Thesis Abstract

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 *Office use only
 Name:
 Laura Britt Fermo

 Number:
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 *Office use only
 Name:
 Laura Britt Fermo

 Title of Thesis:
 HETEROGENEITY IN THE INFLUENCE OF MONETARY POLICY: AN EMPIRICAL ANALYSIS
 FOCUSED ON THE PHILIPPINES

Summary of Thesis:

Monetary policymakers are concerned with how much influence they can exert over market interest rates. Looking at how far and when relevant market interest rates are deviating from policy rates provide us with a perspective of how the degree of influence of the central bank's main policy rate over market rates change over time and, if there are periods of divergence found, an understanding of what factors are causing this divergence. It is generally well accepted that the degree of influence of central banks on market interest rates is a reflection of central bank choice between several monetary policy objectives: monetary independence, exchange rate stability, and financial openness—the degree of attainment of which vary significantly across different policy frameworks, between different stages of development, and over time. In addition to this, more recent literature have come to realize that how much the central bank policy rate can influence market interest rates could as well be driven by financial market characteristics. Hence, given that different factors affect the degree of influence of monetary policy in the economy, then it is reasonable to expect that there will be heterogeneity in the response to this influence: heterogeneity across different economies because of differences in monetary policy objectives and financial market characteristics, and heterogeneity in the response of different banks in terms of growth in bank lending and bank lending rates being the main sector by which monetary policy interest rates affects the rest of the real economy, especially in consideration of the new financial environment brought on by the recent global financial crisis.

In the first chapter, we take a closer look at the policy rate divergence of the ASEAN-4 economies: the Philippines, Indonesia, Malaysia and Thailand. In this chapter, we utilize a Markov-type regime-switching regression (MS Regress) with time-varying transition probabilities empirical technique. Our empirical findings confirm that the policy rate divergence in the ASEAN-4 economies is indeed regime-switching, and the switching is best depicted to occur within a two-regime specification. In addition, because the indicators we have tested in the estimation significantly drive the transitional probabilities, we establish further that this regime-switching is time-varying as well. The MS Regress model allowed us to conduct a deeper investigation, by testing empirically what are significant determinants of the switching probabilities from one regime to the other, and in the end enabled us to identify and characterize the drivers of the transition probabilities themselves. We were hence able to test and, with a robust specification and methodology, determine how attractiveness and sensitivity factors figure into the transitional probabilities of the regime-switching rate gap. We then proceed with a more in-depth analysis of these determinants, as well as the associated monetary policy, macroeconomic, and external developments in the context of the Trilemma principle which have occurred across the ASEAN-4 during both the low rate gap periods and high rate gap periods that could explain both the similarities (within each subgrouping) as well as the heterogeneity in the timing and

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magnitude of the rate gap across the four economies. The focus and main contribution of this study is that for four small, open emerging market economies of the Association of Southeast Asian Nations (ASEAN), the gap between policy rates and market interest rates follows a Markov-type regime-switching process. In addition, the study finds that some domestic financial market characteristics—particularly the degree of foreign ownership of the relevant money markets, and global factors that drive foreign risk-taking and search for yield—particularly indicators of global risk perception, are the significant determinants of the transition probabilities.

In the second chapter of this study, we again estimate empirically the policy rate divergence in the Philippines and the three other members of the ASEAN-4: Indonesia, Malaysia and Thailand in order to corroborate our results in Chapter 1 of the study. We established that even in consideration of the volatility in the rate gaps and utilizing MS GARCH with conditional variance technique as an alternative methodology, we still find that there is, in fact, regime-switching in the policy rate gaps of these economies. We discover as well, that even with their similarities, empirical results indicate that the region is not a homogenous set in terms of the timing and magnitude of the policy rate divergence. Via events analysis, we also identified graphically the variables that appear to drive or trigger the transition probabilities of the regime switches. In particular, in this chapter we were able to establish that the regime switches in the ASEAN-4 are associated closely with global risk perception indices, corroborating the same result in the first chapter, and Trilemma index changes.

In the third and final chapter, we examine the influence of monetary policy in the Philippines at the micro level, and evaluate it in terms of the response of bank lending growth and bank lending rates on the Reverse Repurchase (or RRP) Rate, the main policy instrument of the BSP. We use data at the individual bank level in order to establish heterogeneity in banks' response to monetary policy and the business cycle. Using Panel Data Estimation, we estimated regression coefficients for monetary policy rate changes, changes in macroeconomic indicators (real GDP growth and inflation), bank characteristics including indicators for size, liquidity and capitalization as explanatory variables, as well as the interaction variables between the monetary policy variable and these macroeconomic indicators with the five bank characteristics we have chosen to study. More importantly, we also include in this empirical exercise a dummy variable denoting bank affiliation or holding status as an interactive variable with the monetary policy indicator and the macroeconomic policy variables. We conducted the estimation for all 20 banks in the sample, as well as for 10 domestic banks and then 10 foreign banks in the subsample.

In almost all specifications the response of bank lending growth and lending rates to the monetary policy rate is significant and with the signs of the estimated coefficients being as predicted by theory, but for domestic banks only if taken into the empirical model as an interactive variable with the dummy indicator for the low rate gap periods, or the periods when monetary policy has the highest influence on market interest rates based on Fermo (2016). When taken alone, the RRP rate is a significant determinant of bank lending growth and bank lending rates only for the sample of all 20 banks and for foreign banks. In the case of domestic banks, however, we found a few specifications where the monetary policy variable was insignificant in explaining bank lending growth. Nonetheless, the interactive variable between the chosen monetary policy indicator and the dummy variable denoting the low rate gap regimes were significant in all specifications for the 10 domestic banks. There are several interactive variables between bank characteristics and the dummy variable denoting foreign

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ownership, denoted as DH, whose coefficients are positive and significant—evidence that there is heterogeneity in the responses between the categories of foreign banks versus domestic banks. A comparison of the other results for the panel estimation of 10 domes-tic banks with the results for 10 foreign banks on bank characteristic variables and interaction variables further attests banks on bank characteristic variables and interaction variables further attests to our finding that there is heterogeneity in the response of banks to monetary policy and to other macroeconomic variables. Based on our results, we found that domestic banks are generally more responsive to bank characteristics and their interactions than foreign banks. Many of our interactive terms, however, are significant but negative—indicating that several of the bank characteristics we have considered in this study amplifies rather than shields the impact of monetary policy and the business cycle on bank lending growth and rates—a result that is in contrast to what is commonly found in the existing literature. The main policy rate is a positive and significant variable as well for all specifications. Meanwhile, the interaction variable with the dummy for low rate gap periods do not matter for the setting of foreign banks' lending rates. The inflation rate is significant under all specifications and in the three different sample of banks we have estimated. Real GDP growth, however, is a positive and significant variable for the setting of both low and high quoted lending rates of foreign banks, in the case of domestic banks this variable is not a consideration in the setting of both lending rates.