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Ranking Journals Using Social Science Research Network Downloads

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Abstract. I use a new approach to rank journals, namely the number and percent frequency of articles a journal publishes that are heavily downloaded from the Social Science Research Network (SSRN). I rank 18 accounting and finance journals, and I identify five journals not considered by the two most recent major published ranking studies of publications by accounting faculty, namely (in rank order): *Journal of Financial Economics, Review of Accounting Studies, Review of Quantitative Finance and Accounting, Journal of Corporate Finance,* and *Journal of International Financial Management and Accounting*. I show that financial accounting faculties are more likely to post their working papers to SSRN, and papers posted by financial faculties generate more downloads. I mitigate this bias in favor of the financial area by providing separate rankings based on authors in the financial versus non-financial areas.

Key words: downloads, journal rankings, accounting faculty, social science research network

JEL Classification: M4

1. Introduction

Faculty and administrators use journal rankings in numerous evaluation contexts, such as to make funding, hire, tenure, and promotion decisions. Both *Business Week* and the *Financial Times* consider publication in 'top journals' when assessing intellectual capital as a factor in rating graduate business programs. For example, the *Financial Times* measures intellectual capital of faculty in its January 2002 ranking of the top 100 graduate schools of business in the world via publications in three accounting journals (*Journal of Accounting Research, Journal of Accounting and Economics* and *The Accounting Review*) and three finance journals (*Journal of Finance, Journal of Financial Economics* and *Review of Financial Studies*).

The most common way to rank journals is to seek opinions of faculty members via surveys (Raabe et al., 1987; Schroeder et al., 1988; Hull and Wright, 1990; Brown and Huefner, 1994; Brinn et al., 1996; Borde et al., 1999; Ballas and Theoharakis, 2002). An alternative way to rank journals is via citations to the journal's articles (McRae, 1974; Dyckman and Zeff, 1984; Brown and Gardner, 1985; Smith and Krogstad, 1988; Chung et al., 2001; Krogstad and Smith, 2003). I use a new approach to rank journals, the number and percent frequency of articles a journal publishes that are heavily downloaded from the Social Science Research Network (hereafter SSRN).[1] I identify five journals not considered by the two most recent major published ranking studies of publications by accounting faculty, namely

(in rank order): *Journal of Financial Economics, Review of Accounting Studies, Review of Quantitative Finance and Accounting, Journal of Corporate Finance,* and *Journal of International Financial Management and Accounting*.

Surveys suffer from sample representation bias, response bias, and respondents' lack of familiarity with certain journals. Citations suffer from authors citing editors and potential reviewers (Brown and Gardner, 1985), negative cites (Croom, 1970), popular authors (May, 1967), and biases favoring articles in well-populated disciplines, review and methodological articles (Woodward and Henson, 1976). For a journal to be ranked via a survey, the author's survey must include it. Journals ranked via citation must be included in the author's source of journals, typically the Social Science Citation Index, which surveys about 10% of the academic literature (MacRoberts and MacRoberts, 1989). Thus, the number of journals potentially ranked is limited when either a survey or citation-based technique is used.

A download procedure has several advantages versus other approaches. First, it is a demand-driven, micro-level approach, which examines all working papers individually, determining if they are heavily downloaded, if, when and where they get published. Second, all journals potentially are eligible for inclusion. Unlike surveys and citations, no list of journals is specified. Third, it focuses on working papers, giving the academic community a chance to register interest before editors and reviewers decide what should be published.

A download procedure is not without flaws. Papers that are downloaded need not be read, low quality papers written by popular authors or papers on hot topics are more likely to be heavily downloaded, and authors (in theory) can download their own papers as often as they like. Moreover, the SSRN is economics-based and this bias cannot be completely eliminated.[2] Indeed, consistent with a bias favoring the economic paradigm, I show that financial accounting faculties (who are most likely to adopt the economics paradigm and conduct empirical/archival research) are more likely to post their working papers to SSRN, and papers posted by financial faculties generate more downloads. I mitigate this bias by providing separate analyses based on authors in the financial versus non-financial areas.

I validate the download procedure in several ways. I show that the procedure provides journal rankings generally consistent with those of the two most recently published major ranking studies (Hull and Wright, 1990; Brown and Huefner, 1994) and that downloads are positively related to citations, another common method of ranking journals. As further validation, I show that, in contrast to the above two studies, all 'top 5' journals based on the technique are included in the only six accounting and finance journals considered by the *Financial Times* in its January 2002 ranking of the top 100 graduate schools of business in the world.

I proceed as follows. I discuss data and methodology in Section 2, and present primary results in Section 3. I compare and contrast my findings with those of Hull and Wright (1990) and Brown and Huefner (1994) in Section 4. I conduct additional analyses in Section 5. Section 6 provides a summary and implications.

2. Data and methodology

I obtain two sets of data from SSRN on October 8, 2001, the top: (1) 500 downloads from the Accounting Research Network (hereafter ARN), one of seven networks that constitutes

SSRN[3] and (2) 1000 people posting to SSRN whose papers are most heavily downloaded, regardless of the network posted to.[4] The top 500 ARN downloads are the 500 papers downloaded the most since the network's inception, presented in decreasing order of downloads. The 500th paper was downloaded 204 times, which serves as my lower bound for heavily downloaded papers.[5] I retain all papers authored or co-authored (hereafter authored) by accounting faculty members (source: Hasselback, 2002). I examine the top 1000 SSRN authors, retaining 178 individuals who are accounting faculty members.[6] I add papers downloaded at least 204 times that are authored by accounting faculty members and posted to any of the seven SSRN networks.

My two procedures yielded 427 heavily downloaded papers. I contacted every author in October 2001 to determine the status of his/her working papers, and obtained a very large (98.4%) response rate. I checked with journal editors to verify that papers authors said were forthcoming were formally accepted for publication. If validated, I included the paper as a publication; otherwise I excluded it. 223 papers qualify either as published (1996–2001) or forthcoming. After collecting these data, I decided to confine my study to 1999–2001 because including papers published 1996–1998 or forthcoming after 2001 would unnecessarily bias my study in favor of journals that are quicker to accept and quicker to publish.

