



FACULTY  
OF SOCIAL SCIENCES  
Charles University

# Thesis Evaluation Report

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<b>Title:</b>	Earnings Yield and Expected Stock Returns: A Meta-Analysis
<b>Opponent</b>	Jiří Novák

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## Summary

This Master's Thesis presents a meta-analysis that aggregates prior empirical findings on the association between earnings yield, i.e., the inverse of the price-to-earnings (P/E) ratio, and future stock returns, evaluates whether the pool of reported empirical results suffers from publication selection bias, and investigates how the reported estimates vary with explanatory variables reflecting the data sample characteristics, methodology choices, and publication characteristics of the primary studies, from which the author sources his data set. Using a wide range of up-to-date methodological approaches, the author documents a substantial publication selection bias in this research literature. He concludes that this bias inflates the pool of reported estimates of the magnitude of the studied relationship. He also identifies several relevant characteristics that affect the average magnitude of the reported estimates.

## Contribution

I believe that this Master's Thesis examines an important economic question. Studying the factors that explain the cross-sectional variation in stock returns in financial markets is quite fundamental for asset pricing, which, in turn, affects the interpretation of the empirical evidence and its implications for the conclusions about the likely level of efficiency in allocating capital in the economy. Thus, the author examines a research topic that matters.

Furthermore, considering how controversial the debate over stock market efficiency is, I find it plausible to expect some degree of selectivity in reporting of the empirical results. This makes it worthwhile to investigate the bias in the pool of reported results this potential selectivity may lead to. I also believe that both finance researchers and practitioners could find it informative to learn more about how various research design choices and publication characteristics affect the magnitude of the reported coefficients.

This Master's Thesis performs a rather comprehensive and well-crafted analysis of the above-mentioned questions. Therefore, I believe it makes a valuable contribution to prior research literature.

# Literature

The major aim of any meta-analysis is to aggregate and synthesize findings reported in prior research literature. The search through prior research literature that the author conducted is rather extensive. He initially screened 1,500 potentially relevant research articles. After applying sample selection criteria, the author eventually used 591 estimates collected from 74 studies. That implies that the author considered and then used for his own analysis a large number of prior empirical studies.

While I find the scope of this literature search impressive, I have reservations about how the author discusses prior research literature especially in the introduction of his Master's Thesis and about how he connects his own findings to this literature. The provided literature review is rather cursory. I find it unfortunate that the author performs a comprehensive and presumably time-consuming empirical analysis but then he does not sufficiently motivate the value of this analysis by providing a sufficiently detailed overview of prior research literature and comparing and contrasting his own work to this literature. This also makes it difficult for the author to explain how his own work builds on and extends what we already know from prior research.

Furthermore, I have doubts about the relevance of some of the reviewed studies and about the precision with which their findings are presented by the author. For example, I wonder how essential for this Master's Thesis it actually is to discuss the portfolio theory and the Capital Asset Pricing Model (CAPM). I think this Master's Thesis could quite easily be built without such a discussion. Nevertheless, if the author decided to discuss these studies, I consider it important for the description to be precise. I do not quite understand what the author means with his formulation "*volatility [of something] compared to [something else]*" (see the quote below). I do not think it is advisable to let the reader guess.

*"Systematic risk is usually approximated by market beta. Market beta measures individual assets' volatility compared to the stock market index."*

In addition, several other sections, make an impression of a relatively naive interpretation of finance concepts. I think these issues would have a relatively easy fix. So, I find it unfortunate that the less-than-perfect quality of these sections somewhat compromises the otherwise very solid overall impression this Master's Thesis makes.

# Methodology

I consider the use of methodology one of the key strengths of this Master's Thesis. I believe that, especially in his tests of the publication selection bias, the author uses a large number of modern methodological approaches. This methodology is well discussed, and its relevance is well motivated. This gives the reader confidence that the author understands the strengths and the limitations of the methodology he uses, he is able to correctly implement it, and provides a valid interpretation of the results based on this methodology. The author also compares and contrasts the individual results very well.

I find the discussion of the methodology and empirical results somewhat better developed in the first part of the thesis that deals with the detection of the publication selection bias than in the

second part that investigates the determinants of sample heterogeneity. I think that the quality of the discussion in the first part approaches the quality of texts of articles published in academic journals. The discussion in the second part is somewhat briefer and less well refined but still very solid.

I appreciate that the author includes even additional analyses that are sometimes reported in meta-analyses, i.e., a quantification of the best practice estimate in Section 5.3 and a discussion of the economic (not economical) magnitude of the reported results in Section 5.4. This further underscores the comprehensive nature of the author's empirical analysis reported this Master's Thesis.

