

# Journal of Behavioral Finance in retrospect: a review of its publications as a case in behavioural finance

## Abstract

This study examines the impact and contribution of the *Journal of Behavioral Finance*. It is a unique and novel approach to analysing almost the entire publication history of the journal by using citation analysis and data visualization tools. It uses metadata from 328 journal articles (2004 to 2017) extracted from Scopus and Web of Science. The data included 2,602 author-submitted keywords, 1,825 index keywords and 310 abstracts. Results indicate that *JBF* is still a young journal with 196 academic articles cited by 372 documents. Most citations come from *JBF* itself and *Journal of Behavioral and Experimental Finance*. Seiler is the most published author, University of Gothenberg has more contributions than any other institution while USA, Australia and Germany are top contributing countries. *Investment policy* is the most used author keyword next to *behavioral finance*, while *risk* is the most used index keyword. The most commonly used words in abstracts are *investor* or *investors*. The implications of and for *JBF* are discussed. The most evident is the significant contribution of *JBF* in areas of behavioral finance that are unique to this journal and its influence on scholars that publish in other leading finance journals.

## Keywords

Citation analysis, bibliometric analysis, data visualization, Kumu, behavioural finance, Journal of Behavioural Finance

## Introduction

This paper is an attempt to review one journal in the field of behavioral finance to provide a snapshot of the behavioral finance field. It also provides an example of the growth of publications in one journal, which may also reflect the nature and scope of publications submitted in related source titles elsewhere, and its trends and impact. Behavioral finance is a growing area and the collective contributions of some of the journals in the field, such as *Journal of Behavioral Finance*, *Review of Behavioral Finance* and *Journal of Behavioral and Experimental Finance*, are responsible for this growth. It is important to critically understand where we are in the field of behavioral finance; and in order to do this, we have to examine at least one source title responsible for the knowledge growth. There has never been no attempt like this until now. Hence, this paper looks into the publication history of the *Journal of Behavioral Finance* to provide a meta-analytic approach to understand their publications, citations, impact and trends. The aim is to provide the reader a glimpse of the field and reflect on what has been published in the past and to look forward to what could possibly be trends in the future.

While a relatively young journal, the *Journal of Behavioral Finance* (*JBF*) has quickly established itself as a well-respected journal in the field of behavioural finance. It has published articles that served the scholarly community and the industry significant contributions to the advancement of the field. Beyond the quantitative measures available to indicate the extent of influence of a particular journal, such as rankings and impact scores, it is important to think that a journal also takes pride in looking retrospectively at its humble beginnings and the many challenges and successes associated with creating a name for itself. Now nearing its 20 years of publication, it is important to highlight some of its achievements. Hence, this paper is a snapshot of almost the entire publication history of *JBF* to date. The picture painted here is a reflection of the journal's rich contribution to the business and finance fields, using data from more than 300 published academic articles.

While *JBF*'s key indicators according to InCites (Clarivate Analytics, 2018a) are less than stellar compared to other finance-focused journals, its performance in the analytics game continue to improve. Using the latest available figures (2016), its cites were only 274. Its journal impact factor (JIF) is only .576 and its five-year JIF is .794. Its article influence score is .263 in the same year. However, one has to look at historical indices and compare them against these 2016 figures. *JBF* has jumped from a JIF of .143 in 2011 and a five-year JIF of .422 in 2013, the earliest available data. Its article influence score is erratic. The 2013 figure is at .343, which is better than its 2016 score. The article influence score determines the average influence of a journal's articles over the first five years after publication and each article has an average score of 1.00. "A score greater than 1.00 indicates that each article in the journal has above-average influence. A score less than 1.00 indicates that each article in the journal has below-average influence." (Clarivate Analytics, 2018b, para. 1). Impact can certainly be measured using such

metrics and comparing them with similar journals, such as *Review of Behavioral Finance* (RBF) or *Journal of Behavioral and Experimental Finance* (JBEF), may prove useful. But analysis of its value and contribution to the field can also shed light into its overall impact. Thus, the aim of this paper. While there is currently no available information from Clarivate Analytics how *JBF* compares with *RBF* and *JBEF* with regards to JIF scores, Scimago Journal Rankings (Scimago Lab, 2018) provide an alternative metric – the *b*-index. *JBF*'s *b*-index is 10 while both *RBF* and *JBEF* are 7. A higher journal *b*-index indicate more publications cited in the previous years. Beyond these metrics, a citation analysis can also be made to meaningfully understand a journal's contribution and impact.

