Report on **Bachelor Thesis**

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

Student:	**Sander Belon**
Advisor:	**Vilém Semerák, Ph.D.**
Title of the thesis:	**Alleged Chinese currency manipulation: the case of the Yuan in relation to the USD from 2005 to 2020.**

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

Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.

Short summary

The thesis presents an attempt to evaluate the relative undervaluation of the Chinese currency. Besides a general overview of the discussions about misalignments (and currency manipulations) and previous research focused on China, the student presents his own estimates based on the application of the behavioural exchange rate model (BEER) for the years 1980/2005-2019.
Mr Belon has opted for a relatively ambitious econometric methodology, and I appreciate the tenacity with which he was trying to learn details relevant for a reliable application and interpretation of the VECM results and prediction of the equilibrium exchange rates. This can be a non-trivial issue in the presence of multiple cointegrating vectors. Unfortunately, he subsequently ran out of time, the thesis would have benefited from one or two additional weeks of editing the literature review and checking of the presented results (and of the form of their presentations).

Contribution
The main contribution consists in the attempt to estimate and present up-to-date estimates of the misalignments of Chinese currency based on newer (and hopefully better) data. This contribution is devalued by some questions about the reliability of results (see the section methods) for details. Another possible contribution can be found in the form of an updated literature review or in an accessible overview of the history of Chinese forex policies, for instance, the development of forex arrangments in 1980s. However, this contribution is again a bit weakened by simplifications made in the text, the literature review remains at a relatively general level too.
Some of the simplifications/omissions and confusing formulations found in the text:
- The historical part (section 2.1) glides over the rather specific economic features of Chinese centrally planned model (and the possible implications for the forex regime). This also causes that an uninformed reader will be puzzled e.g. by the sentence on quotas on p. 4 or the mention about the different types of transactions (p. 5-6).
- The brief outline of the plethora of concepts of equilibrium (real) exchange rates on p. 9 remains a bit vague: a diagram or more structured text would make the similarities and differences clearer.
- The author also claims that the FEER is too idealistic because it assumes full employment […] to calculate the internal equilibrium (p. 13). But that is a distorted and simplified description, this is how the concept defines internal equilibrium, it does not claim that normal economies actually achieve such a state.
- The introductory part of chapter 4 (p. 15) includes a strange statement on a real exchange rate based on multiple or two variables – when compared with previous sentences it seems that the author actually wanted to continue the discussion of multilateral/bilateral representation of equilibrium exchange rate, but later the author really mentions models with only two independent variables. Some additional editing would have been clearly helpful.
- A bit unusual description of the real effective exchange rate (REER) is provided on p. 16 (The REER is often utilised as a representation of the current exchange rate…), while in fact, a better explanation has already been provided on p. 15.

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- Final conclusion leaves the reader wondering whether the author really identified undervaluation or rather overvaluation (p. 34).

Methods

The author attempted a relatively ambitious (considering the fact that it is an undergraduate thesis) methodology. Analysis of misalignments requires the estimation of some equilibrium rate, in this case, the author opted for a BEER model. The actual estimation of the equilibrium real exchange rate is based on the use of Johansen co-integration tests and the vector error correction model (VECM). The methodology per se is selected correctly, quite a few authors had used similar methods (or even simpler Engle-Granger cointegration). The selected methodology has some disadvantages (a much more detailed multiregional model might be more suitable for some related research questions), but it can still be considered adequate for the topic (and quite ambitious for this level of study).

The implementation of the methodology and explanation of the results are a bit weaker, though. Besides some less important issues (typo in equation 5.3, p. 24), the reader is left in vague with respect to several important issues:

- the full output of the VECM is not provided in the appendix and as standard errors are not included in the simplified graphical version of the VECM (equation 5.3) for practical reasons, this important piece of information is missing altogether.

- the two cointegrating vectors and their parameters are not provided, the author jumps to the result (equation 5.4) but does not provide many clues on how this result was derived.

- how the author derived the final equation for the long-run relationship (equation 5.4)

And most importantly, the estimated real equilibrium exchange rate shows a systematic deviation from the original values of the real effective exchange rate throughout the whole sample. This is rather unusual (and indeed, it contradicts previously published results) and suggests that the predictions were calculated incorrectly.

All in all, it seems that the author managed to prepare the data and implement the VECM model relatively correctly but did not quite succeed in presenting the results and predicting the equilibrium real exchange rate.

Literature

The author provides a decent description of the development of the Chinese exchange rate regime (section 2) and of the logic of the most often used models of real equilibrium exchange rates, with an emphasis on the fundamental equilibrium exchange rate (FEER) and BEER. Relevant papers and main papers are covered reasonably well, although it would be possible to include also additional papers which presented the estimates of similar concepts on European transition economies.

Manuscript form

The thesis is written in relatively acceptable English, but some language issues (including inconsistent and sometimes even illogical capitalization – e.g. p. right in chapter 1: Introduction) and errors remained in the submitted version of the paper.

Some minor issues with figures and equations also survived into the submitted version of the text:

- Figure 2.1: The title promises USD/CNY exchange, while the chart appears to depict the reversed (CNY/USD) series.

- Equation 5.2 (p. 19) – very simplified, includes neither subscripts for time indices nor random component.

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On the other hand, the paper is relatively logically structured, and the author also provides lists of tables, figures, and acronyms; a brief appendix with additional results is provided, but unfortunately, it does not include detailed results of the VECM estimation.

Overall evaluation and suggested questions for the discussion during the defense

The results of the Urkund analysis do not indicate significant text similarity (1% score) with other available sources.

In my view, in spite weaker quantitative results, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade C"

Questions for the defense:

1. Please describe the current foreign exchange regime of Chinese currency, compare the regime used for the CNY with the regime used for the Hong Kong dollar.
2. Please explain why the FEER approach is "often argued to be normative" (p. 10).

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

CATEGORY	POINTS
Contribution (max. 30 points)	21
Methods (max. 30 points)	18
Literature (max. 20 points)	17
Manuscript Form (max. 20 points)	15
TOTAL POINTS (max. 100 points)	**71**
GRADE (A – B – C – D – E – F)	**C**

NAME OF THE REFEREE: *Vilém Semerák*

DATE OF EVALUATION: *August 29th, 2022*

Digitally signed (August 29th, 2022):
Vilém Semerák

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Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F