I calculate four rankings. My first ranking uses the total number of heavily downloaded papers authored by accounting faculties published during the three years, 1999–2001. My second ranking deflates this number by the total number of articles authored by accountants the journal published 1999–2001. My third and fourth rankings are similar to my first two rankings but I omit conference papers, special issues, supplements, and symposia (hereafter conferences).[7] I require that each journal I include publishes at least two heavily downloaded papers authored by accountants, 1996–forthcoming, and at least 10 papers authored by accountants, 1999–2001. Eighteen journals satisfy these dual criteria.[8] Thirteen journals have the words accounting, auditing or taxation in their titles. The other five journals have the words finance or financial in their titles.

I selected my first ranking because it is the most comprehensive measure. Its defect is failure to adjust for the fact that some journals publish far more articles than do others. I construct my second ranking to adjust for journal size. I selected my third and fourth rankings in recognition of the fact that conferences may be devoted to 'hot topics' or 'survey articles,' whose papers are likely to be downloaded more often, biasing rankings in favor of journals having conferences. Moreover, if journals holding conferences do not publish conference papers, their total presence in the literature likely would be smaller so including conferences biases the un-deflated rankings in favor of journals hosting conferences. Nevertheless, conference papers add to knowledge creation and dissemination so excluding them altogether is inappropriate. I consider all four rankings to be equally valid so I take a mean of the four rankings as my overall measure.

3. Primary results

Table 1 provides the rankings. A simple average of the four ranking procedures yields the following 'top 5' journals (in order): *Journal of Accounting and Economics* (JAE), *Journal*

Table 1. Journal ranking combining all areas: financial, managerial, auditing, tax and systems

Journal Name	Undeflated Includes Conf. Papers	1st Rank	Deflator 1	Deflated Includes Conf. Papers	2nd Rank	Undeflated Excludes Conf. Papers	3rd Rank	Deflator 2	Deflated Excludes Conf. Papers	4th Rank	Mean Rank
Journal of Accounting and Economics	26	2	87	29.89%	2	15	2	52	28.85%	2	2
Journal of Accounting Research	28	1	100	28.00%	3	20	1	76	26.32%	4	2.25
Journal of Finance	8	5.5	18	44.44%	1	8	4.5	18	44.44%	1	3
The Accounting Review	11	3	70	15.71%	8	11	3	70	15.71%	6	5
Journal of Financial Economics	5	9	20	25.00%	4	5	6	18	27.78%	3	5.5
Review of Accounting Studies	10	4	49	20.41%	5	4	8	27	14.81%	8	6.25
Accounting Horizons	8	5.5	68	11.76%	10	8	4.5	68	11.76%	10	7.5
Journal of Financial and Quantitative Analysis	2	13.5	11	18.18%	7	2	13	11	18.18%	5	9.625
Journal of Accounting, Auditing and Finance	7	7	66	10.61%	11	3	10	32	9.38%	11	9.75
Financial Analysts Journal	3	11	15	20.00%	6	2	13	14	14.29%	9	9.75
Contemporary Accounting Research	6	8	88	6.82%	13	4	8	59	6.78%	13	10.5
Review of Quantitative Finance and Accounting	4	10	51	7.84%	12	4	8	51	7.84%	12	10.5
Journal of Corporate Finance	2	14	15	13.33%	9	2	13	13	15.38%	7	10.75
Auditing: A Journal of Practice and Theory	2	14	72	2.78%	17	2	13	57	3.51%	15	14.75
International Journal of Accounting	2	14	63	3.17%	16	2	13	63	3.17%	16	14.75
Journal of Intl. Fin. Mgmt. and Accounting	1	17.5	24	4.17%	14	1	16.5	24	4.17%	14	15.5
Journal of the American Taxation Association	2	14	56	3.57%	15	0	18	32	0.00%	18	16.25
Accounting, Organizations and Society	1	17.5	76	1.32%	18	1	16.5	76	1.32%	17	17.25

Notes: Journals are limited to those having published at least two heavily downloaded papers authored by accountants 1996–forthcoming, and at least ten papers authored by accountants, 1999–2001. Undeflated is the number of highly downloaded papers published in the journal during 1999–2001. The second ranking is this number deflated by the total number of articles authored by accountants that are published in the journal during 1999–2001. Total number of papers includes discussion papers and short articles, but excludes FASB commentaries/responses, book reviews and biographies. Non-conference articles are the subset of articles in the first ranking that are not conferences, supplements, symposia or special issues. The fourth ranking is this number deflated by the total number of non-conference articles authored by accountants that are published in the journal during 1999–2001. Mean rank is a simple average of the four rankings.

of Accounting Research (JAR), *Journal of Finance* (JF), *The Accounting Review* (TAR), and *Journal of Financial Economics* (JFE). The 'next 5' journals are: *Review of Accounting Studies* (RAST), *Accounting Horizons* (AH), *Journal of Financial and Quantitative Analysis* (JFQA), *Journal of Accounting, Auditing and Finance* (JAAF), and *Financial Analysts Journal* (FAJ) [tied for 9th and 10th]. The 'other 8' journals are: *Contemporary Accounting Research* (CAR) and *Review of Quantitative Finance and Accounting* (RQFA) [tied for 11th and 12th], *Journal of Corporate Finance* (JCF) [13th], *Auditing: A Journal of Practice and Theory* (AJPT) and *International Journal of Accounting* (IJA) [tied for 14th and 15th], *Journal of International Financial Management and Accounting* [16th], *Journal of the American Taxation Association* (JATA) [17th], and *Accounting, Organizations and Society* [18th].