Citation analysis, or bibliometric analysis, is not a new approach to analysing large citation data. It has been applied in various business disciplines including finance but to only to a limited extent. However, there are a few that deserve mention. Vieira and Teixeira (2010) paid attention to investigating whether finance, management and marketing are scientific fields using journal citations. They explored this issue using citations from the top-ranked journals in these areas. The work by Siciliano (2017) is slightly different in that it does not study finance itself but business and finance librarianship. The only similarity to the current work is its use of citation analysis using large data on a single journal (*Journal of Business and Finance Librarianship*) over a considerable number of years (24-year period). A close one is that written by Calma (2017) which looked into the ten highly-ranked finance journals, including *JBF*, and looked for the most published authors, top contributing universities and countries and most discussed topics using keywords. Another is a citation analysis of Australia Research Council grants investigators and comparing their citation track records (Brooks & Byrne, 2006).

Kumar and Ulaganathan (2015) performed a citation analysis on the *Journal of Emerging Market Finance* for years 2002-2013. They not only looked at citation data and contribution patterns but also authorship trends. Borokhovich, Bricker and Simkins (2000) analysed the finance journal impact factors and concluded that impact factors and citations are a result of not shorter but longer-term influence. Chung, Cox and Mitchell (2001) analysed the citation patterns in the finance literature by comparing the number of publications (output) and the number of citations (impact). They found that citations are mostly concentrated on the top authors while the top two journals, *Journal of Finance* and *Journal of Financial Economics*, publish more than half of all most cited articles. These previous studies add to our understanding of the impact of finance journals inside and outside the finance discipline. While it is important to continue doing this type of analysis over time, I find that it is best to complement these earlier studies by examining journals which have not featured in the past and focus on an area of behavioral finance.

Despite available research, citation analysis in finance generally, and behavioral finance more specifically, remains an under-researched area. To apply citation analysis in behavioral finance per se is non-existent. To my knowledge, and based on library searches, there has been

no attempt to investigate the impact of JBF using its metadata and using citation analysis and visualization. Thus, this is a novel and timely contribution to appreciate the journal's footprint in the behavioral finance field.

Where is *JBF*'s impact more visible? In which journals do scholars that cite *JBF* articles publish in? Which countries and institutions do these scholars come from? How does *JBF* compare with other leading journals in finance with respect to which institutions and countries their scholars come from and where they publish in? These are some of the questions that this paper tries to address. The approach to do citation analysis and make use of visualization tools as applied to *JBF* is new. Thus, it is a novel and innovative approach that may provide a significant value-add and contribution to the growing field of finance generally, and of behavioural finance more specifically. It is also a refreshing take on the usual and more technical finance topics that are discussed in finance journals. This leads to the primary aim of this paper, which is to provide an analysis and visualization of the impact of one journal – the *Journal of Behavioral Finance* – by looking retrospectively at its achievements in nearly 20 years.

### **Methods**

A search was made on September 27-28, 2017 using Web of Science, Scopus, EBSCOhost, EonLit, Gale Cengage and Proquest using the researcher's online university library subscription. While it is not complete, this resulted in all available publications from *JBF*. The extraction procedure resulted in the collection of 328 journal articles for 2004 through to the search date. Reviews, editorial and errata were excluded. All bibliometric metadata were downloaded and this represented the data used for further analysis. This included information about the authors, titles, abstracts, keywords, cited references, and so on. No results were found for years 2000 to 2003 – the early years of *JBF*. Web of Science has most of the articles indexed, 248 records in total from 2008, of which 239 were academic articles. Scopus indexed 196 documents from 2011. Different databases index and use metadata differently. **This was a challenge**; however, when the data was combined, all available and shared data were merged.

A search was also made in Web of Science and Scopus on *JBF*'s former name, *The Journal of Psychology and Financial Markets* (years 2000-2002). However, neither of these two databases have any document indexed from this journal.

The methods of analysis included using the various databases' built-in analytics, Excel for further data analysis and charts, and Kumu for data visualization. Kumu is an online data visualization software used for social network analysis and similar network visualization analysis involving large or complex data.

### **Results and Discussion**

To provide a 'baseline' information, I first present here analysis that is available from WoS. Note that, as mentioned earlier, only 248 records were indexed which included articles from 2008 to 2017. The analytics feature of WoS allows for identifying the key players in the journal, such as the top contributing authors, universities and countries. While this data and analysis do not include data from 2000 to 2007, the analytics results nonetheless provide a picture of the journal's last 10 years of research activity.

