ESSAYS ON BANK RISKS: THE CASE OF PHILIPPINE BANKS

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Summary

Banking supervision has evolved from regulating individual banks to promoting the soundness and stability of the whole financial system. Meanwhile, bank risks continue to dynamically change over time. Hence, bank supervisors should be able to thoroughly understand the risk dynamics of banks and develop more risk-based prudential regulations. While there are several research on bank risks, many of them cover financial institutions in advanced economies. This dissertation contributes to the limited literature on bank risks in developing countries. Additionally, we employ quarterly bank-level data to provide more granular analysis of bank risks than previous studies did.

In the first analytical chapter (Chapter 3) of this dissertation, we examine the sensitivity of daily bank stock returns to changes in domestic interest rate, foreign interest rate, and exchange rate using generalized autoregressive conditional heteroskedasticity (GARCH) models and model averaging techniques. Our results indicate that the mean and the variance of Philippine bank daily stock returns seem to be sensitive to US interest rate risk and exchange rate risk between 2006 and 2013 (crisis period) but not between 2014 and 2018 (normal period). In addition, fluctuations in US interest rate and exchange rate seem to contribute to the high volatility of daily bank stock returns during the global financial crisis period (2007 to 2009) as illustrated by GARCH-based indicators in Section 3.6. Moreover, the different sensitivities of stock returns between sub-periods

indicate that US interest rate and exchange rate risks of Philippine bank stocks are changing over time.

Furthermore, we investigate the effect of changes in US interest rate on quarterly bank income using linear panel model and find that the profitability of Philippine universal banks seems to be also sensitive to US interest rate risk. Hence, these results suggest that Philippine largest banks tend to be vulnerable to US financial markets and US interest rate risk seems to be an important risk exposure of Philippine universal banks.

In the second analytical chapter (Chapter 4) of this dissertation, we examine the microeconomic and macroeconomic determinants of non-performing loans (NPL) across six loan categories in the Philippines using instrumented dynamic panel models. Our results indicate that all NPL types tend to persist over time. In addition, bank-specific characteristics and macroeconomic conditions are likely to affect agricultural and SME NPLs (mandatory loans), while only macroeconomic factors seem to have an impact on corporate and consumption NPLs (regular loans). In particular, cost-inefficient banks tend to have higher agricultural and SME NPLs indicating that the loan quality of these two mandatory credits is associated with operational inefficiency. Additionally, rising unemployment rates seem to increase agricultural NPL. Furthermore, highly capitalized banks tend to have more agricultural NPL implying higher credit risk for agricultural loans. Meanwhile, higher SME NPL is associated with tighter credit standards. In addition, rising GDP growth rates are likely to contribute to higher SME NPL and the impact tends to last for a long period. These findings suggest a deterioration in SME loan quality and a possible credit risk build-up in SME lending segment of banks along with Philippine economic progress. Similarly, higher GDP growth rates tend to increase corporate and

consumption NPLs (regular loans). However, microfinance and housing NPLs seem to

be not sensitive to macroeconomic developments.