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## A NOTE ABOUT THE FINANCE JOURNAL RANKINGS AND CITATION COUNTS

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#### **ABSTRACT**

The purpose of this study is to examine the (rank) correlation coefficient of five finance journal ranking methods from Harzing's Journal Quality List in 2016 and one citation count method from the Association Business Schools (ABS) Academic Journal Quality Guide in 2010. We also propose a new way of comparing the actual ranks from the above six journal ranking methods with the random ranks generated from Excel to address which finance ranking method deviates the most from a random ranking.

**Keywords:** citation count, financial journal ranking, listwise deletion method, Pearson's rank correlation coefficient, relative measure

## INTRODUCTION

Finance journal rankings are frequently used as a measure of both a journal's and author's research quality (Oltheten, Travlos, & Theoharakis, 2005). They are useful in the discipline of finance because researchers can use them to find the right outlets, editors can evaluate the quality of their selections and update their editorial agendas, libraries can use them to make subscription decisions,

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academics can use them to assess the quality of the journal, and administrators can use them to evaluate faculty members' research productivity for tenure and promotions (Chan, Fok, & Pan, 2000; Borde, Cheney, & Madura, 1999). The present value awards of finance journal publications at public research universities are also studied (Swidler & Goldrever, 1998). Numerous objective finance journal evaluation methods such as citation counts and citation impacts, subjective finance journal evaluation methods such as the opinions of finance chairpersons and affiliations, as well as hybrid evaluation methods based on objective and subjective methods have been proposed in the past 30 years. These methods (among others) are discussed in Alexander and Mabry (1994), Arnold, Butler, Crack and Altintig (2003), Beattie and Goodacre (2006), Borokhovich, Bricker, and Simkins (1994), Chan, Fok, and Pan (2000), Chan, Chang, and Chang (2013), Chang and McAleer (2014), Chow, Haddad, Singh, and Wu (2008), Coe and Weinstock (1983), Haensly, Hodges, and Davenport (2009), Mabry and Sharplin (1985), McNulty and Boekeloo (1999), Niemi (1987), Oltheten, Travlos and Theoharakis, (2005), Russell and Gurupdesh (2011), Smith (2004), Swidler and Goldreyer (1998), and Zivney and Reichenstein (1994).

Among them, the impact factor based upon journal citations is perhaps the most frequently adopted objective journal evaluation method. However, the downside of impact factor analysis includes self-citation bias and sociological and statistical factors (Amin & Mabe, 2000). While a subjective evaluation method is an alternative, it has the drawbacks of being self-serving and prone to predisposition bias and slow-fading memory bias (Chen & Huang, 2007, Kim, Morse, & Zingales, 2009). As mentioned in Beattie and Goodacre (2006), all existing finance journal evaluation methods have inherent limitations. To avoid European/Asian academics ranking Europe/Asia-based journals higher, we compare journals listed mainly in Harzing's and ABS, where most journals are European home based. Since correlations are studied, the pros and cons of each evaluation methods will not be discussed in detail.

In this study, we focus on five established finance journal ranking methods from the 2016 edition of Harzing's Journal Quality List (Harzing, 2016) and one citation count method from the 2010 edition of the Association of Business Schools Academic Journal Quality Guide (Association of Business Schools (ABS), 2010). Pearson's rank correlation coefficients and their ranked performance when compared with 100 random (arbitrary) rankings generated from Excel measured by Mean Absolute Deviation (MAD) are observed. The same process can be applied to the different finance journal evaluation methods mentioned above and to journal evaluation methods in other academic disciplines.

### **DATA ANALYSIS**

Two separate analyses are performed in this study. We first calculate Pearson's rank correlation to determine the consistency (i.e., the linear correlation or the dependency) between two different finance journal evaluation methods. Secondly, we compare the ranking results from each method with random ranks generated from Excel. We simulate 100 sets of random ranks each at 30 observations. The Mean Absolute Deviation (MAD) is calculated for each of the 100 random ranks vs the ranks from each method where:

$$MAD = \frac{\sum_{i=1}^{30} |actualrank - randomrank|}{30}$$

The larger the mean for the MAD's from the 100 samples, the greater the deviation the evaluation method is from a random ranking. This implies that the ranking method may be more restrictive than its counterpart with a smaller average MAD.