Journal of Accounting and Economics (JAE) ranks second on all four dimensions, revealing that its rank is invariant to scaling and inclusion of conference papers. *Journal of Accounting Research* (JAR) ranks first in the un-scaled rankings but no higher than third in the scaled rankings, revealing it has the largest mass, but not the largest percent frequency, of heavily downloaded papers. *Journal of Finance* (JF) ranks first in the scaled rankings but lower in the un-scaled rankings, indicating it publishes the largest percent frequency but not the largest mass of heavily downloaded papers. *The Accounting Review* (TAR) ranks higher on un-scaled dimensions (third) than on scaled dimensions (sixth or below), showing that its comparative advantage is mass, rather than frequency of heavily downloaded papers. Similar to *Journal of Finance* (JF) and the other three finance journals, *Journal of Financial Economics* (JFE) ranks higher on the scaled than on the un-scaled dimensions.[9]

Review of Accounting Studies (RAST) ranks fourth when conference papers are included but much lower (eighth) when they are excluded, suggesting that its conferences favor 'hot topics.'[10] *Accounting Horizons* (AH) ranks higher using un-scaled criteria. Similar to TAR, its comparative advantage is mass rather than percent frequency of papers. *Journal of Accounting, Auditing and Finance* (JAAF) ranks relatively higher using conference papers. Similar to RAST, its conferences focus on 'hot topics.'

Contemporary Accounting Research (CAR) ranks higher using un-scaled measures and its rank is identical both with and without conference papers, revealing that its comparative advantage is mass rather than percent frequency of papers and its conferences focus less on 'hot topics' than do RAST and JAAF.[11] *Review of Quantitative Finance and Accounting* (RQFA) ranks as high as eighth using an un-scaled metric and excluding non-conference papers, but lower otherwise. *Auditing: A Journal of Practice and Theory* (AJPT), *International Journal of Accounting* (IJA), *Journal of International Financial Management and Accounting* (JIFMA), and *Journal of the American Taxation Association* (JATA) rank no higher than 13th using any of the four ranking criteria. The highest that *Accounting, Organizations and Society* (AOS) ranks on any of the four dimensions is tied for 16th and 17th.

4. Comparison with Brown and Huefner (1994) and Hull and Wright (1990)

Table 2 compares the mean rankings in Table 1 with the survey rankings of Brown and Huefner (1994) and Hull and Wright (1990) [hereafter BH and HW]. Similar to HW but

Table 2. Rankings from current study versus two other studies

Journal Name	This Study	BH (1994)	HW (1990)
Journal of Accounting and Economics	1	3	4
Journal of Accounting Research	2	2	1
Journal of Finance	3	n/a	3
The Accounting Review	4	1	2
Journal of Financial Economics	5	n/a	n/a
Review of Accounting Studies	6	n/a	n/a
Accounting Horizons	7	14	31
Journal of Financial and Quantitative Analysis	8	n/a	5
Journal of Accounting, Auditing and Finance	9.5	10	9
Financial Analysts Journal	9.5	n/a	26
Contemporary Accounting Research	11.5	4	n/a
Review of Quantitative Finance and Accounting	11.5	n/a	n/a
Journal of Corporate Finance	13	n/a	n/a
Auditing: A Journal of Practice and Theory	14.5	6	17
International Journal of Accounting	14.5	24.5	n/a
Journal of Intl. Fin. Mgmt. and Accounting	16	n/a	n/a
Journal of the American Taxation Association	17	7	8
Accounting, Organizations and Society	18	5	6

Notes: This study's ranking is from the last column of Table 1. The BH (1994) ranking is from Table 4 of Brown and Huefner (1994). The HW (1990) ranking is from Table 1 of Hull and Wright (1990).

in contrast to BH, the download procedure includes non-accounting journals. Five of the 18 journals in Table 1 are finance journals: *Journal of Finance* (JF), *Journal of Financial Economics* (JFE), *Financial Analysts Journal* (FAJ), *Journal of Corporate Finance* (JCF), and *Journal of Financial and Quantitative Analysis* (JFQA). HW include JF, FAJ and JFQA, but exclude JFE and JCF. JCF was initiated after HW, so it could not have been included in HW, but JFE could have been as it began in the 1970s.

Journal of Accounting and Economics (JAE) and *Journal of Accounting Research* (JAR) respectively, rank first and second using a download procedure. Both BH and HW rank these two journals in the 'top 4,' but in the opposite order. BH ranks JAR second and JAE third; HW ranks JAR first and JAE fourth. Consistent with HW, a download procedure ranks *Journal of Finance* (JF) third. It ranks *The Accounting Review* (TAR) fourth, slightly below both BH and HW, who rank it first and second, respectively. It ranks *Journal of Financial Economics* (JFE) fifth. In sum, the download procedure's 'top 5' rankings generally are similar to those of both BH and HW. Its 'top 5' rankings consist of four journals that BH, HW, or both rank in their 'top 4,' plus JFE, a journal excluded from both surveys. In contrast to both HW and BH, all of the 'top 5' journals are part of the set of journals employed by the *Financial Times* when it ranked graduate business programs in 2001 and by Trieschmann et al. (2000) in their analyses of journal rankings.[12]

Review of Accounting Studies (RAST), initiated after both BH and HW were published (in 1996), ranks sixth. *Accounting Horizons* (AH) ranks seventh, well above its rankings by BH (14th) and HW (31st). *Journal of Financial and Quantitative Analysis* (JFQA) ranks

eighth, somewhat below its ranking by HW (5th). *Journal of Accounting, Auditing and Finance* (JAAF) and *Financial Analysts Journal* (FAJ) tie for 9th and 10th. JAAF's ranking is precisely the average of the two ranks by BH (10th) and HW (9th).

