# Report on Diploma Thesis

*Topic:* **Determination of Credit Risk for Dept Assets Portfolio**

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Diploma thesis of the student Yuan Tian concentrates on determination of credit risk. A well-functioning banking system and stable banks are an important prerequisite for economic development in each country. In recent years, several major banks in the world went bankrupt and many others fell into financial difficulties and so stronger focus is given on economic capital and on methods of setting a capital requirement for covering unexpected losses from credit risk in banks. The determination of credit risk is a very timely and useful topic and also corresponds with the topics of diploma thesis at the Department of Finance.

The main objective of this thesis is to determine and then compare the value of regulatory capital requirement for unexpected losses from credit risk under Basel agreements, including Basel I, Basel II, and Basel III, and the value of economic capital by using the CreditMetrics™ model.

Diploma thesis is divided into five main chapters, where first chapter is introduction, second and third chapters are theoretical and methodological, chapter fourth is the application part and the last chapter is conclusion.

Second chapter is concentrated on description of the financial risk. First, the author describes credit risk including types of credit risk, factors affecting credit risk and fundamental differences between credit and market risk. Then attention is paid to description of market risk, liquidity risk and operational risk.

The chapter third is devoted to description of the credit risk management and models. In the first part of this chapter are described fundamental models of credit risk management. Then significant part of this chapter is focused on description of CreditMetrics model, that can be used to calculate the economic capital. The last part of this chapter is devodet to description of models based on the Basel Capital Accord, that is used to calculate  the regulatory capital requirement for covering unexpected losses for credit risk by banks.

The most important part of the diploma thesis is the chapter fourth. In this practical part is calculated the economic capital and the regulatory capital requirement for covering unexpected losses for credit risk on a portfolio consisting of ten selected bonds traded on the Frankfurt Stock Exchange. The obtained value of economic capital calculated by CreditMetrics when the confidence level was at 99,9% was very similar to the value of regulatory capital requirement calculated by standard approach under Basel II.

The thesis is processed on an excellent level of expertise, including conclusions and graphical presentation. It is important to appreciate that the author tried to work independently. Because the main aim of this thesis has been fulfilled and author also respects the formal guidelines, **the diploma thesis can be recommended to defense.**

In Ostrava, 5th May 2016
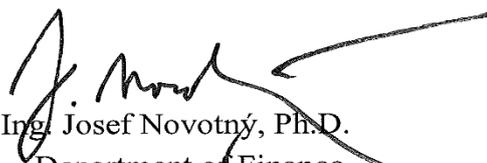
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