The top publishing author is Seiler MJ (7 records), followed by Aspara J, Loughran T and Mesly O (4 records each) then Du N, McDonald B, Seiler VL, Shavit T, Tikkanen H and Vlaev I (3 records each). Combined, they contributed nearly 6% of all *JBF* publications.

The top contributing country is USA (97 records), followed by Australia (21) and Germany (14). This makes 1 in 4 records coming from the USA. Old Dominion University and University of Zaragoza are the top contributing institutions with 6 records each, followed by University of Haifa and University of New South Wales (5 each), while DePaul University, Florida International University, University of Notre Dame and Universidad Publica de Navarra each contributed 4 records. The year 2014 has published more articles than any other year (30 records), followed by 2015 (29) then 2012 and 2017 (27 each).

To put *JBF*'s impact into perspective, a comparison with other journals was made. I have taken five other similar journals in finance and considered their citation impacts. Note that this analysis depends on what is indexed through Scopus so it may not include all of their publications. Also, for this comparison, I will include articles only. In other words, the comparison will only include academic (journal) articles, and will exclude articles in press, reviews, editorials and errata. Results are from a more recent search date: 29 October 2018.

Let me begin with *JBF*. Scopus indexed 212 articles, attracting 574 citations. The citations come from *Journal of Behavioral Finance* (47 documents) and *Journal of Behavioral and Experimental Finance* (18) as the two with most citations. Goteborgs Universitet (University of Gothenberg) has the most number of documents (9 documents) while USA (150 documents), Australia (55) and China (51) represent nearly half of those citations. While this data include only those indexed in Scopus and citations only from 2011, it does provide a picture of its most recent impact.

A journal that is only slightly older than *JBF* is *Journal of Financial Markets* or *JFM* (since 1998). When compared to *JBF*, *JFM* has 444 articles cited by 7,980 documents to date. Its impact is more visible in *Physica: A Statistical Mechanics and its Applications* (69 documents). Publications affiliated with New York University (111 documents) refer to *JFM* the most, while the United States (3,130 documents) and the United Kingdom (924) lead the contributing countries of those 7,980 documents that cite the 444 *JFM* articles.

*Journal of Corporate Finance* (since 1994) may be older than *JBF* but it is the next closest to *JBF*'s age. The search for this journal resulted in 1,311 articles indexed in Scopus and generated 17,253 citations to date (indexed since 1994). Its impact can be traced to contributions from Hong Kong Polytechnic University (156 documents) and York University (144). Similar to *JFM*, *JCF* is a popular avenue among United States- (5,655) and United Kingdom-based (2,070) institutions. *JCF*'s scholarly works have been popularly cited in *JCF* itself (931 documents) followed by *Journal of Banking and Finance* (411).

While not a fair comparison, it is important to also include the *Journal of Finance* (since 1946), with its rich publication history and significant impact, in order for *JBF* to see where it could possibly go in the future if *Journal of Finance (JF)* is seen as a benchmark. The search in Scopus found 4,178 *JF* articles indexed (since 1946), attracting a total of 179,331 citations. As Scopus is only able to show the citations of 2,000 articles each time, I examined the citations of the first 1,943 articles as an example, published from 1946 to 1987 inclusive. This represents 65,529 of the total citations. A number of these citations come from *JF* *Journal of Banking and Finance* (1,883). New York University (788 documents) have published the most documents that cite the *JF* articles. Similar to the other top-ranked journals, the United States (25,853 documents), the United Kingdom (6,311) and China (4,756) represent 56% of the 65,529 citations. The remaining 2,235 *JF* articles (1988 to date of search) have been cited in 113,802 documents, also mostly from the US, the UK and China.

Lastly, we look at two closely related journals to *JBF*: *Review of Behavioral Finance (RBF)* and *Journal of Behavioral and Experimental Finance (JBEF)*. *RBF* has quite a small number of publications indexed in Scopus, only 78 articles as at this writing. As both *RBF* and *JBEF* are relatively similar to *JBF*, I also include their top keywords here for comparison. Other than behavioural/behavioral finance as a top keyword, *investor sentiment*, *stock market* and *stock returns* are its most popular topics based on keywords. Old Dominion University, Athens University of Economics and Business and Cass Business School are the top affiliations while the US, the UK and Australia are the leading contributing locations. Currently, its impact is only felt in 150 citing documents. The *Journal of Behavioral and Experimental Finance* has 141 articles indexed on Scopus with a different statistical profile compared to *RBF*, and also *JBF*. Its top topics based on keywords, other than "behavioral finance" and "experimental finance", are *market efficiency*, *overconfidence* and *behavioral biases*. Its top contributor is University of Innsbruck. Most articles come from the United States, Germany and the Netherlands.

