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DISSERTATION THESIS REPORT

Topic: **AssetDividingAppraisal Model (ADAM) – Direct Real Estate Investment Evaluation**

Author: **Dipl.-Kfm. CartenSchäfer**

The present work deals with the evaluation of direct investments into real estate. The author progresses logically and methodologically. He begins with an overview of the current state and the methods used, with a focus on Germany and the Czech Republic. He is factually correct while evaluating and comparing various approaches, looking for their differences. Then he sets hypotheses and indicates the scientific methods and procedures applied. He creates his own unique model – ADAM – and uses it for testing the hypotheses. After the theoretical part, he demonstrates on two case studies the practical benefits of his model. At the end, he evaluates the hypotheses and suggests further directions of research in his chosen field.

The work is based on current scientific knowledge. Extensive literature search captures well different trends and methods which differ mainly geographically. In several places, the author correctly notes that under certain conditions all methods lead to the same result; however, the question remains whether we can always obtain all the needed input data. Furthermore, there is one idea that goes beyond the topic of the thesis and is not as widely accepted as the author claims. I mean how to perceive discount rate and the need for perfect capital market – page 38 and onwards. I will get back to it later, in the context of questions to be discussed.

The doctoral student precisely and correctly defined the issue to be examined and presented the solution to it further in the thesis. On page 3, he first briefly shows that basically two main approaches are possible. He continues with analysing them in detail, comparing them, detecting their strong as well as weak points. In this way he lays foundations for setting up the goal of the thesis.

In the fifth chapter the author describes what scientific methods he will use and why. Then he specifies what qualities the model ADAM designed by him should have and how he will approach the model creation. The seventh chapter brings a broader discussion on the methods applied, with the author´s explanations why he chose particular methods for particular parameters of the model, and comments as to whether a specific method has been suitable for the author´s intentions. In this context I appreciate the author´s orderliness and precision.

I have already mentioned several times that the thesis contains the author´s own ADAM theoretical model for the evaluation of direct investments into real estate. With help of the hypotheses, the author tests what input parameters are of key importance for the final evaluation, whether the parameters are interconnected, and, if so, how this interconnection works. The possibility to evaluate separately the building and the land is also of key

importance in the CR, although with the amendment of the Civil Code, our legislation gets harmonized with common practice in Europe.

Regarding the technicalities of the work, I have a few observations that in no way belittle the quality of the thesis, though:

- A quotation covering nearly nine pages (page 15 and onwards) makes the text unnecessarily heavy; in addition, the author kept the original hyphens in it.
- Instead of *PV* in the formula 4-1, should not there be *LV*?
- In the formula 4-4, I would rather expect NY_i than *NY*, and also NY_b instead of NY_i.
- Similarly in the formula 4-5, there should be perhaps D_n instead of *D*?
- I have not managed to find in bibliography the link with page 40(Schäfer,2012).
- In several places, there is "und" instead of "and".
- There is the same whole paragraph once on page 73 at the bottom, and again on page 74 on the top.
- As compared to other parts of the thesis which are very precise, the description of statistical distributions 7 is too brief in the chapter 7, almost misleading. In the same part, there is often no identification of axes in the figures (figure 28 and the following).
- What is the relation between the equations 7-7 and 5-8, is it just the question of confused usage of capital versus small letters?
- The purpose of the eighth chapter is not clear, neither how the author used it.

In the next section, I present the questions for discussion:

1. What will be the difference, both methodological and factual, if I compare using either the real estate local returns and local sales revenues or the expected cash flow and required returns, with the appropriate level of risk?
2. Could the author explain how he came to the modification in the formula 5-6 on page 58?
3. Often times the economic life has been identified with the lease duration in the thesis, why?
4. The sign ∂_T, is used in the formula 7-11 on page 96, second line; is it possible to explain its meaning and also why the author did not carry out partial derivation?
5. In the simulation on page 97, the author used normal distribution for the variables *p* and *z* which means that he admits even negative values of these parameters. Would it be possible to use e.g. lognormal distribution?
6. Does the doctoral student share the opinion held by some (Engel, 2003), that the standard CapitalAssetPricing Model cannot be used for assets showing a negative correlation of returns with the returns of the market portfolio?

Given the above, the doctoral student has demonstrated his ability and readiness for independent creative work in research and development. I recommend his thesis to be defended before the relevant board for dissertation defence.

In Prague, May 26th, 2014
Prof. Ing. Oldřich Starý, CSc.