

## Introduction

Overall, this collection of three chapters meets the standards for a successful doctoral program dissertation. It includes a breadth of topic understanding, as demonstrated by the extensive discussions of the related literature. It also shows a depth of understanding in its careful and appropriate implementation of empirical techniques. Finally, the author clearly states the contributions of these studies to the collective body of knowledge. Specific by-chapter summaries, critiques, and suggestions follow below.

## Chapter 1: Financial Signaling and Earnings Forecasts

This study investigates the interplay of financial signals among managers and analysts leading up to firm financial performance announcements. Using almost 200,000 firm-quarters of analyst forecasts and over 40,000 firm-quarters of managers' forecasts, the author subdivides the samples into firms that exhibit high (positive or strong), low (negative or weak), or mixed (both positive and negative or strong and weak) signals about future performance based on well-known financial indicators. Examining the distribution of analysts' forecast errors, the author finds heterogeneity among the three sub-sample distributions. Furthermore, managers' forecasts depend on the type of firm, and the results suggest they perceive and respond to the differences among analysts' forecasts. In turn, analysts sometimes neglect to adjust to managers' biased behavior and can become misled by these forecasts. Overall, these results help quantify the degree of analysts' forecast errors and suggest that a game exists between analysts and managers around information disclosure.

The author has demonstrated a comprehensive understanding of the relevant literature, a robust amalgamation of multiple disparate data sources, and a competent implementation of appropriate empirical methods. The results are well-explained and contribute to the body of knowledge. In short, this overall body of work represents a dissertation worthy of conferring the doctoral degree.

In terms of looking ahead to publication, I do have some feedback for the authors' consideration prior to submission. First, I recommend the author find a professional editor to review the manuscript for language and typographical issues. For instance, there are multiple failures to delineate groups that cause reader confusion (e.g., pg. 3 "more evenly" twice, pg. 19 "mixed signal" twice, etc.). Secondly, while the complete time series availability of data sets is listed (e.g., Compustat US data ranges from 1950 to present) and the author describes the sample sizes (e.g., 31,396 analyst forecast firm quarters), it isn't clear to the reader what years/quarters of data are actually represented in the sample. For example, does the sample shown represent 1978-1992 or 2000-2015 data? I'm not clear whether it's even a common date range for both analyst and manager forecasts? Besides helping the story's consistency, more specific dates assist the reader by allowing us to put the findings into greater economic and financial market context. Finally, it would be helpful to have a clearer sense of the data analyzed; from the various locations where it is discussed, if I understand correctly, the 1-35 percentile, 45-55 percentile, and 65-99 percentile observations were used in this study after trimming and eliminating observations. Also, the sample size asymmetry in Tables 1.1 and 1.2 make it clear that the sample is not common for analyst errors and manager errors. This asymmetry causes questions for a reader and will likely do so for a reviewer. Were all industries included, or were financial firms omitted?

Stylistically, it could help to include values from tables in the narrative. For instance, on pg. 26, it says the median for the low group is negative, however, my Table 1.6 in 1.C shows positive 0.08? Adding (0.08) in the paper narrative would clearly show the disconnect to the author and induce immediate repair. Also, just a small comment that Table 1.4 ought to move forward where it is discussed instead of staying in the Conclusion section.

Is the forecast error on pg. 28 the absolute value as stated in the text, or is it the (raw) difference, as stated in the Table 1.1 description? This nuance non-trivially affects the interpretation, which currently reads as if it is the (raw) difference.

## **Chapter 2: Cross-Industry Abnormal Returns and Trading Volume upon Earnings Announcements**

This study analyzes how trading activity—specifically trading volume and earnings surprises—for the first earnings announcer in a quarter informs contemporaneous and future volume and return behavior for firms in the same industry. The author investigates more than 4,000 firms (50,000+ firm-quarters) over a twenty-year period to reach multiple conclusions. The author first finds that abnormal trading volume of subsequent announcers informs the subsequent announcer's stock returns at the first and own subsequent announcement dates as well as in the post-announcement periods. Besides a first announcer's earnings surprise informing that of a subsequent announcer's, the study also finds that the history of a firm's (both first and subsequent announcers) earnings surprises predicts the subsequent announcer's earnings surprises. Finally, the author provides evidence that at the first announcement, the market attempts to price in the subsequent announcer's predictability, but that it does not do so completely.

Again, the author does a fine job placing the study in the related research. Also, a 20-year period of quarterly data with over 4,000 firms provides a very solid sample. The empirical methods are appropriate, and the contribution well-described. It is another well-constructed essay that meets the requirements for a successful doctoral dissertation, and my constructive comments are much more brief than for chapter 1.

