

博士論文要旨

**Empirical Analyses on Consumption CAPM:
Evidence from the U.S and Japan**

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Consumption-based asset pricing models (CCAPMs) have suffered from several empirical challenges. There are two main issues with consumption-oriented models. First, the risk aversion estimated within this model deviates largely from the reasonable range that is consistent with general common practice. Second, the model fails to explain the cross-sectional variation in stock returns. This thesis aims to solve these issues by using alternative consumption risk measures and providing an empirical analysis of CCAPMs using durable consumption and long-run durable expenditure data, focusing on the Japanese and U.S. stock markets. Chapter 1 summarizes the literature that attempts to amend the original CCAPM and describes the motivations and contributions of this research. Chapter 5 briefly concludes this thesis, states the limitations of the study, and suggests potential areas of future research.

Abstracts for Chapters 2, 3, and 4 are given below:

Chapter 2

Durable Consumption Risk, Stock Market Returns and the Japanese Business Cycle

Following the work of Yogo (2006), Chapter 2 investigate the role of durable goods in the consumption-based asset pricing model in the Japanese stock market. Durable consumption risk can capture variation in Fama-French (size and book-to-market sorted) portfolios, as well as market beta–sorted portfolio returns. The model is not rejected by a Hansen-Jagannathan distance or an over-identification test when using Fama-French and market beta–sorted portfolios. The estimated elasticity of intertemporal substitution with two different characteristic portfolios is close to zero, which is consistent with Hall (1988). In addition, durable consumption growth is closely connected to the Japanese business cycle, which explains why the model works well. These results imply that durable goods consumption risk in the limited participation model may better explain the Japanese stock market.

Chapter 3

Asset Pricing with Long-Run Durable Expenditure Risk: Evidence from the U.S.¹

¹ The contents of this chapter are based on Li (2019, Financial Research Letters, forthcoming)

Applying the model of Parker and Julliard (2005) to durable goods, this chapter investigates the relationship between long-run durable expenditure risk and cross-sectional variation of stock returns in a most highly developed capital markets: the U.S. A new finding is that the long-run durable expenditure model can obtain a reasonable risk-aversion parameter and estimate a smaller value than those obtained with the many novel models proposed in recent years. I find that durable expenditure risk over the long-run is countercyclical with U.S. recessions. Regarding multiple-period returns, durable expenditure growth over 14 quarters has an explanatory power of 70% and a risk aversion of 14.

Chapter 4

Asset Pricing with Long-Run Durable Expenditure Risk: Evidence from Japan

This chapter investigates the empirical performance of the model of long-run durable expenditure risk in Japan. I find that the estimated risk aversion is reasonable for the durable expenditure measured over the long-run horizon. The noise to signal ratio is lower for the future horizon of durable expenditure ranging from 2 quarters to 12 quarters, relative to the traditional consumption capital asset pricing model. The explanatory power of the durable expenditure calculated in both the Fama-MacBeth regression and nonlinear generalized method of moments is high. Further, there is an upswing in the long-run expenditure growth during the Japanese recession.