Report on **Master Thesis**

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague

Student:	**Bc. Sona Souckova**
Advisor:	**Tomas Jandik MA MSc MRICS**
Title of the thesis:	**Simulation of pension reform impact on Czech real estate market**

OVERALL ASSESSMENT *(provided in English, Czech, or Slovak):*

This thesis analyzes the potential impact of a Czech pension reform on property direct investment volumes in the country between 2013 and 2017. The hypothesis is that „the implementation of second pillar of Czech pension reform may have a positive significant impact on Czech commercial property market".

The thesis is split into two parts: (i) formation of second pillar and (ii) impact of second pillar on Czech commercial property market. Whereas the reader would assume that the latter section should deserve most attention, it was only covered on 28 pages relative to 40 pages devoted to the first part.

The bulk of the first part (chapters 1 – 4) is a lengthy and barely relevant discussion of pension system including Czech history as well as foreign experience. Some specific comments are as follows:

- Literature review is rather week and relies heavily on a few sources such as (Lloyd-Sherlock 2010) and (Dobesova 2006).
- Some referrences are not properly described (Souckova 2010), which raises the question whether they are the primary research sources.
- Graphs on pages 35 – 40 miss a uniting story and rational for being presented. Although information provided is intuitively important, there is a lack of analysis and sub-conclusions.
- Part 2.4.4. (dealing with pension fund regulation) is likely very relevant to the thesis. A good thesis should go deeper in this respect and discuss the impact in more detail.
- Foreign experience as a unique chapter is not helpful and does not target well the individual analytical inputs into the calculation.

End of the first part of the thesis – chapter 5 – suddenly presents some key initial inputs into the analysis, namely the participation share, number of PAYG contributors, average wage and contribution size. Quality of the anylzed inputs is diverse. Estimation of average wage, for instance, can be hardly disputed. Nevertheless, most of the sub-sections are too short to discuss how sensitive the cash inflows into pension funds are to these value drivers. Resulting tables 5.1 and 5.2, summarizing some key scenarios, offer well defined sub-conclusions of the thesis. Once again, discussion of risks influencing thesis scenarios would be much more useful at this place rather than the lengthy description of pension systems at the beginning.

Second part of the thesis takes the estimates of cash inflows into pension funds and concludes the simulation analysis with analysis of the real estate market. Some specific comments include the following:

- Section 6.1, specifying nature of real estate as an asset class, does not clearly conclude how property investment features relate to answering the hypothesis.
- The literature review is rather week. The student could have discsussed in more detail available research on risk adjusted return of property as part of a pension fund portfolio.
- There is a dubious statement that institutional investors don't use leverage in direct property acquisition, this is likely wrong and deserves more explanation.
- Categorization of investors into core, value-add and opportunity groups is very good although the reader will wonder whether it is her own view or whether this was stated in (Baum 2009).
- Czech Republic is benchmarked only to countries with high share allocation to real estate. Whilst this approach might be correct, it is not clear whether there is not a selection bias.
- Section 7.2 provides a very interesting and relevant review of selected countries (subject to comment above) with respect to percentage investment limits and real estate share allocations. Extension of this section would further improve the thesis.
- Section 8.3 is a lenghty way of showing that OLS method does not work for answering the hypothesis. The student should be ready to argue why only one determinant – GDP per capita – was analyzed to determine the real estate allocation share.
- Section 9.1. presents some key limiting assumptions to the thesis which also form the base for recommendations for further research. A good thesis should elaborate on these limiting assumptions and analyze their impact on presented conclusions. Specifically, more detailed work could have been done in the following areas:
  - Impact of the increased investment volumes on property prices,
  - Discussion of the impact of leverage and presenting some support for the level of 40 % used,

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- o Effect of releasing the constraint that pension funds can only invest in the Czech property.
- - Section 9.2.1 presents a simple forecast of property investment volumes in years 2013-2017. Linear growth trend was clearly used but specific percentage is not disclosed.
- - Section 9.2.2. concludes with impact of pension property investment relative to the forecasted property investment volumes. Chart very well depicts the forecasted effects for various percentage share allocation scenarios during 2013 and 2017 and thus answers the hypothesis. Still, discussion on sensitivity of this factor is purely mechanical without proper link to likely governmental policy.
- - Discussion on sensitivies of other key value drivers (other than percentage share allocation) is week or non existent and should be present in concluding remarks.

Manuscript form is average. Specific comments:

- - Formating of tables and alignment of lists and contents is of rather average quality,
- - A research diagram would help reader get around the research approach taken. This should be located just behind unspecified equation on page 19,
- - English is generally sufficient but non-academic wording is quite frequent (e.g. „...this thesis tries to estimate..."),
- - Some tables miss measurement units and useful sumation of presented partial data (e.g. Table 2.2),
- - In general, the thesis does contain all attributes with the caviat to quality described above.

In summary, the thesis does answer the addressed hypothesis and thus contributes to the research topic . It is heavy on description of pension systems, light on real estate specific analysis and fairly specific in addressing the tested hypothesis. Methods and literature review are both rather week, although these attributes are not critical for this type of master thesis. Manuscript form is about average.

In case of sucessful defense of the above comments, I recommend satisfactory grade („dobre", 3).

SUMMARY OF POINTS AWARDED *(for details, see below):*

CATEGORY		POINTS
Literature	*(max. 20 points)*	8
Methods	*(max. 30 points)*	8
Contribution	*(max. 30 points)*	18
Manuscript Form	*(max. 20 points)*	12
TOTAL POINTS	*(max. 100 points)*	**46**
GRADE	**(1 – 2 – 3 – 4)**	**3**

NAME OF THE REFEREE: *Tomas Jandik MA MSc MRICS*

DATE OF EVALUATION: *14 June 2011*

Referee Signature