The SSRN download procedure's ranking of *Contemporary Accounting Research* (CAR) [tied for 11th and 12th with *Review of Quantitative Finance and Accounting* (RQFA)] is well below that of BH (4th). RQFA was initiated in 1993, after both the HW and BH surveys were conducted, so neither study could have included the journal in its survey. The SSRN download procedure ranks *Journal of Corporate Finance* (JCF), initiated in 1995 after both BH and HW were published, 13th. Both *Auditing: A Journal of Practice and Theory* (AJPT) and *International Journal of Accounting* (IJA) tie for 14th and 15th. AJPT ranks slightly above HW (17th) but well below BH (6th). AJPT's low ranking is consistent with the fact (shown below) that a download procedure using all papers to rank journals disadvantages journals publishing relatively fewer papers by financial faculties. As shown below, AJPT ranks considerably higher when papers authored by financial faculty are omitted. IJF ranks much higher than it did in BH (where it tied with *Advances in Accounting* for 24th and 25th). *Journal of International Financial Management and Accounting,* initiated in 1989, ranks 16th. While this journal could have been included by BH, it was excluded by both surveys. *Journal of the American Taxation Association* (JATA) ranks 16th, well below its rankings by BH (7th) and HW (8th). As shown below, when financial papers are omitted, JATA rises to 10th. *Accounting, Organizations and Society* (AOS) ranks 18th, well below the BH and HW rankings of 5th and 6th, respectively. AOS's low ranking may be attributable to the economics-bias of SSRN and/or the lack of downloading by non-North American faculty.[13]

5. Additional analyses

5.1. Assessing the validity of a download methodology

The dual facts that my results generally are consistent with the survey results of HW and BH, and that all my 'top 5' journals are included in the set of journals used by the *Financial Times* in its rankings of graduate business programs and by Trieschmann et al. (2000) in its analysis of journal rankings help to validate my methodology. I provide additional validity of the download procedure by showing that its journal rankings are positively correlated with citation, another method accounting faculty use to rank journals (McRae, 1974; Dyckman and Zeff, 1984; Brown and Gardner, 1985; Smith and Krogstad, 1988).

Table 3 places the 18 journals into three groups: 'top 5,' 'next 5' and 'other 8.' It provides evidence regarding two queries (Source: Social Science Citation Index, January 2002): (1) Are download rankings positively associated with citation? and (2) Are papers in the top half of heavily downloaded papers cited more than those in the bottom half? The cutoff for top versus bottom half of downloads for the 223 articles published or forthcoming is 424.

There is a monotonic relation between journal rank and mean citation frequency for all three groups of journals for 'top half' papers published in 1999–2001. For the 18 journals combined, 'top half' papers have more mean citations than 'bottom half' papers in all three

Table 3. Mean citation frequency of articles published in 18 journals

Journals		Published in 1999–2001		Published in 1999		Published in 2000		Published in 2001	
		Top Half	Bottom Half	Top Half	Bottom Half	Top Half	Bottom Half	Top Half	Bottom Half
Top 5 journals	Mean	3.04	2	5.25	2.55	3.39	2.09	2.04	0.83
	N	50	28	8	11	18	11	24	6
Next 5 journals	Mean	1.64	0.69	5.5	1.83	1.17	0	0.83	0
	N	14	16	2	6	6	3	6	7
Other 8 journals	Mean	1	1	0	0	1	1.14	1.25	1
	N	8	12	1	1	3	7	4	4
All 18 journals	Mean	2.54	1.41	4.82	2.17	2.63	1.48	1.74	0.53
	N	72	56	11	18	27	21	34	17

Notes: The top 5 journals are *Journal of Accounting and Economics, Journal of Accounting Research, Journal of Finance, The Accounting Review* and *Journal of Financial Economics*. The next 5 journals are *Review of Accounting Studies, Accounting Horizons, Journal of Financial and Quantitative Analysis, Journal of Accounting, Auditing and Finance,* and *Financial Analysts Journal*. The other 8 journals are *Contemporary Accounting Research, Review of Quantitative Finance and Accounting, Journal of Corporate Finance, Auditing: A Journal of Practice and Theory, International Journal of Accounting, Journal of International Financial Management and Accounting, Journal of the American Taxation Association, and Accounting, Organizations, and Society.* Mean citation frequency for papers published in 18 journals, 1999–2001. The three groupings are based on the mean ranks in Table 1. Top (bottom) half indicates the paper appears in the top (bottom) half of downloads (424). The source of citations is the *Social Science Citation Index*. The citation analysis was conducted during January 2002.

years. Moreover, there is a monotonic relation for 'top 5' versus 'next 5' for 'bottom half' papers for each year, and for 'top half' papers for 2000 and 2001. It is evident that citations map well into downloads.[14]

5.2. *Representativeness of the accounting discipline of articles published in the 18 ranked journals*

If all journals publish papers that equally represent papers written by faculties in all areas of the accounting discipline, journal rankings would be invariant to biases arising from the fact (shown below) that financial accounting faculties post their working papers to SSRN more often and these papers are downloaded more often. To determine if articles published in the 18 journals equally represent the different accounting disciplines, I took a 10% random sample of accounting faculty (Hasselback, 2002) and acquired the following information during February 2002.[15]

(1) Individual's area(s) of specialization.
(2) Number of papers the individual posted to SSRN.
(3) Number of downloads for each paper posted to SSRN.

I identified 703 people who listed at least one of 26 areas of specialization. Most faculty members listed multiple areas, but nearly all (660/703) included one of five areas: financial, managerial, auditing, tax or systems. I retain these 660 faculty members, omitting those (about 6%) who do not include any of these five areas. The last row of Table 4 shows frequency, by area, of these accounting faculties.[16] Financial is the largest area, nearly double the size of the managerial area, about triple the size of the auditing and tax areas, and over four times the size of the systems area. While the Hasselback (2002) teaching/research classification are admittedly noisy proxies for research area, they should be unbiased measures of individuals' research areas.

If all journals publish papers in proportion to faculty represented by all areas, the percent of papers published by area would be: financial (40.2%), managerial (23.4%), auditing (14.6%), tax (12.7%), and systems (9.1%).[17] Table 4 provides information regarding the distribution of papers published in the 18 journals by area of specialization. Not surprisingly, finance journals are most over-represented by accounting faculties in the financial area, but two accounting journals have nearly 65% of their articles authored by financial faculties: *Review of Accounting Studies* and *Journal of Accounting and Economics*. Only three accounting journals under-represent the financial area, *Journal of the American Taxation Association, Auditing: A Journal of Practice and Theory* and *Accounting, Organizations and Society*. *The Accounting Review* and *International Journal of Accounting* are the two most representative journals of the financial area.

