Report on **Master Thesis**

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

Student:	Jan Picálek
Advisor:	Martin Hronec
Title of the thesis:	Mispricing in leveraged value small-capitalization stocks

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

Contribution

The thesis is concerned with forecasting future returns of small, value and leveraged stocks as well as forecasting future deleveraging in these stocks. Using these forecasts, the author creates decile and long-short portfolios which offer significant spread between the lowest and highest decile portfolios. Positive abnormal risk-adjusted returns with respect to three and five-factor Fama & French models are documented. On top of that, the author studies feature importance in both predictive tasks. He identifies multiple stock characteristics with strong effect on future stock returns (e.g. 6-month previous return, EBITDA/EV, ROA, etc.) as well as future debt paydown (CAPEX/Assets, Sales growth, Current ratio, etc.)
Author uses data from Refinitiv and builds a point-in-time based research dataset from scratch, which is a non-trivial task for the data used in this thesis.

Methods

Author uses Gradient Boosting Trees to forecast a long-term debt reduction as well as future abnormal returns in the universe of small, leveraged value stocks. Next, the author constructs decile as well as long-short portfolios using forecasted stock returns. On top of that, the author focuses on interpretability by studying the importance of individual anomalies used as predictors. In case of classification, he uses permutation test and in case of regression, he uses squared error decrease as well as partial dependence plots.
All methods used in the thesis are explained in detail.

Literature

Literature review section, called *Asset Pricing Theory and Anomalies Review in the thesis*, is well written and the author provides clear background on topics related to the thesis. From basic asset pricing concepts, through multifactor models to anomalies and predictability of stock returns. The author works with the relevant literature and connects his findings with it quite well.

Manuscript form

The manuscript is very well written which makes it easy to read and understand. This is no coincidence as Jan has rewritten it multiple times until he was satisfied with the result. I am especially happy with the form of all the figures and tables in the thesis, which are self-contained and really professionally looking. Overall, the manuscript meets and exceeds all the requirements.

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Overall evaluation and suggested questions for the discussion during the defense

To conclude, the author delivered a valuable contribution both to the academic literature as well as the investing community. Presented findings extend current research not only by providing out-of-sample evidence of previously documented phenomena but also by bringing forward truly original conclusions. It is obvious that there is a lot of dedicated effort behind the results.

In my view, the thesis fulfills the requirements for a master thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade A.
The results of the Urkund analysis do not indicate significant text similarity with other available sources.

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

CATEGORY	POINTS
Contribution (max. 30 points)	28
Methods (max. 30 points)	29
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	20
TOTAL POINTS (max. 100 points)	97
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: Martin Hronec

DATE OF EVALUATION: 7.6.2022   Digitally signed, 7.6..2022, Martin Hronec

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Referee Signature