Risk Management for Life Insurance Contracts

Master Thesis

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Field of Study: **Management & Economics**

Submitted: **01.12.2017**

Abstract

Swiss insurers are currently facing a period of low returns on investments and potential losses going forward that have been brought about by a period of persistent low interest rates. Low interest rates have affected the profitability and sustainability of guaranteed life insurance contracts that are the traditional form of life insurance offered in this market. Guaranteed life insurance is a popular investment instrument in the Swiss insurance market because of its tax-free status and the stable long-term savings prospect it offers. This product distinguishes itself by offering a guaranteed interest rate over the duration of the life insurance contract.

The Swiss Financial Market Supervisory Authority (FINMA) sets a maximally allowed technical interest rate which it periodically adjusts. This technical interest rate is the regulatory body uses to regulate the product design and pricing of guarantee life products (FINMA, 2016, June 22). The current rate highest possible interest rate of 0.05 however is simply not workable for insurance companies. This low interest to negative interest rate environment impacts these products.

This thesis will seek to present the details of the impact the current low-interest environment is having on the Swiss life insurance sector. An empirical study will be used to model the Swiss life insurance sector during time periods where different interest rate environments were experienced as we monitor how the market performed. Based on the findings from the current state of the life insurance market we will then present and compare alternative products from a risk management perspective as our recommendations for the various stakeholders in the market.

The following hypothesis will be tested: The profit margins of a life insurance company and the general health of the life insurance market suffers during a low interest rate environment. On the other hand, a customer will be more willing to buy a life insurance with

a higher guaranteed return compared to a prevailing long-term interest rate of the market. These contrasting theorems will be discussed under the utility of the customer. An empirical study will also be carried out to further investigate the topic of our study. The data used for the purposes of this study will be data provided by Zurich Underwriting as well as data from the SMI and different funds. The thesis was contributed to by the Product & Proposition Management Life Team at Zurich Insurance Company.