In contrast to chapter 1, the data section provides a very good paragraph on pg. 71 describing the sample size and time period. Curiously, how many industries are involved? And, were all possible industries included, or did the author remove financial firms, etc.?

I noticed the CARs are calculated using the market model. While adequate, this is probably not state-of-the-art. Typically at least a Fama and French three-factor model is desirable with a Carhart-augmented four-factor model even more preferred. I suspect the conclusions would still hold, so this is more of a robustness comment I would anticipate from a reviewer.

If the author wanted to truly test the conjecture about the difference between institutional and individual investor behavior cited in Barber and Odean (2008), one proxy is to subdivide the firms by size and see whether the abnormal trading volume behavior is different across the range of small to large firms.

## **Chapter 3: The EU Members' International Portfolio Investment Positions**

This chapter analyzes the dynamics of EU nations' by-country global security holdings over the period 2001-2014. It chronicles how these security holdings change in response to underlying unobservable common factors and well known macroeconomic variables, particularly investigating differences during the pre- and post-financial crisis eras. Using a principal components analysis, the authors find that EU members' portfolio components highly correlate in their co-movements driven by common factors, yet these co-movements diverged during the financial crisis. Concurrently, there is also variance in the EU members' investment behavior at the country level. They find that non-diversified countries (i.e., high investment concentration) and more diversified countries (low investment concentration) respond differently to well known macrovariables. These differences become more important during the financial crisis period. These findings have important implications for globally-integrated financial markets and policymakers.

In sum, this chapter once again demonstrates a thorough understanding of the related literature, appropriate (and different) empirical techniques, and a novel contribution to the field. For these reasons, it meets the standards for a sufficient dissertation chapter. Admittedly, I found it to be the most challenging chapter to embrace as a reader, in large part due to the authors' admitted data constraints—that is, the difficulty of disentangling investment strategy from assets' market value. Some more detailed feedback is provided below.

The differences in investment described around hypothesis 3 are a bit confusing and could be clarified. It's challenging for the reader to understand the nuanced difference between “those countries who prefer to invest more evenly among country-destinations (low concentration type)...” described in the second full paragraph on pg. 105 and, “The investment share at the destination measures the proportion of a source country's total portfolio investment that is invested in the destination country.” Isn't the second measure just a more granular measure of the first? In other words, a source country cannot put 50% into a single destination country without being highly-concentrated, no? Perhaps clearly articulating the way you measure low- and high-concentration types vs. share or portfolio would be helpful. For instance, if true, “we measure concentration using a concentration index based on share of portfolio and detailed later in this paper” and “we measure share of portfolio as the percentage of the portfolio the source country invests in a particular destination country.” In layperson's terms, the former is akin to the asset location decision while the latter describes the asset allocation decision.

I was pleased to read the discussion on pg. 118 about the difference between changes in valuations and changes in investment strategy. However, this question popped into my mind much earlier in the manuscript. Perhaps a sentence or two earlier would have kept it from bothering me for many pages. To reiterate, it would probably be my largest sticking point if I were reviewing this paper for publication.

I think it's worth describing the concentration index (3.4) a bit more. Why the squared term? Providing a quick bit of intuition would be helpful, such as “If country  $i$  invested 100% (1%) in country  $j$  (100 countries  $j$ ), then given the average of 10% [or whatever the number] of all  $i,j$  pairs, the index is 0.81 (98.01), which is in the  $xx$ th ( $yy$ th) percentile of observations and demonstrates high (low) concentration.” Then again, perhaps it's only a personal stylistic preference for me!

For future research in this area, obviously the recent UK referendum will provide an interesting example of a direct shock to the EU and all related financial markets. Since the UK is such a large part of the EU and a

top 5 destination country, I wonder, would excluding it from your sample change the findings? If so, it might give some insights into the possible future impacts of not having the UK in the EU.

Very small things now...the transition is awkward between the last two paragraphs on pg. 101. Is the second point continuing to discuss results—as implied by “Secondly,”—or is it discussing the implications—as implied by the last sentence of the prior paragraph? Missing a cite on pg. 103, 3<sup>rd</sup> full paragraph; “and etc..” out of place in last paragraph on pg. 104; missing cite on pg. 121; equations are often referenced as (5) instead of (3.5);

### **Conclusion**

As stated in the opening paragraph, this dissertation meets the standards and format for a PhD thesis in economics, and I support it for a dissertation defense. Congratulations!