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EXAMINING THE LIQUIDITY RISK OF ASEAN BANKS
BY USING PARTIAL ADJUSTMENT MODEL

KHALIL YAHYA MOHAMMED ABDO

MASTER OF SCIENCE (BANKING)
UNIVERSITI UTARA MALAYSIA
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EXAMINING THE LIQUIDITY RISK OF ASEAN BANKS BY USING PARTIAL ADJUSTMENT MODEL

BY

KHALIL YAHYA MOHAMMED ABDO
817740

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December 2016
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ABSTRACT

The aim of study is to examine whether ASEAN banks actively manage their liquidity or not and how effective the liquidity risk has been managed. Two liquidity measurements have been used, the first one is net stable funding ratio (NSFR) which indicates banks’ long-term liquidity buffer and the second one is the short-term liquidity ratio (SHORT). The study used annual data of 87 banks that operate in 6-ASEAN countries over 20-year period (1996-2015). Firstly, partial adjustment model is employed to examine whether ASEAN banks do have liquidity target ratios. The findings showed that the average estimated liquidity target for NSFR is 1.4936, and 0.6417 for SHORT. These findings confirm that ASEAN banks do have liquidity targets. Secondly, generalized method of moments (GMM) is employed to estimate the speed of adjustment of ASEAN banks towards their liquidity target ratios. The findings revealed that the adjustment speed for NSFR is 0.406 and 0.366 for SHORT, this implied that ASEAN banks adjust their NSFR quicker than their SHORT. Thirdly, GMM estimation method is used to examine the determinants of banks’ liquidity target ratios. The results showed that bank size was found positively related with NSFR and negatively with SHORT. Furthermore, equity ratio and asset quality negatively affected both NSFR and SHORT, while bank growth plan, funding cost and interest rate spread were positively influencing the liquidity targets for both NSFR and SHORT. In addition, GDP was found insignificant for both NSFR and SHORT. Fourthly, ordinary least squares (OLS) regression estimation technique is used to examine the determinants of ASEAN banks’ speed of adjustment towards liquidity. The results showed that the liquidity distance from target level (GAP) was positively related with the adjustment speed whereas bank size, GDP growth, and financial crises had negative impacts on the banks’ speed of adjustment. Lastly, OLS regression is used to examine the impact of speed of adjustment towards liquidity on banks’ profitability. The results showed that the liquidity’s speed of adjustment affected banks’ profitability negatively.

Keywords: ASEAN Countries; Commercial banks; NSFR; Short-term liquidity ratio; Liquidity management; Partial adjustment models: GMM; Speed of adjustment.
ABSTRAK


Kata kunci: Negara ASEAN; bank perdagangan; NSFR; nisbah kecairan jangka pendek; pengurusan kecairan; model pelarasan separa; GMM; Kelajuan pelarasan
Dedicated to my wonderful mother who could not see this thesis completed. There’s nothing that I value more than your love, the world classifies you as dead but my heart classifies you as immortal.

May ALLAH (SWT) grant you the highest rank in paradise.
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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The recent line of banking theoretical literature emphasizes the role of banks in creating liquidity on the base of financing long-term assets with short-term liabilities. However, the heavy reliance on short-term sources of funds has exposed banks to liquidity risk that was very clear over the global financial crisis 2007-2008. Banks in many countries experienced liquidity shortages because of the turmoil of wholesale bank funding markets. The most vulnerable banks in US banking system were heavily affected to the extent that these banks found themselves unable to renew their borrowing. This segment of banks and other financial institutions have suffered big losses on their investments in the subprime market that leads to illiquidity and which necessitated government support (Acharya & Merrouche, 2013; Brunnermeier & Pedersen, 2009; Cornett, McNutt, Strahan, & Tehranian, 2011; Huang & Ratnovski, 2011; King, 2013).

In response to that crisis, the Basel Committee on Banking Supervision (BCBS) has developed the third record "Basel III" to strengthen the existing capital requirements and to cope with the illiquidity issues and funding unrests arose during the crisis. By introducing the new record, BCBS aimed to address deficiencies of Basel II that was adopted in 2004 which was structured around imposing capital requirements based on three
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