

Report on Master Thesis

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

Student:	Ms. Thanh Tu NGUYEN
Advisor:	Tomáš Jandík, M.A., MSc., CFA, MRICS
Title of the thesis:	A forecast of Commercial Real Estate Development and Investment Volumes in the Czech Republic.

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

Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.

Contribution

The author tests three hypothesis using various forecasting techniques and with the following results:

H1: Between 2000 and today the Czech commercial real estate market went through an asset price bubble similarly like the housing market. Hypothesis was rejected and the author concludes that whilst housing market did go through two bubbles, prices of commercial real estate were proved to be fully supported by market fundamentals.

H2: The Czech CRE investment volumes have negative correlation with (i) change in price levels, (ii) change in unemployment rates and positive correlation with (iii) the change in 10-year government bond yields, (iv) the change in portfolio capital value index, (v) the change in interest rate spread and (vi) the change in consumer spending. Hypothesis was not rejected and the author concludes that these „expected“ relationships were „fully proven“.

H3: From 2017 to 2020 the Czech CRE investment volumes are expected to exhibit positive growth rates. This thesis was rejected by both qualitative and quantitative tools and the author concludes that despite 2018 investment volumes are not expected to reach the levels of 2017, the subsequent years should exhibit mild and gradual growth.

The above conclusions do contribute to academic research to a great extent, however, with some reservations:

- 1) First conclusion is generally surprising as there was a major price correction between 2007 and 2010, however, the definition of a pricing bubble as deviation from market fundamentals does provide possible explanation for the conclusion. In order to defend conclusions from her 1st thesis, it is recommended that the author explains other possible definitions of a “market bubble” and whether she believes that fundamental factors behind 2007 pricing were sustainable.
- 2) Second conclusion is relatively strange for points (i), (iii) and (iv) whereby the mainstream expectation would presume opposite correlation relationships then anticipated by the author. In order to defend conclusions of her second thesis, the author should focus on these three points, discuss the reasons for the direction of the presented relationships and differentiate between a correlation and a causality.
- 3) Third conclusion goes in hand with mainstream expectation of market practitioners and it is interesting to see that same conclusions are derived from forecast-based models. Major reservation to the selection of explanatory variables is the lack of „new completions“ of “new supply” by developers. This statistics is very well accessible and measurable and should be the usual suspect explanatory variable of investment volumes. Had been a structured questionnaire between market professionals carried out, it would have most likely confirm that the major slowdown of investment volumes is not macro-based but linked to the lack of investment opportunities and other limits on the micro level (e.g. slow permitting process). In

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order to defend her third thesis, the author should explain how the selection of explanatory variables was carried out.

Overall, the thesis, if properly defended, does provide good contribution to research. It should be also remembered that there is a lack of rounded academic research on the Czech real estate commercial investment market and most of the conclusions made by the author can be to a great extent pioneering conclusions.

Methods

Application of various research methods, and research approach in general, is a strong feature of this thesis. The author uses a combination of qualitative-based forecasts (peak tagging, judgmental forecasts) and model based forecasts (ARIMA, OSL, VAR models, impulse response analysis). Pro's and con's of different approaches are discussed. Whilst model-based forecasts are well analyzed and presented, judgmental forecast are largely limited to periodic or published corporate research brochures. Contribution of this work could be improved, if a structured questionnaire of selected market professionals would have been used. Despite subjective focus of this method, the relevance of certain findings could be tested. A few presented and casual relationships presented in „Table 3: Potential variables“, are surprising at best and need a proper review.

Literature

Literature review is done in a proper manner. Considering the practical nature of the thesis and a limitation to a relatively small submarket (real estate investment in Czech Republic) the author reaches out to review both practice-based corporate research brochures to theoretical papers dealing with application of model-based forecasts.

Manuscript form

Manuscript form is strong without reservations. Language of the work, division of chapters, referencing, cross-referencing, formatting and presentation of annexes is carried out thoroughly and in a proper research manner.

Summary and suggested questions for the discussion during the defense

Good piece of academic work combining quantitative and qualitative methods to draw some interesting and often pioneering academic conclusions in a relatively small and specific sub-market. As detailed above, it is recommended that for defending the proposed assessment, the author:

- 1) explains other possible definitions of a “market bubble” and whether she believes that fundamental factors behind 2007 asset pricing were sustainable (to defend her 1st thesis),
- 2) justifies findings presented in points (i), (iii) and (iv) of her second thesis, discusses the reasons for the direction of the presented relationships and differentiates between a correlation and a causality,
- 3) explains how the selection of explanatory variables was carried out to test her third thesis and how various micro-economic factors (new supply, planning restrictions, small market size, etc.) influence investment volumes.

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

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	24
<i>Methods</i> (max. 30 points)	28
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	20
TOTAL POINTS (max. 100 points)	92
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: Tomáš Jandík, M.A., MSc., CFA, MRICS

DATE OF EVALUATION: 10.9.2018



Referee Signature