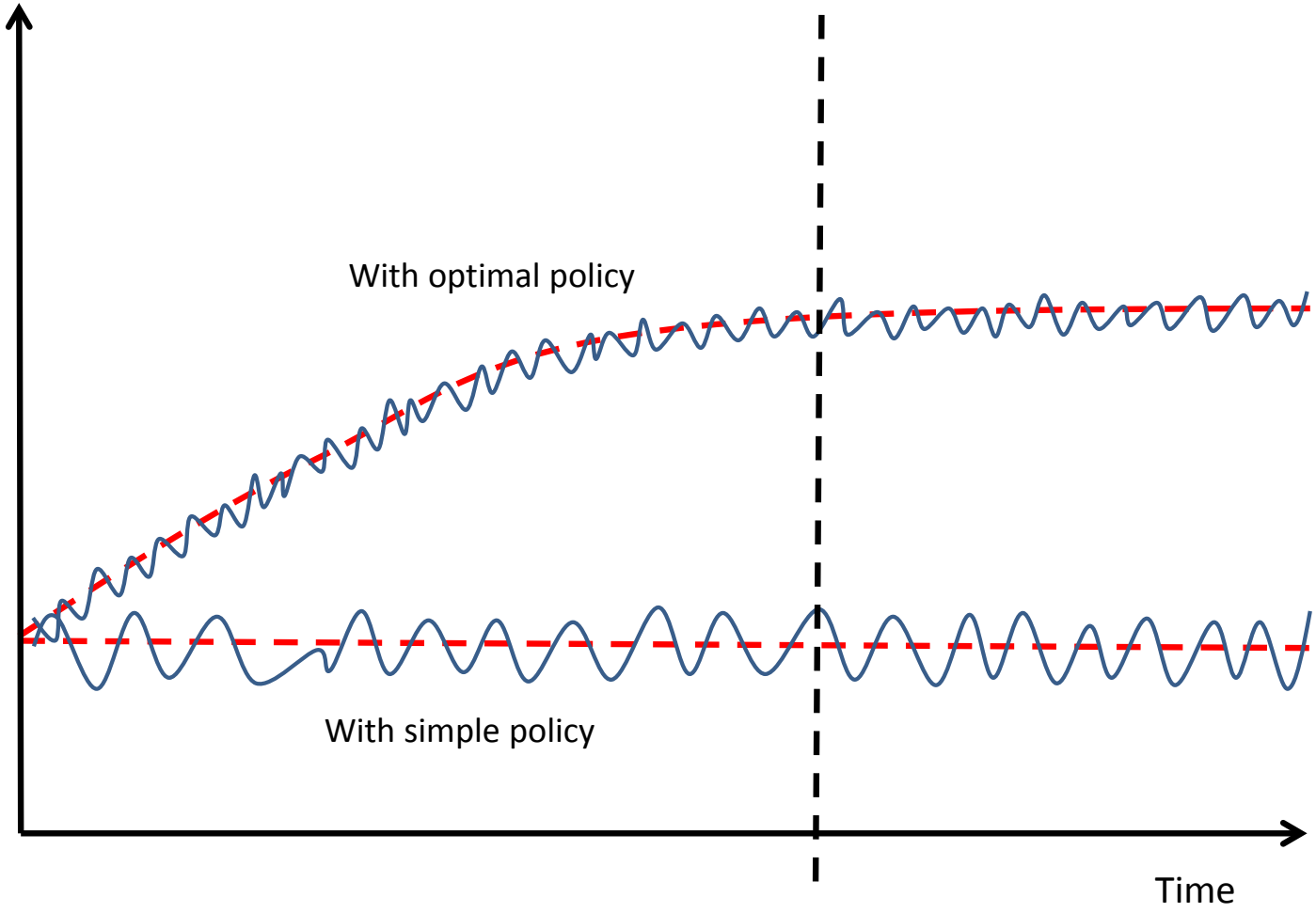
Marginal product of capital = Marginal cost of capital

- τ = Tax benefit of debt.
- p = Expected premium in the financing cost.

Sequence of output with and without optimal policy



Sequence of output with and without optimal policy



CENTRALITY OF THE INTERMEDIATION SECTOR

- Recent contributions have proposed new models with a more prominent role for financial intermediaries.

- In many cases, the new models simply relabel 'firms' as 'banks':
  - In previous models firms were facing financial frictions while the financial intermediation sector was frictionless.
  - In the new models firms are frictionless or fully dependent on banks but financial intermediaries face financial frictions.

- The current paper is part of these contributions:
  - Banks are similar to firms in the costly-state verification model.
  - However, banks pay negative dividends at a cost and this introduces precautionary investment.

QUESTIONS

1. What is the advantage of focusing on banks rather than firms?

2. If the collapse in economic activity derives from the lack of financing from banks, how can we reconcile the fact that nonfinancial corporations hold large stocks of liquid assets?

3. The counter argument is that problems in financial intermediation affect households, not firms.

MORE SPECIFIC COMMENTS

- There is no formal description of the Ramsey problem and its analytical properties.

- There is no information about the transitional dynamics in the implementation of the Ramsey policy.

- It would be informative to understand show the dynamics of Q (price of capital).

CONCLUSION

- Interesting paper.

- Clever modeling of the intermediation sector that keeps tractability.

- If my conjecture is correct, it would be very interesting to explore the impact of cyclical policies on the long-term level of the macro-economy (in addition to the business cycle implications).