Five journals slightly over-represent the managerial area: *International Journal of Accounting, Review of Accounting Studies, Journal of Corporate Finance, The Accounting Review, Journal of International Financial Management* and *Accounting, Organizations and Society* over-represents this area, with over twice the representation of the random sample. At the other extreme, several finance journals have less than 10% representation, and two accounting journals have less than 15%: *Journal of the American Taxation Association* and *Auditing: A Journal of Practice and Theory*.

Not surprisingly, *Auditing: A Journal of Practice and Theory* is most over-represented by publication by auditing faculty members, over triple that of the random sample (46.51% versus 14.59%). Four other accounting journals over-represent this area, *The Accounting Review* (20.10%), *Contemporary Accounting Research* (17.03%), *Accounting Horizons* (16.06%), and *International Journal of Accounting* (15.83%). At the other extreme, three accounting journals have less than 5% of articles by auditing faculty, *Journal of the American Taxation Association* (2.53%), *Journal of Accounting and Economics* (4.44%), and *Review of Accounting Studies* (4.66%).

Not surprisingly, *Journal of the American Taxation Association* is most over-representative of the tax area; nearly five times that of the underlying discipline (60.41% versus 12.74%). No other journals over-represent the tax area. Three accounting journals have less than 1.5% representation in this area: *Auditing: A Journal of Practice and Theory, Journal of International Financial Management and Accounting,* and *Accounting, Organizations and Society*.

Consistent with conventional wisdom that accounting journals publish few systems papers, only one journal, *Accounting, Organizations and Society,* over-represents the area (12.68%). *Auditing: A Journal of Practice and Theory* (7.60%) is the next most representative

Table 4. Percent frequency distribution of articles published 1999–2001 by accounting faculty area

Journal	Financial	Managerial	Auditing	Tax	Systems	Rep Index	Nonacc %
Journal of Accounting and Economics	64.50	20.57	4.44	7.3	0.95	799.15	3.33
Journal of Accounting Research	60.95	20.23	13.65	4.47	0.7	581.97	1.96
Journal of Finance	83.33	4.17	8.33	2.78	1.39	2429.11	92.97
The Accounting Review	44.12	24.62	20.1	8.86	2.31	109.28	0
Journal of Financial Economics	79.17	14.17	2.92	3.75	0	1905.4	88.3
Review of Accounting Studies	64.69	26.22	4.66	4.42	0	860.95	5.77
Accounting Horizons	55.56	17.53	16.06	6.74	4.12	333.89	8.11
Journal of Financial and Quantitative Analysis	87.27	6.06	3.33	0	3.33	2839.88	85.71
Journal of Accounting, Auditing and Finance	62.84	21.34	9.71	3.03	3.08	672.71	5.71
Financial Analysts Journal	85.56	8.89	3.33	2.22	0	2589.45	88.1
Contemporary Accounting Research	56.06	20.86	17.03	4.85	1.2	389.66	0
Review of Quantitative Finance and Accounting	63.1	21.01	9.93	3.63	2.32	682.55	57.5
Journal of Corporate Finance	57.78	25.56	6.67	10	0	468.67	71.15
Auditing: A Journal of Practice and Theory	30.51	13.94	46.51	1.45	7.6	1330.43	8.86
International Journal of Accounting	47.59	26.26	15.83	4.02	6.29	149.2	14.86
Journal of Intl. Fin. Mgmt. and Accounting	62.85	23.96	7.99	1.04	4.17	719.45	31.43
Journal of the American Taxation Association	22.71	12.86	2.53	60.41	1.49	2890.92	1.75
Accounting, Organizations and Society	23.77	49.98	12.48	1.10	12.68	1130.81	23.53
Random Sample	40.18	23.35	14.59	12.74	9.14		

Notes: Percent frequency distribution by area is determined for each journal and for a random sample of 703 accounting faculty obtained from the alphabetical listing in the back of Hasselback (2002). All percent frequency distributions sum to 100.00. Authors in multiple areas are accorded partial representation. For example, a co-authored paper whose first author is in the managerial area and whose other author is in both the financial and auditing areas is coded as 0.5 financial, 0.25 managerial and 0.25 auditing. A journal's percent frequency distribution by area is a simple average of all the papers it publishes authored by accountants, 1999–2001. Percent frequency distribution for the random sample is based on data from the random sample of 703 accounting faculty. Rep Index is the sum of squared differences between an area's percent frequency distribution in a journal and the area's percent frequency distribution in the random sample. Nonacc % is the percent of papers published by a journal, 1999–2001, where none of the authors are accounting faculty.

journal of this area. *Review of Accounting Studies* is the only accounting journal to publish zero papers by systems faculty, but the two highest ranked accounting journals, *Journal of Accounting and Economics* and *Journal of Accounting Research,* publish less than 1% of their papers by systems faculty.

Table 4 also contains a journal 'representativeness index,' [hereafter RI], created similar to a chi-square statistic. RI is the sum of the squared differences between the journal's representativeness of an area and the random sample's representativeness of an area. The journal with the lowest index best represents the accounting discipline. *The Accounting Review* is the most representative journal (RI = 109.28), followed by *International Journal of Accounting* (149.20), *Accounting Horizons* (333.89), and *Contemporary Accounting Research* (389.66). *Journal of the American Taxation Association* is the least representative journal (RI = 2890.92), followed by *Journal of Financial and Quantitative Analysis* (2839.88), *Financial Analysts Journal* (2589.45), and *Journal of Finance* (2429.11). The magnitude of the RI's conform to conventional wisdom that general journals, such as *The Accounting Review* and *Contemporary Accounting Research,* are more representative of the underlying discipline than specialty journals, such as *Auditing: A Journal of Practice and Theory* and *Journal of the American Taxation Association.*

The last column in Table 4 shows the frequency percent of non-accountants. All papers published by *The Accounting Review* and *Contemporary Accounting Research* between 1999 and 2001 have at least one accounting author. The other five accounting journals ranking in the 'top 10' also have less than 10% representation by non-accounting faculty, but they have some papers published by non-accountants: *Journal of Accounting and Economics, Journal of Accounting Research, Review of Accounting Studies, Accounting Horizons,* and *Journal of Accounting, Auditing and Finance* published 3.33%, 1.96%, 5.77%, 8.11%, and 5.71% of articles by non-accounting faculty, respectively.[18] In contrast, four of the finance journals have at least 85% of their articles authored by non-accounting faculty, *Journal of Finance, Journal of Financial Economics, Financial Analysts Journal,* and *Journal of Financial and Quantitative Analysis,* revealing the importance of deflating by papers published by accountants in lieu of deflating by all papers the journal publishes.

