＜学位請求論文要旨＞

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Essays on Macroeconomic Fluctuations and Optimal Monetary Policy

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This dissertation investigates two main topics: optimal monetary policy and the sources of macroeconomic fluctuations. In the second chapter, the New-Keynesian (NK) model is theoretically extended introducing a new ingredient: the durable service market. In the subsequent chapters, the source of Japanese macroeconomic fluctuations are empirically investigated: the role and the source of news shocks on macroeconomic fluctuations in the Japanese economy in the third and chapter; the relationship between the Great Moderation and the labor market in the fourth chapter.

NK models have been extensively used in recent years to analyze the impact of monetary policy on business cycle fluctuations and to provide guidelines in the design of optimal monetary policy rules. In the second chapter, we extend the standard NK model introducing durables service market and investigate the role of the service price.

Econometric evidence suggests the existence of two dynamics in the U.S. housing market: (i) housing rental and purchase prices co-move positively in response to productivity shocks, and (ii) the purchase price exhibits much larger volatile movements than the rental price in response to the shocks. A standard NK model with nominal rigidity in the

production sector is inconsistent with these facts. The dissertation makes a significant contribution to the literature by demonstrating that the incorporation of a rental market into an otherwise standard NK model with durables and introduction of nominal rigidity in the rental market support our empirical findings.

In the second half of the second chapter, we investigate the inflation rate that should be set as the target for the central bank. Our main findings are as follows: First, even in cases where both service and production sectors are equally sticky, the user cost is more important than the purchase price, from the perspective of welfare loss. Second, in contrast to the situation in the economy that includes only nondurables, a temporary shock persistently influences output fluctuations. However, this does not mean that welfare loss increases as the degree of durability increases. Third, welfare is found to be a strictly increasing function of durability.

In the third chapter, we investigate whether the change in the future technology process, so-called "news shocks," is the main contributor of the macroeconomic fluctuations in Japan over the past forty years. In this chapter, we take two structural vector-autoregression (SVAR) approaches to answer this question. First, we quantitatively evaluate the relative importance of news shocks among candidate shocks, estimating a structural vector-error-correction model (SVECM). Our estimated results suggest that the contribution of the TFP news shocks is nonnegligible, lying among the previous works. Furthermore, we disentangle the source of news shocks by adopting several kinds of restrictions, and find that news shocks on investment-specific technology (IST) also have an important effect. Second, to minimize the gap between SVAR approach and Bayesian estimation of a dynamic stochastic general equilibrium model, we adopt a new approach: SVAR with sign restrictions. The SVAR with sign restrictions reconfirms the results that the news shocks are important in explaining the Japanese macroeconomic fluctuations.

In the fourth chapter, we examine the changing dynamics and sources of volatility of the postwar output growth in Japan. We document two major facts in the postwar Japanese business cycle: (i) the Great Moderation phenomenon occurred in Japan in the middle of the 1970s, but was not persistent with some volatile movements of output from

the late 1980s to the early 1990s and in the late 2000s; and (ii) the correlation between labor input and productivity has been negative overall. To find the source of output and labor input behaviors of the postwar Japanese economy, a time-varying VAR with drifting coefficients and stochastic volatilities is modeled in line with Gali and Gambetti (2009). We find that technology shocks are responsible for significant changes in the output volatility throughout the total sample period while the volatility of labor input is largely attributed to nontechnology shocks.