University of Zurich[UZH]

Department of Banking and Finance

The impact of SNB's interest rate policy on the profitability of Swiss banks

Master's thesis

Chair of Banking
Prof. Dr. Steven Ongena

Author:	Alexander Bucher
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Executive summary

I Problem statement

The economic environment in which Swiss banks are operating in today becomes more and more difficult. On the one side, technological and regulatory enhancements lead to an increased investment demand. On the other hand, Swiss financial institutions have increasingly to deal with the uncertainties of the recent accommodative monetary policy of Switzerland's central bank SNB. The ease in monetary policy since the outbreak of the financial crisis of 2007/2008 is based on the immense appreciation of the Swiss franc and a general decline in interest rate levels in the western hemisphere.

II Aim of research

The conceptual framework presented within this thesis that aims to explain profitability effects after interest rate changes corresponds to the credit model by Stiglitz and Weiss (1981). According to their argumentation, lower interest rates affect the external finance premiums of their borrowing base. Under the assumption that banks will not lend within a range of decreasing marginal returns, decreasing interest rates result in lower revenues for banks. In this respect, the theoretical framework presented by Borio, Gambacorta and Hofmann (2015) conceptually links the relationship between monetary policy and profitability to four different refinancing effects that allow a bank to generate profit growth after interest rate increases.

This thesis therefore examines whether the mentioned conceptual theories can be verified in existing data for Swiss financial institutions, and in this respect attempts to update the profitability determinants of the current Swiss banking sector. This study is particularly dedicated to analyse the potential existence of a positive relationship between short-term interest rate changes and return on average assets, as well as net interest margins in the period between 2009 and 2016, respectively.

III Methodology

In order to comprehensively illuminate the described research question, the relevant and corresponding academic literature as well as the current state of research in the field of bank profitability will be illustrated in detail.

The data for the empirical models estimated in this thesis stems mainly from the data source provided by SNL Financial which analytically covers the financial situation for the largest Swiss banks. Additionally, the author of this thesis enriches the existing data by collecting data for smaller banks that are not covered in the stream provided by SNL Financial. From this process, 635 additional observations resulted which were then manually added to the overall data sample. This work's empirical model setup is characterised by violations of classical regression assumptions. In order to enhance the statistical legitimacy, the author of this thesis applies the so-called two-step GMM approach developed by Arellano and Bover (1995). This estimation methodology achieves an optimal trade-off between the number of observations in the sample and the levels of instrumented lags which are incorporated in the said model to account for endogenous regressors.

IV Results

The findings of the conducted regressions are proposing that interest rates have an impact on performance measures of Swiss banks. However, as the corresponding SARON is positively correlated with the stated profitability indicators, the observation of the CHF 3m-Libor shows a different pattern and has a negative effect on the profitability of the analysed Swiss banks. Long-term interest rates in the form of 8y-yields on Swiss Confederate Bonds also affect performance measures of Swiss banks positively, which is not necessarily explainable by existing theoretical concepts. Performance in general is chiefly explainable by lagged realizations of the dependent variables and the interest income shares. However, some control variables affect the profitability of banks sporadically.

The findings of this thesis reflect the current academic debate as there exist studies that propose both, negative and positive correlation between bank performance and interest changes, respectively. Nevertheless, there is a strong need for further clarification of this effect in Switzerland, as banks should be fully aware of their profit determinants in order to conduct proper risk assessments.