

SUMMARY

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Most two-country models of international capital flows end up with a “bang-bang” equilibrium, in which the more patient country ends up with all of the capital, while the less patient country is left with nothing. By formulating the problem as a differential game, Professor Hamada and his collaborators were able to resolve the problem by creating an oligopolistic, instead of perfectly competitive, model of the international capital movements. The model can be used to show analytically that although a significant level of debt may develop between the more patient and less patient countries in equilibrium, both countries maintain a significant level of consumption and capital.

Professor Hamada and his collaborators also analytically proved a saddle-point stability of the equilibrium for the model. Thus my research was to discover, using computational methods, the extent to which the equilibrium is stable. In order to accomplish this, I built several of my own computational models for international capital flows from scratch.

I am grateful to the SRO program, which has allowed me to experience the work of mathematical economics first-hand. Professor Hamada was a wonderful adviser; he always made me feel welcome in the department and provided necessary guidance for my research. He was also a committed mentor, helping me learn about myself as an economist.