In summary, we can see from this comparison that *JBF* has not yet attracted contributions from the United Kingdom and countries, universities and scholars that prominently feature in the three other journals discussed above. There are many reasons for this, and two obvious ones are the scholar's choice of where to publish and the journal's decision to accept publication.



*making* (18), *disposition effect* (15) and *investor sentiment* (14). Below illustrates the usage pattern of the top 5 keywords (Figure 2). As can be seen, there has been a decline in the usage of these terms in recent years. *Disposition effect* and *investor sentiment* were the only ones that have been used in the past five years. Although *investment policy*, *behaviour* and *decision making* have been mostly popular, interestingly, they have not been used in the last five years. More particularly for investment policy, research in this area (i.e. research that use these keywords) has “ceased” since 2008.

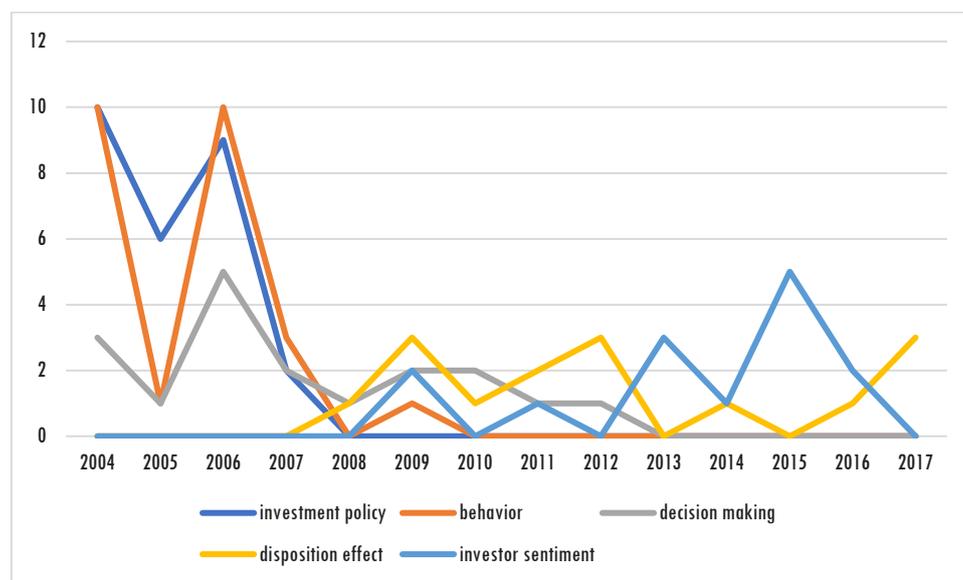


Figure 2. Top 1-5 author-submitted keywords

It would be interesting to see the next top 6-10 author-submitted keywords and look for any growth patterns (Figure 3). *Prospect theory* (13 times) came next at top 6 followed by *investors* (12), *United States* (12), *risk aversion* (11) and *behavioural decision theory* (8). However, there is no discernible pattern of growth or decline but only an erratic use of these terms that is observably patchy. *Risk aversion* has not been used as a keyword since 2007. *Investors* and *United States* have not featured for the periods 2008 to 2013. However, research on *investors* has had a resurgence in 2017.