## The Study of Pearson's Rank Correlation Coefficient

In this study, finance journal rankings are directly obtained from Harzing's Journal Quality List, which include rankings from a variety of sources compiled and edited by Professor Anne-Wil Harzing. It is published primarily to assist academians target journals of an appropriate standard. The list was originally collated while the editor was associated with the Bradford University School of Management (1997–2001). Since then, the list has been updated and extended periodically to keep it current. The current 54th version of the Journal Quality List was published on April 16, 2015 online containing 18 different rankings of more than 900 journals.

Since not every finance journal is ranked by different evaluation methods, when there are missing ranking data, the listwise deletion method is commonly used. This method excludes those cases with missing rank and runs the analysis on what remains. The parameter estimates will be unbiased if the missing data is random. When the missing data is not random, a loss in power of the test statistics and/or bias may results (Allison, 2001). Through the listwise deletion method, we end up with a study of 30 finance journals in our sample ranked by the University of Queensland Journal Rating 2007 (UQ2007), Aston March 2008 (AST2008), Australian Business Deans Council Journal Rankings List February 2010 (ABDC2013), Chartered Association of Business Schools Academic Journal Quality Guide March 2015 (ABS, 2015), and Citation Counts

by ABS in 2010. These journals can be found in Appendix A; most of the journals are quality and high quality journals in ABS (i.e. being ranked 2 or above). Details about the ranking scales and how finance journals are ranked by the above methods are listed in Appendix B.

Next, the ranks for each of the 30 journals under different evaluation methods are obtained. When there are equal values (ranking), the average of their ranks from 1 to 30 are used. The (linear) correlation and dependence between two different evaluation methods are studied via Spearman's rank correlation coefficient (r). In our case,

$$T = \frac{r}{\sqrt{\frac{1 - r^2}{n - 2}}}$$

with n = 30, will approximately follow a T-distribution with n - 2 = 30 - 2 = 28 degrees of freedom under the null hypothesis that there is no linear correlation between the two methods. The T-ratios and their p-values for Person's rank correlation coefficients are listed in Table 1. When p > 0.05 (highlighted in bold faces), we conclude that there is no (positive) linear correlation between the two evaluation methods. Table 1 shows that all evaluation methods are positively correlated. The finance journal rankings by AST2008, ABDC2013, and ABS2015 are not correlated with the Citation Count method by ABS in 2010. Two most correlated finance journal ranking methods are ABS2015 and ABDC2013 with VHB2015 at r = 0.80276 and 0.71908, respectively.

Table 1
The T-ratios and their p-values for Pearson's rank correlation coefficients

|                              | AST2008               | ABDC2013              | ABS2015               | VHB2015               | Citation count                |
|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| UQ2007<br>( <i>p</i> -value) | 0.42497<br>(0.00962*) | 0.57849<br>(0.00041*) | 0.47194<br>(0.00423*) | 0.55282<br>(0.00077*) | 0.38354<br>(0.01821*)         |
| AST2008 (p-value)            |                       | 0.44698<br>(0.00664*) | 0.53396<br>(0.00119*) | 0.41071<br>(0.01208*) | 0.22026<br>( <b>0.12108</b> ) |
| ABDC2013 ( <i>p</i> -value)  |                       |                       | 0.64503<br>(0.00006*) | 0.71908<br>(0.00000*) | 0.21046<br><b>(0.13214)</b>   |
| ABS2015 (p-value)            |                       |                       |                       | 0.80276<br>(0.00000*) | 0.24679<br>( <b>0.09430</b> ) |
| VHB2015 (p-value)            |                       |                       |                       |                       | 0.35265<br>(0.02798*)         |

Note: \*indicate the significance at the level of 0.05

## The Study of the MAD for Ranks from an Evaluation Method vs a Random Rank

Relative error measures are quite commonly used in comparing one proposed forecasting method with a benchmark forecasting method (for example, the random walk). Typical relative measures are proposed by Theil (1966) for the U<sub>2</sub>, and Hyndman and Koehler (2006) for the Absolute Mean Scaled Error (AMSE). Along these lines, in this study, the ranks from a finance journal evaluation method listed above are compared with 100 random ranks generated from Excel. A low average MAD indicates that the finance journal ranking from the method is similar to a random ranking; otherwise, the finance journal ranking from the method is derivative from the random ranking. The means and the standard deviations of the MADs for each finance journal evaluation method and the relative of the means of the MADs are listed in Table 2. The results imply that UQ2007 is farther from a random ranking and ABS2015 is the least farther from a random ranking among the six evaluation methods.