5.3. Representativeness of downloaded papers of the accounting discipline

If accounting faculties in all areas are equally likely to post their working papers to SSRN, and if posted papers by faculties in all areas are equally likely to be downloaded, a journal's representativeness index will not impact its journal ranking. However, if some faculties are more likely to post to SSRN and to have their papers heavily downloaded, download procedures will bias rankings in favor of journals publishing relatively more papers in certain areas. The potential benefit of posting increases with the number of interested readers, and larger areas have more interested readers. Thus, it is likely that financial faculties are more likely to post to SSRN and to have their papers downloaded because they are the largest of the five areas.

To see if faculty members in the financial area are more likely to post their papers and to have their papers downloaded more often, I compare each area's postings and downloads.

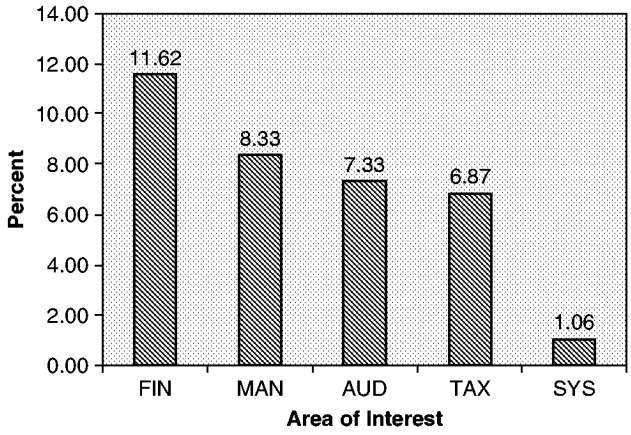

Figure 1. Percent of accounting faculty in an area of interest who post to SSRN.

Figure 1 shows that financial faculties (11.62% of whom post) are about 40% more likely to post than are managerial faculties (8.33%), about 60–70% more likely to post than are auditing and tax faculties (7.33% and 6.87%, respectively), and nearly 11 times more likely to post than are systems faculties (1.06%). Indeed, the rank order of the five areas in Figure 1 is identical to the relative size of the area in the accounting discipline shown in the last row of Table 4.

Figure 2 examines if posted papers by financial faculty are downloaded more than papers authored by other faculties. The ranking of the median number of downloads by area is similar to Figure 1: financial (median downloads = 211), managerial (202.5), tax (178), auditing (120.5), and systems (68). Figures 1 and 2 reveal that the Table 3 rankings favor journals publishing a relatively larger proportion of their papers by financial faculty.[19]

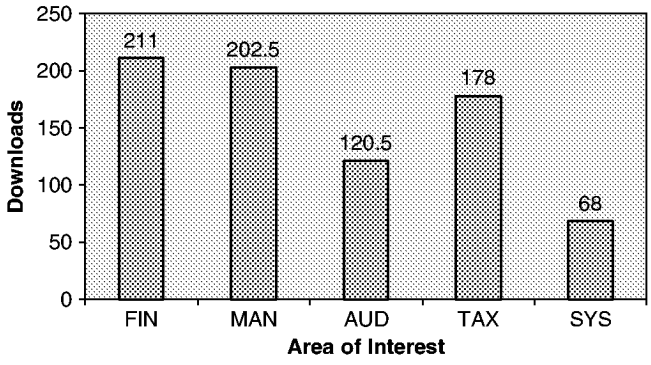

Figure 2. Median downloads for papers posted to SSRN by area of interest.

5.4. Mitigating the financial bias

I mitigate the 'financial bias' by dichotomizing papers into two mutually exclusive and collectively exhaustive parts: papers posted by financial faculty versus papers posted by other (managerial, auditing, tax and systems) faculties.[20] In order to be included in these rankings, a journal must publish at least ten papers by accountants 1999–2001 for both financial and other non-financial faculty separately. All five finance journals fail this criterion for non-financial faculties so they are eliminated from the Table 5 rankings. Thirteen journals with the names accounting, auditing or tax in their titles remain. Panels A and B respectively rank financial and other papers for the 13 accounting journals.

If the dichotomization procedure mitigates the financial bias, the panel B rankings of less financial-oriented journals should exceed the panel A rankings as less financial-oriented journals should publish higher quality non-financial vis a vis financial papers. Similarly, panel A rankings of more financial-oriented journals should exceed panel B rankings because more financial-oriented journals should publish higher quality financial versus non-financial papers.[21]

Table 4 showed that *The Accounting Review* (TAR), *Journal of the American Taxation Association* (JATA), *International Journal of Accounting* (IJA), *Auditing: A Journal of Practice and Theory* (AJPT), and *Accounting, Organizations and Society* (AOS) are the least financial-oriented journals. Consistent with my procedure mitigating the financial bias, TAR rises from 4th in panel A to 3rd in panel B; JATA rises from 11th to 10th; and AJPT rises all the way from 10th to 6th.[22]

Review of Accounting Studies (RAST), the most financial-oriented journal, drops two places, from 3rd in panel A to 5th in panel B. Four other journals publish more than 60% of their papers in the financial area: *Journal of Accounting and Economics* (JAE), *Journal of Accounting Research* (JAR), *Journal of Accounting, Auditing and Finance* (JAAF), and *Review of Quantitative Finance and Accounting* (RQFA). JAR drops from 1st in panel A to 2nd in panel B; JAAF drops from 7th to 8th; and RQFA drops from 6th to 7th. It is evident that the dichotomization procedure helps to mitigate the financial bias inherent to the Table 1 rankings.