## Form

I believe that the Master's Thesis is well structured, the individual parts follow a logical order and they are well interconnected. The tables and figures are formatted and labelled well. I would appreciate more informative explanatory notes at some of the tables. I believe some parts of the text could be further refined to ensure a smooth flow of ideas. I believe the Master's Thesis is written in very good English that respects the academic style of writing.

## Conclusion

Overall, I believe that this Master's Thesis has many strengths. First and foremost, I believe that it comprises a solid and rather comprehensive empirical analysis of a large sample of empirical estimates collected from numerous primary studies. Furthermore, the author uses several modern techniques for detecting publication selection bias, which helps the reader assess the robustness of the main findings to the use of alternative methodological approaches. In addition, the author provides a reasonable interpretation of the various results, and he draws plausible conclusions based on the observed findings. I also appreciate that this Master's Thesis investigates an important economic topic that is certainly of interest to both finance researchers and practitioners. Due to these strengths, I believe that this Master's Thesis not only fulfills and exceeds the requirements stipulated by the Faculty of Social Sciences, Charles University but it also has a good publication potential if the author decides to develop it further after his oral defense and perhaps eliminate some of the shortcomings I discuss below.

My major reservation concerns the way the author reviews prior research literature and motivates his original contribution to that literature. I find the overview of prior research literature substantially less well developed than the other parts of this Master's Thesis. I consider this unfortunate because I believe that it somewhat compromises the overall impression this Master's Thesis makes (especially since the reader typically starts by reading the introduction, and so its quality tends to be rather consequential for the first impression). Without such motivation, the reader may not fully appreciate the value of the findings presented in this Master's Thesis. Consider the author's summary of the main findings, which I quote below. Rather characteristically, this formulation is rather vague and disengaged (i.e., it begs the "so what?" question). I believe the author should try harder to convince the reader about the value of his work. That is why the questions I propose essentially invite the author to further elaborate on these points at his oral defense.

*"We find the evidence for publication bias that significantly reduces the effect of earnings yield on expected stock returns. Moreover, this effect seems to be positively affected by survivorship bias*

*and utilisation specific estimation technique. On the other hand, earnings yield effect is reduced in developed countries.”*

The results of the anti-plagiarism analysis do not indicate significant text similarity with other sources.

I recommend the Thesis for defense. I suggest a grade A. Depending on how well the author addresses the questions below at his oral defense, I recommend the evaluation committee to consider nominating it for the IES Director’s Award.

## Questions

I recommend the evaluation committee to ask the author the following questions:

1. What new can we learn from this Master’s Thesis? How do the reported findings contribute to what we already know about the studies relationship from prior research literature?
2. A substantial part of the empirical analysis presented in this Master’s Thesis examines the publication selection bias in this stream of research literature. What are the a priori reasons to expect that reporting of empirical results may actually be selective even though the data on both the earnings yields and stock returns are readily available in centralised databases for all listed firms?
3. The earnings yield, i.e., the inverse of the price-to-earnings (P/E) ratio, is likely highly correlated with other valuation multiples, e.g., the book-to-market (B/M) ratio. The B/M ratio is used as a basis for one of the pricing factors that is included in both the three-factor model (Fama and French, 1992, 1994), and the four-factor model (Carhart, 1997). B/M may thus be considered a more fundamental pricing determinant than P/E. What do the results presented in this Master’s Thesis tell us about the power of P/E to explain the cross-sectional variation of stock returns when considered in combination with additional potential explanatory variables, e.g., B/M?
4. One of the most fundamental questions related to the empirical pricing factors, e.g., P/E, B/M, is whether they reflect some latent systematic risk dimensions that naturally affect equity prices (i.e., an explanation consistent with rational pricing of assets in financial markets and the efficient market hypothesis), or whether these measures are correlated with future stock returns because they identify stocks that are temporarily mispriced (i.e., a behavioral explanation suggesting less than perfectly efficient financial markets). The controversy over the validity of these two alternative explanations is reflected, for example, in the quotation below. Can the empirical results reported in this Master’s Thesis help us discriminate between these alternative explanations?

*“Compared to Basu (1977), who opted to view his findings as a manifestation of market inefficiency, Ball (1978) pointed out that market efficiency tests frequently involve assessing both the efficient market hypothesis and a specific equilibrium relationship simultaneously.”*

## Awarded Points and Grade

Contribution (max 30)	29
Methods (max 30)	30
Literature (max 20)	16
Form (max 20)	20
<b>Total (max 100)</b>	<b>95</b>
<b>Grade (A – B – C – D – E – F)</b>	<b>A</b>

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**Referee's Signature**

13 September, 2024

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**Evaluation Date**

Jiří Novák

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**Referee's Name**

# Grading 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:

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Total Points	Grade
91 – 100	A
81 – 90	B
71 – 80	C
61 – 70	D
51 – 60	E
0 – 50	F

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