Report on Master Thesis

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

Student:	**Jan Kreidl**
Advisor:	**PhDr. Milan Rippel**
Title of the thesis:	**Implementation of Basel III: Impact on the Behaviour of the Banking Sector**

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

Thesis describes and tests the impacts of Basel III regulatory requirements to banks. It is an interesting and actual topic.

First I list some language imperfections (but surely not all).
Czech Abstract: I would use rather „nežádoucí“ instead of „nechtěná“, instead of „zvýšené kapitálové přiměřenosti“ use „zvýšeného kapitálového požadavku“. The sentence „Pomocí analýzy panelových dat se proto zkoumáme souvztažnost mezi změnami v kapitálové přiměřenosti …“ does not make sense because of stylistical mistakes, moreover I wouldn't use the word „souvztažnost“ as „závislost“ is more convenient. Use „změnami ve stabilitě banky“ instead of „změnami v stabilitě banky".
Introduction: Instead of „…to minimize the possibility of future crisis…“ use „to minimize the probability of future crisis“. Instead of „The purpose of the second chapter will be to provide…" use "The purpose of the second chapter is to provide…".
The Role of Basel II in the Recent Crisis: „…that PD, EAD and LGD, which should be used in the IRB, are a function of the cycle." should be „…that PD, EAD and LGD, which should be used in the IRB, are functions of the cycle." and „…the procyclical capital regulations enables to lend…" should be „…the procyclical capital regulations enable to lend…". In Figure 2, there should be explicitly used "GDP growth" in the legend .
Risk Coverage: Instead of "…must include several specified element." use "…must include several specified elements."
Leverage ratio: I assume, the leverage ratio was planned to be described in a separate subsection, but it was not. Otherwise there are two words: "Leverage ratio" redundant in the text.
Changes in RWA: Instead of "…answering one the most troubling issue of the recent crisis." use "…answering one of the most troubling issue of the recent crisis."
Change of Capital Ratios: Wrong spelling in "hte" instead of "the".
Hypothesis 1: In the sentence "Now we have to a transformation that is forced by the nature of our data source." there is probably missing verb.
There are many other language imperfections, which I do not that much care about, but what I consider as very serious problems are the wrong names of the statistical tests or formulae. Not because I would so much rely on correct spelling, but mainly because this shows that the author is probably not familiar with the tests at all and uses them for the first time. I would expect the author to carefully read the names of the tests when using them for the first (or second, or something similar) time. The name of the Russian statistician is Chebyshev, not Chebshev and the test for heteroskedasticity is Breusch-Pagan test, not Breuch Pagan test.

Now I list some formal problems that I care about much more than the spelling mistakes and other language imperfections.
Liquidity coverage: Liquidity coverage ratio is defined wrongly as there is a minus sign in the nominator, which should probably not be there.

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Serious imperfection is at the bottom of page 20. There are few mathematical expressions with no description of the used variables. I would also welcome explanation of the dot operator (is it a derivative by time or something else)?

Hypothesis 1: I am unhappy with the equation numbering and with quality of descriptions of the mathematical formulae. I do not see any difference between equation 1 and equation 2, except for the capitalized name of the function (which does not mean anything on its own). If the author wants to use some commonly used notation, he should at least mention this fact somewhere. I also strongly disagree with one of the assumptions of the model created to support the hypotheses, which states: "…the value of the loss given default wouldn't change in time, because they are dependent on the legal environment and so they do not change in time." I agree, that LGD depends also on the legal environment, but I can not agree that it does not depend on anything else, so it does not change in time. LGD is usually correlated with PD and both are highly influenced by economic conditions.
There is no description of the test statistics of the Breusch-Pagan test, so the reader has to derive on his own what do N and T stand for and what are the "e" variables. If I understand it correctly, the random model accounts for the correlations among the different banks, not countries. However this should surely be described much better and it shows author's insufficient ability to use mathematical formalism in describing econometric models. What is the threshold of the P-value of the Breusch-Pagan test which divides the random effects model from fixed effects and why? So my opinion about the major original part of the thesis is that it would deserve much better description. If I understand it correctly, the estimations of the three dependent variables (for the three different hypotheses) are expected to be deterministically dependent on each other as they all depend on the same three independent variables. My feeling is that at first, we do not have sufficient number of observations to find stable models. Second problem is that author does not present any characteristics of the independent variables. As the B-P test sometimes did not reject the hypothesis of heteroskedasticity, there might be high correlations among the predictors, which makes the estimations of the model coefficients biased. I wouldn't use any of the three found models to predict the reaction of banks to Basel III Accord as at first I do not see any pattern in the results, which would hold over the countries (and so I am strongly aware of overfitting the models), second I think the situation is much more complex. For example the reaction would also depend on the level of competition on the market, on the actual inflation, actual portfolio characteristics, etc. Also, for example the level of interest rate on loans can be pushed up by the new regulation, but on the other hand the higher is the interest rate, the higher can be the probability of default and hence also the CR would increase. In other words there are inherent correlations among the used predictors which can change depending on the economic environement. In other words I am not persuaded that the suggested models will work and that the estimated coefficients are cycle-independent. Moreover I do not see whether the net interest margin used is nominal or real.
Overall evaluation: I very much appreciate the description of the Basel III framework.That is a good job done on the thesis. On the other hand I am unhappy with the original part of the thesis as I assume that student of IES should have much better abilities to describe and use mathematical models. I understand that data can limit the work, but wrongly used models should make much more damage than no models. I wouldn't put econometrics in everything for any price just to make the text looking better or to test hypotheses for which I do not have

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enough data or when the conditions of the methods are not met (my major objection here is the high probability of overfitting).
In case of successful defense, I recommend "chvalitebně" (good, 2).

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

CATEGORY		**POINTS**
Literature	*(max. 20 points)*	20
Methods	*(max. 30 points)*	13
Contribution	*(max. 30 points)*	13
Manuscript Form	*(max. 20 points)*	16
TOTAL POINTS	*(max. 100 points)*	**62**
GRADE	**(1 – 2 – 3 – 4)**	**2**

NAME OF THE REFEREE: Pavel Doležel

DATE OF EVALUATION: 6.9.2012

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Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

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

Strong	*Average*	*Weak*
20	*10*	*0*

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.*

Strong	*Average*	*Weak*
30	*15*	*0*

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.*

Strong	*Average*	*Weak*
30	*15*	*0*

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.*

Strong	*Average*	*Weak*
20	*10*	*0*

Overall grading:

TOTAL POINTS	**GRADE**		
81 – 100	**1**	= excellent	= výborně
61 – 80	**2**	= good	= velmi dobře
41 – 60	**3**	= satisfactory	= dobře
0 – 40	**4**	= fail	= nedoporučuji k obhajobě