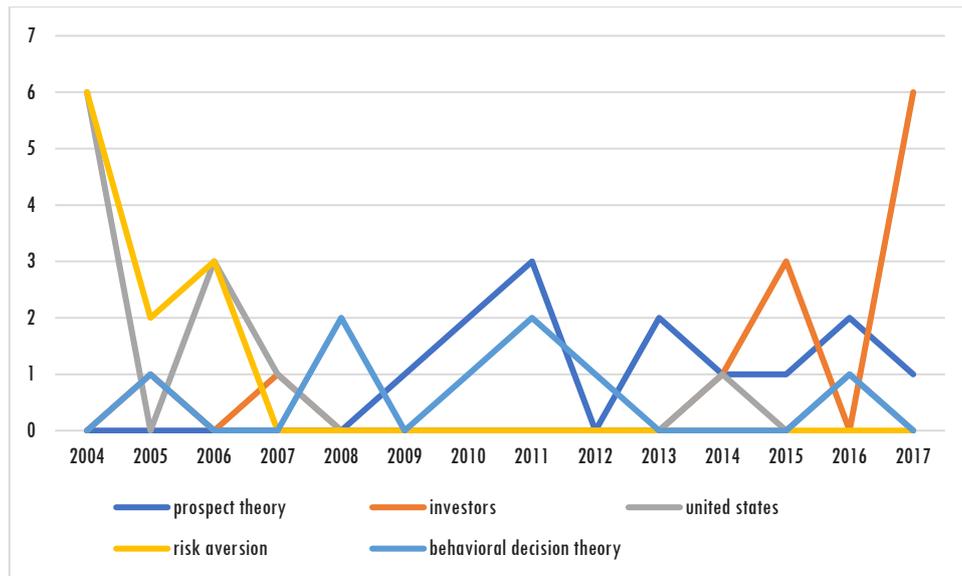


Figure 3. Top 6-10 author-submitted keywords

If author-submitted keywords were to be used, publications in *JBF* can be described as encompassing diverse topics not only usually associated with behavioural finance. Further, from 2004, topics come and go. There are periods where popular topics wax and wane.

Using the same author-submitted keywords exactly as they appeared in metadata, it appears that 2014 was most connected with 122 unique keywords. Other than the author-submitted keyword “behavioral finance”, which is usually related to the journal itself and the main topic it promotes, the most connected keywords are *disposition effect*, *investor sentiment*, *prospect theory*, *investors*, *herding*, *investor behaviour*, *overconfidence* and *volatility*.

### Most discussed topics using index keywords

Index keywords are those supplied by Web of Science or Scopus and started only in 2009. A total of 1,825 keywords from 211 articles were found. The most used keywords, separated as single words, are *returns* (53), *risk* (50), *behaviour* (44), *information* (38), *market* (37), *performance* (34), *investors* (33), *investment* (29), *stock* (28) and *prices* (26).

However, if keywords were taken as terms or phrases as when they were submitted, the top keyword is *risk* (42 times), followed by *behaviour* (29), *returns* (26), *market* (25), *prospect theory* (24), *information* (22), *performance* (20), *stock returns* (18), *choice* (17) and *investors* (17).

### Most discussed topics using abstracts

A total of 310 articles with abstracts were found. These articles contained 39,080 words (including articles such as *a*, *and* or *the*). Excluding words that did not make sense, the most commonly used words in abstracts are *investor/investors* (403

times), *market/markets* (333), *stock/stocks* (320), *finance/financial* (264), *returns/return* (214), *behavior/behavioral* (209), *price/prices* (185), *investment/investments* (171), *information* (170) and *risk* (156).

It was expected that there are strong parallels between author-submitted keywords, index keywords and key terms found in abstracts. Comparing results from the three, we can infer from *JBF* publications that the primary focus has been in relation to risks, returns, stocks, investments, behaviour, markets and performance.

## **Conclusion**

Earlier in this piece, the aim has been to look into the publication history of the *Journal of Behavioural Finance* and examine its impact in the field of finance generally and in behavioural finance more specifically. While *JBF* is a relatively young journal, and has less output than comparable finance journals, it has made its strategic mark based on a number of key important contributions and citations. What this paper has shown is the unique focus and intent of the journal. This was evident in its scope and the range of topics that it published over the years. Earlier it was found that other journals focus on corporate governance, liquidity, returns, risk or markets. It is important to point out the *JBF* has also investigated these same issues but also interspersed them with the psychology of financial markets allowing *JBF* to focus on topics such as investment policy, decision making, disposition effect and investor sentiment. This provides *JBF* a unique 'brand' and a scholarly position that connects with the general finance literature but is also grounded in a specific niche. Knowing now what *JBF* has been publishing for the past few years in comparison to others, and where and how it is making an impact, the journal is faced with an opportunity to shape its future direction.

It is clear earlier that the closest journals to *JBF* are *Review of Behavioral Finance* and *Journal of Behavioral and Experimental Finance*. While these two have less publications, as they are quite new journals, and certainly the three combined compared to their relative position in the finance discipline, it is interesting to note that while they pursue research on similar topics they are not the same. This adds the necessary variety of research undertaken in this area. It is expected that the contributions of the three will grow and that their value-add in the field of behavioral finance will become more prominent.

As mentioned earlier, this study is limited to the use of the indexing databases available and it may be possible to get more data for *JBF* should various databases are pulled together. That is, the data might not be complete, thus making the results inconclusive. Nonetheless, this paper provides a deeper understanding of the research areas of behavioral finance using *JBF* as an example.

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