Table 2
The means, SDs, and relative ratios of the MADs

|                | UQ2007 | AST2008 | ABDC2013 | ABS2015 | VHB2015 | Citation count |
|----------------|--------|---------|----------|---------|---------|----------------|
| Mean           | 9.8393 | 8.8860  | 9.5560   | 9.4807  | 9.6493  | 9.9147         |
| SD             | 0.9969 | 0.9032  | 1.0200   | 0.8282  | 0.9565  | 1.0451         |
| UQ2007         | 1.0000 | 1.1073  | 1.0296   | 1.0378  | 1.0197  | 0.9924         |
| AST2008        | 0.9031 | 1.0000  | 0.9299   | 0.9373  | 0.9209  | 0.8962         |
| ABDC2013       | 0.9712 | 1.0754  | 1.0000   | 1.0079  | 0.9903  | 0.9638         |
| ABS2015        | 0.9635 | 1.0669  | 0.9921   | 1.0000  | 0.9825  | 0.9562         |
| VHB2015        | 0.9807 | 1.0859  | 1.0098   | 1.0178  | 1.0000  | 0.9732         |
| Citation count | 1.0077 | 1.1158  | 1.0375   | 1.0458  | 1.0275  | 1.0000         |

## Citation count study in ABS

In these lists, judgments are made on the basis of the number of times in which an average article in a journal is cited by the authors of articles in related journals (e.g.; Johnson & Podsakoff, 1994; Tahai & Meyer, 1999, Starbuck, 2002; Institute of Scientific Information, 2004; Madhi, D'Este, & Neely, 2009).

## **CONCLUSIONS**

In this study, we examine the linear correlation coefficient between two different finance journal ranking methods. We find the VHB2015 and ABDC2015 are the most correlated finance journal ranking methods. The finance journal ranking by

AST2008, ABDC2013, and ABS2015 have no correlation with the Citation Count method by ABS in 2010. We also compare the actual ranks from a finance journal ranking method with the random ranks generated from Excel. The results show that UQ2007 is the finance journal ranking methods farthest from random ranking and ABS2015 may be the ranking with the least restrictions on finance journal rankings.

## APPENDIX A

| No. | Journal Names from Listwise Deletion Method                      |
|-----|--|
| 1   | European Financial Management                                    |
| 2   | European Journal of Finance                                      |
| 3   | Finance & Stochastics  |
| 4   | Financial Analysts Journal                                       |
| 5   | Financial Management   |
| 6   | Financial Markets, Institutions & Instruments                    |
| 7   | Financial Review   |
| 8   | Global Finance Journal   |
| 9   | Journal of Applied Corporate Finance                             |
| 10  | Journal of Banking & Finance                                     |
| 11  | Journal of Business Finance & Accounting                         |
| 12  | Journal of Corporate Finance                                     |
| 13  | Journal of Derivatives   |
| 14  | Journal of Empirical Finance                                     |
| 15  | Journal of Finance   |
| 16  | Journal of Financial & Quantitative Analysis                     |
| 17  | Journal of Financial Economics                                   |
| 18  | Journal of Financial Intermediation                              |
| 19  | Journal of Financial Markets                                     |
| 20  | Journal of Financial Research                                    |
| 21  | Journal of Financial Services Research                           |
| 22  | Journal of Futures Markets                                       |
| 23  | Journal of International Financial Management & Accounting       |
| 24  | Journal of International Financial Markets, Institutions & Money |
| 25  | Journal of International Money and Finance                       |
| 26  | Journal of Portfolio Management                                  |
| 27  | Mathematical Finance   |
| 28  | Review of Finance (formerly European Finance Review)             |
| 29  | Review of Financial Studies                                      |
| 30  | Review of Quantitative Finance and Accounting                    |

### **APPENDIX B**

[The following information is from JOURNAL QUALITY LIST, Forty-first Edition, 20 July 2011, Compiled and edited by Professor Anne-Wil Harzing. Website: http://www.harzing.com]

## UQ 2007: University of Queensland Journal Rating 2011

This list was originally constructed in 2003 in three stages:

- 1. Construction of a mega-database (over 2,000 titles) based on ratings and rankings from over 120 sources.
- 2. Allocation of each title to one of 5 tiers (1 = highest, 5 = lowest) on the basis of the second highest rating from the rating/ranking sources (i.e., the rating must be from at least two sources).
- 3. The data base was supplied to the six discipline cluster leaders in the school as a resource that they could use to construct the official list (which comprises 588 journals). They could use the mega-database or any other source to justify each journal's rating.