6. Summary

Past research has identified three top accounting journals (Hull and Wright, 1990; Brown and Huefner, 1994): *The Accounting Review* (TAR), *Journal of Accounting Research* (JAR) *and Journal of Accounting and Economics* (JAE). I use a new procedure to rank journals: the number and percent frequency of papers authored by accountants a journal publishes that are highly downloaded from the Social Science Research Network website. A download procedure also identifies these three journals as the top three accounting journals.[23] Altogether, I rank 18 accounting and finance journals.

Two of the 'top 6' journals are excluded by HW and BH, *Journal of Financial Economics* (JFE, ranked 5th) and *Review of Accounting Studies* (RAST, ranked 6th). I rank three additional journals excluded by these studies: *Review of Quantitative Finance and Accounting*

Table 5. Journal rankings based on dichotomizing into financial versus other

Journal Name	Undeflated Includes Conf. Papers	1st Rank	Deflator1	Deflated Includes Conf. Papers	2nd Rank	Undeflated Excludes Conf. Papers	3rd Rank	Excludes Conf. Papers	Deflated Excludes Conf. Papers	4th Rank	Mean Rank
Panel A: Financial											
Journal of Accounting Research	20.33	1	60.95	33.36%	1	14.67	1	45.45	32.27%	1	1
Journal of Accounting and Economics	16.08	2	57.4	28.02%	2	8.58	2	29.05	29.54%	2	2
Review of Accounting Studies	7.43	3	31.7	23.45%	3	2.6	7	14.03	18.53%	3	4
The Accounting Review	5.03	6	30.88	16.30%	4	5.03	3	30.88	16.30%	4	4.25
Contemporary Accounting Research	5.17	5	49.33	10.47%	6	3.17	4.5	31.73	9.98%	5	5.125
Review of Quantitative Finance & Accounting	3.17	7	32.18	9.84%	7	3.17	4.5	32.18	9.84%	6	6.125
Journal of Accounting, Auditing and Finance	5.28	4	41.48	12.74%	5	0.75	9	27.64	2.71%	11	7.25
Accounting Horizons	3	8	36.67	8.18%	8	3	6	36.67	8.18%	7	7.25
International Journal of Accounting	1.67	9	27.6	6.04%	9	1.67	8	27.6	6.04%	8	8.5
Journal of Intl. Fin. Mgmt. and Accounting	0.5	11	15.08	3.32%	10	0.5	11	15.08	3.32%	9	10.25
Accounting, Organizations and Society	0.5	11	18.07	2.77%	11	0.5	11	18.07	2.77%	10	10.75
Auditing: A Journal of Practice and Theory	0.5	11	21.97	2.28%	13	0.5	11	18.7	2.67%	12	11.75
Journal of the American Taxation Association	0.33	13	12.72	2.62%	12	0	13	6.77	0.00%	13	12.75
Panel B: Managerial, auditing, tax and systems											
Journal of Accounting and Economics	9.92	1	29.6	33.50%	1	4.42	4	15.95	27.69%	1	1.75
Journal of Accounting Research	7.67	2	39.05	19.63%	2	5.33	2	30.55	17.46%	2	2
The Accounting Review	5.97	3	39.12	15.25%	4	5.97	1	39.12	15.25%	4	3
Accounting Horizons	5	4	29.33	17.05%	3	5	3	29.33	17.05%	3	3.25
Review of Accounting Studies	2.57	5	17.3	14.84%	5	1.4	6	11.97	11.70%	5	5.25
Auditing: A Journal of Practice and Theory	1.5	8	50.03	3.00%	10	1.5	5	38.3	3.92%	8	7.75
Review of Quantitative Finance & Accounting	0.83	9.5	18.82	4.43%	8	0.83	7.5	18.82	4.43%	7	8
Journal of Accounting, Auditing and Finance	1.72	6	24.53	7.00%	6	0.25	12	17.36	1.44%	10	8.5
Journal of Intl. Fin. Mgmt. and Accounting	0.5	11.5	8.92	5.61%	7	0.5	9.5	8.92	5.61%	6	8.5
Contemporary Accounting Research	0.83	9.5	38.67	2.15%	11	0.83	7.5	27.27	3.06%	9	9.25
Journal of the American Taxation Association	1.67	7	43.28	3.85%	9	0	13	25.23	0.00%	13	10.5
Accounting, Organizations and Society	0.5	11.5	57.93	0.86%	13	0.5	9.5	57.93	0.86%	12	11.5
International Journal of Accounting	0.33	13	30.4	1.10%	12	0.33	11	30.4	1.10%	11	11.75

Notes: Journals are limited to those 13 journals in Table 4 with a non-accounting % below 70%. Undeflated is the number of highly downloaded papers authored by accountants that are published in the journal during 1999–2001. The second ranking is this number deflated by the total number of articles authored by accountants that are published in the journal during 1999–2001. Total number of papers includes discussion papers and short articles, but excludes FASB commentaries/responses, book reviews and biographies. Non-conference articles are the subset of articles in the first ranking that are not conferences, supplements, symposia or special issues. The fourth ranking is this number deflated by the total number of non-conference articles authored by accountants that are published in the journal during 1999–2001. For each of the 13 journals in this table, deflator 1 (2) in panels A and B sum to deflator 1 (2) in Table 1. Mean rank is a simple average of the four rankings.

(tied for 11th and 12th), *Journal of Corporate Finance* (13th), and *Journal of International Financial Management and Accounting* (16th).

I document that a download procedure favors financial versus other areas of the accounting discipline (managerial, auditing, tax and systems) and that different journals do not equally represent papers published in the financial versus other areas. I reduce this bias by dichotomizing the 13 accounting journals into two groups, financial versus other.[24]

I show that a download procedure is a valid technique in several respects. First, it provides similar rankings to the surveys of HW and BH. Second, journal rankings based on the technique are positively correlated with citation. Third, it provides similar rankings to those of *The Financial* Times and Trieschmann et al. (2000). Fourth, it includes journals omitted by past ranking studies of accountants that have been highly ranked by other authors.[25] Fifth, I obtained a 98.4% response rate when I queried authors as to the status of their working papers so my study does not suffer from a survey bias.

I do not presume that an SSRN download procedure is better than other, more conventional techniques, such as survey or citation. Each procedure has non-identical strengths and weaknesses so each provides incremental evidence regarding journal rankings. A download procedure should be considered as complementary to, not a substitute for, other techniques for ranking journals.

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Notes

1. There are other ways to rank journals such as academic journal library holdings (Lowe and Locke, 2002). While my study is the first to use downloads to rank journals, it is not the first to use downloads. Pinkowitz (2002) uses downloads from the *Journal of Finance* website to examine research dissemination.
2. Economists founded the SSRN and most of its board members are trained as economists.
3. The others are Economics Research Network, Financial Economics Network, Legal Scholarship Network, Management Research Network, Marketing Research Network, and Negotiations Research Network.
4. I'saved' all the data I needed within two hours, being cognizant of the fact that the SSRN database is updated regularly. According to SSRN, the top 1000 people constitute less than 2% of the total number of people who post to SSRN. The date I selected is arbitrary. I simply wanted to capture all the data at a point in time, and I began work on the project shortly thereafter so the data would not get stale.
5. I could not use a lower benchmark than 204 unless I examined all papers posted to SSRN as of 10/8/01. Not surprisingly, I opted not to do this.
6. Hasselback (2002) lists over 11,000 individuals. The 178 people retained are about 1.5% of all accounting faculty.
7. With the exception of *Contemporary Accounting Research* (CAR), all journals that publish conference papers do so in separate issues. I identified CAR conference papers as those accompanied by discussion comments.

8. Two journals included in my study, *Journal of International Financial Management and Accounting* and *Accounting, Organizations and Society,* published two highly downloaded papers, 1996-forthcoming but only one during 1999–2001.
9. This finding also applies to *Journal of Financial and Quantitative Analysis* (JFQA), *Financial Analysts Journal* (FAJ) and *Journal of Corporate Finance* (JCF). With this brief discussion, I do not refer to these three finance journals hereafter in this section.
10. RAST has the largest decrease amongst accounting journals in percent frequency when conference papers are omitted, from 20.41% to 14.81%. As expected, most journals publishing conference papers have a decrease in percent frequency when conference papers are omitted. Aside from RAST, the other six journals publishing conference papers with a decrease are JAE (from 29.89% to 28.85%), JAR (28% to 26.32%), FAJ (20% to 14.29%), JAAF (10.61% to 9.38%), CAR (6.82% to 6.78%), and JATA (3.57% to 0%). Three journals publishing conference papers have a slight increase: JFE (25% to 27.78%), JCF (13.33% to 15.38%) and AJPT (2.78% to 3.51%). JF has conference papers [based on the AFA annual meeting] but no conference papers by accountants were published, 1999–2001.
11. This finding is consistent with CAR's broader call for papers in its conferences than do RAST and JAAF.
12. I omit the third finance journal used by the *Financial Times, Review of Financial Studies,* because it published fewer than ten papers by accountants during 1999–2001. Nevertheless, two of these five papers are heavily downloaded so the journal would rank highly if I did not omit journals publishing fewer than ten papers.
13. I examined but rejected a third possibility that non-North American based faculty are less likely to post to the SSRN. An examination of a random sample (discussed in section 5.2 below) revealed that faculty domiciled outside North America post more often than do North American based faculty.
14. My evidence is consistent with Pinkowitz (2002) who examined the *Journal of Finance* website and found that downloads are positively correlated with future citations.
15. More precisely, using random numbers without replacement, I examined all the names on 17 of the 164 pages providing an alphabetical listing of accounting faculties.
16. The number of people in the five areas of specialization sum to 1,028, suggesting that many of the 660 people listed more than one area. Individuals in multiple areas are given fractional weights (e.g., someone in auditing and systems is considered to be 0.5 in each area).
17. The financial percent is calculated as 100 times the ratio of 413 to 1028.
18. AH ranks high because it publishes a larger percent of papers than do the other 17 journals by practicing accountants who are not in Hasselback (2002).
19. The evidence in Figures 1 and 2 helps explain why the Table 3 rankings include numerous finance journals, but exclude other well regarded non-accounting journals, such as *Organizational Behavior and Human Decision Processes,* a leading journal (according to the *Financial Times*), wherein accounting faculty with a behavioral-orientation have a considerable presence. A download procedure is not unique in excluding behavioral-oriented journals from its rankings. Neither the surveys by HW and HW nor the citation studies by McRae (1974), Dyckman and Zeff (1984), Brown and Gardner (1985), and Smith and Krogstad (1988) include behavioral-oriented non-accounting journals.
20. Sample sizes are too small to decompose non-financial into managerial, auditing, tax and systems.
21. I assume that it is more competitive to publish papers of a particular type in a journal whose reputation is better established for the type.
22. AOS barely moves because it published only one highly downloaded paper in the three years, 1999–2001. It was included because it published or had forthcoming two highly downloaded papers, but one of them was forthcoming so it was omitted from the rankings that were based on the three years, 1999–2001.
23. These comparisons exclude the finance journals such as *Journal of Finance,* which ranks third both in this study and in Hull and Wright (1990). Nevertheless, the top three accounting journals are the same in this study, Hull and Wright (1990) and Brown and Huefner (1994).
24. I cannot completely eliminate the bias in favor of financial faculties because the SSRN has a bias in favor of economics and the financial faculty are the largest area, making them more likely to post papers and to have their posted papers downloaded.
25. For example, Chung et al. (2001) identify *Journal of Financial Economics* as one of the top two finance journals.

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