| Rank | Interpretation              |
|------|-----------------------------|
| 1    | Highest rating              |
| 2    |                             |
| 3    | Intermediate quality rating |
| 4    |                             |
| 5    | Lowest rating               |

#### AST 2008: Aston March 2008

New version of the Aston lists originally published in 1999/2003/2006. The 1999 list was based on a large survey of opinions of academics of the Midlands universities. In 2003 this list was sent to Aston research conveners for discussion within their group and each group then sent in revised lists which formed the basis of the new rankings. Anybody who wanted to add a journal was asked to provide evidence, preferably citation evidence from the World of Knowledge Data Base, but failing that expert opinions in the field from other universities. In the 2006 "rankings are made on the basis of citation rates, impact factors, interrogation of data bases and the evaluations of senior academic staff in Aston Business School and other international business schools. They are subject to change as the standing and impact of journals changes." No in-formation was available about the procedures for the 2008 update.

| Rank | Interpretation             |
|------|----------------------------|
| 4    | World leading              |
| 3    | Internationally excellent  |
| 2    | Recognised Internationally |
| 1    | Recognised nationally      |
| 0    | Unclassified               |

# ABDC 2013: Australian Business Deans Council Journal Rankings List February 2013

The ABDC Journal List is a collaborative list developed by the Australian Business Deans Council that seeks to list journals relevant to Australian business academics and group these journals into four quality categories.

| Rank | Interpretation   |
|------|--|
| A*   | Best or leading journal in its field - publishes outstanding, original and rigorous research that will shape the field. Acceptance rates are typically low and the editorial board is dominated by leading scholars in the field or subfield, including from top institutions in the world. Where relevant to the field or subfield, the journal has the highest impact factors or other indices of high reputation. |
| A    | Highly regarded journal in the field or subfield - publishes excellent research in terms of originality, significance and rigor, has competitive submission and acceptance rates, excellent refereeing process and where relevant to the field or subfield, has higher than average impact factors. Not all highly regarded journals have high impact factors, especially those in niche areas.                      |
| В    | Well regarded journal in the field or subfield - publishes research of a good standard in terms of originality, significance and rigor and papers are fully refereed according to good standards and practices but acceptance rates are higher than for Tiers A* and A. Depending on the field or sub-field, will have a modest impact factor and will be ISI listed.  |
| С    | A recognised journal - publishes research that is of a modest standard and/or is yet to establish its reputation because of its newness. This tier is more inclusive than the others but only includes refereed journals.  |

## ABS 2015: Association of Business Schools Academic Journal Quality Guide March 2015

The first version of this list was published by Bristol Business School in June 2004, while the second version appeared in 2005 as the Harvey Morris Business Journals List. The original list stems from an analysis of where UK academics declared publications for the purposes of RAE 2001. Other journals were then added through comparison with other lists in circulation. Rank-ings in these lists were standardised at this stage, bearing in mind the UK RAE 2008 classification

of research outputs as 4\* (best work in the field), 3\* (international excellence), 2\* (internationally recognised) 1\* (nationally recognised).

In converting the second edition of the HM List to the ABS list the editors followed a nine stage procedure involving significant peer review and review of the quality standards, track records, contents and processes of each journal. For the 2nd (March 2008), 3rd edition (March 2009) and 4th edition (March 2010) a review panel of experts considered feedback from academic associations, publishers and individual academics.

| Rank | Interpretation            |  |
|------|---------------------------|--|
| 4*   | A world elite journal     |  |
| 4    | A top journal             |  |
| 3    | A highly regarded journal |  |
| 2    | A well regarded journal   |  |
| 1    | A recognised journal      |  |

## VHB 2015: Association of Professors of Business in German speaking countries

A ranking developed on behalf of the Association of University Professors of Business in German speaking countries (Verband der Hochschullehrer für Betriebswirtschaft - VHB). This version (VHB-JOURQUAL 2.1) is an update of the second edition (2008). Rankings of journals on the list were not updated, but new journals were added.

| Rank | Interpretation              |
|------|-----------------------------|
| A+   | VHB-JourQual Index ≥ 9      |
| A    | VHB-JourQual Index $\geq 8$ |
| В    | VHB-JourQual Index $\geq 7$ |
| C    | VHB-JourQual Index $\geq 6$ |
| D    | VHB-JourQual Index $\geq 5$ |
| E    | VHB-JourQual Index < 5      |

[The following is from ABS Journal Qualification List: Version 4, 2010, published by The Association of Business Schools, 137 Euston Road, London, NW1 2AA, United Kingdom]

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