

4-1993

## Periodical Price Index 1993: Projecting Serials Costs; Periodicals Price Survey 1993

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### ScholarWorks Citation

Van Orsdel, Lee and Born, Kathleen, "Periodical Price Index 1993: Projecting Serials Costs; Periodicals Price Survey 1993" (1993). *Scholarly Papers and Articles*. 39.  
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# 33<sup>RD</sup> ANNUAL SURVEY

## PERIODICAL<sub>1993</sub>

## PRICE INDEX<sub>1993</sub>

*LJ's revamped  
periodicals price survey  
projects costs  
for 1994*

# The Art of Projecting:

## The Cost of Keeping Periodicals

*LJ's* 33rd consecutive Periodicals Price Survey takes a new approach this year. While we've always sought to include pertinent historical data to help readers make savvy budget decisions, this year's survey not only collects and tabulates the data but also provides cost projections for 1994. Equally important, the survey evaluates the critical factors that will weigh heavily on readers' budgetary decisions for the coming fiscal year: cost history and currency fluctuation. *LJ's* 1993 survey also introduces another essential budgetary determinant: a comprehensive cost evaluation of foreign as well as domestic publications. The price survey, cost projections, and currency trends are based on data supplied, compiled, and analyzed by EBSCO Subscription Services, Birmingham, Alabama.

"We're not just giving librarians the data, we're helping them interpret it," said Lee Ketcham, Director of Libraries, University of Montevallo, Alabama, who, along with Kathleen Born, Academic Division Marketing Manager, EBSCO, wrote this year's survey. Ketcham, a member of the advisory board for the Alabama Network of Academic Libraries, said their aim was to bring a set of complex issues into focus. "We hope this article gives librarians the information they need and improves their understanding of the issues," she said, "but only to the extent that it helps them formulate practical budgeting strategies." Ketcham and Born are both members of the Library Materials Price Index Committee (LMPIC) of the Association for Library Collections and Technical Services (ALCTS), a division of the American Library Association (ALA).—Ed.



PHOTO BY BILLY BROWN

EBSCO's Kathleen Born (l.) and University of Montevallo's Lee Ketcham

**Table 1: Cost History by Subject**

Subject	Average No. of Titles	Average Cost Per Title 1989	Average Cost Per Title 1990	% of Change	Average Cost Per Title 1991	% of Change	Average Cost Per Title 1992	% of Change	Average Cost Per Title 1993	% of Change	'89-'93 % of Change
General Works	78	\$51.40	\$55.64	<b>8.25</b>	\$65.05	<b>16.90</b>	\$63.28	<b>-2.72</b>	\$68.44	<b>8.16</b>	<b>33.15</b>
Philosophy & Religion	123	61.27	64.92	<b>5.94</b>	75.43	<b>16.20</b>	78.62	<b>4.22</b>	88.53	<b>12.61</b>	<b>44.49</b>
Psychology	132	99.09	109.06	<b>10.06</b>	122.49	<b>12.31</b>	136.98	<b>11.83</b>	149.29	<b>8.98</b>	<b>50.66</b>
History	202	53.95	57.20	<b>6.04</b>	63.49	<b>11.00</b>	69.10	<b>8.83</b>	74.16	<b>7.33</b>	<b>37.47</b>
Geography	61	141.36	155.85	<b>10.25</b>	193.25	<b>24.00</b>	218.88	<b>13.26</b>	236.79	<b>8.18</b>	<b>67.51</b>
Anthropology	42	110.78	121.16	<b>9.37</b>	136.60	<b>12.74</b>	146.61	<b>7.33</b>	148.49	<b>1.28</b>	<b>34.03</b>
Recreation	16	45.60	47.95	<b>5.17</b>	56.86	<b>18.57</b>	60.75	<b>6.84</b>	65.81	<b>8.34</b>	<b>44.33</b>
Business & Economics	247	119.56	131.08	<b>9.64</b>	159.79	<b>21.90</b>	175.55	<b>9.86</b>	196.86	<b>12.14</b>	<b>64.65</b>
Sociology	241	89.40	98.54	<b>10.23</b>	113.13	<b>14.80</b>	123.95	<b>9.57</b>	138.00	<b>11.34</b>	<b>54.37</b>
Political Science	62	70.77	76.47	<b>8.06</b>	92.58	<b>21.06</b>	99.94	<b>7.96</b>	112.50	<b>12.56</b>	<b>58.96</b>
Law	85	55.02	58.92	<b>7.09</b>	68.86	<b>16.87</b>	73.98	<b>7.44</b>	83.86	<b>13.36</b>	<b>52.44</b>
Education	97	82.41	92.03	<b>11.67</b>	107.48	<b>16.79</b>	113.67	<b>5.76</b>	130.57	<b>14.86</b>	<b>58.43</b>
Music	47	39.01	43.18	<b>10.71</b>	47.97	<b>11.07</b>	53.53	<b>11.60</b>	56.61	<b>5.75</b>	<b>45.12</b>
Art & Architecture	18	67.25	73.14	<b>8.77</b>	79.05	<b>8.07</b>	85.51	<b>8.17</b>	91.23	<b>6.69</b>	<b>35.67</b>
Language & Literature	292	49.32	51.36	<b>4.14</b>	59.02	<b>14.92</b>	62.08	<b>5.18</b>	67.57	<b>8.84</b>	<b>37.01</b>
General Science	66	180.49	190.34	<b>5.46</b>	234.15	<b>23.02</b>	300.35	<b>28.27</b>	348.18	<b>15.93</b>	<b>92.91</b>
Math & Computer Science	131	356.43	385.19	<b>8.07</b>	466.66	<b>21.15</b>	506.08	<b>8.45</b>	567.11	<b>12.06</b>	<b>59.11</b>
Astronomy	21	480.66	494.29	<b>2.84</b>	606.25	<b>22.65</b>	655.25	<b>8.08</b>	810.84	<b>23.74</b>	<b>68.69</b>
Physics	189	631.46	680.06	<b>7.70</b>	812.40	<b>19.46</b>	927.27	<b>14.14</b>	1090.34	<b>17.59</b>	<b>72.67</b>
Chemistry	193	608.29	641.26	<b>5.42</b>	789.09	<b>23.05</b>	915.75	<b>16.05</b>	1042.36	<b>13.83</b>	<b>71.36</b>
Geology	68	283.69	297.66	<b>4.92</b>	366.22	<b>23.03</b>	380.53	<b>3.91</b>	443.72	<b>16.61</b>	<b>56.41</b>
Biology	231	347.81	372.62	<b>7.13</b>	443.14	<b>18.92</b>	474.94	<b>7.17</b>	548.21	<b>15.43</b>	<b>57.62</b>
Botany	57	278.86	296.56	<b>6.35</b>	345.73	<b>16.58</b>	375.98	<b>8.75</b>	439.65	<b>16.93</b>	<b>57.66</b>
Zoology	106	265.97	291.92	<b>9.76</b>	335.23	<b>14.84</b>	362.22	<b>8.05</b>	413.42	<b>14.13</b>	<b>55.44</b>
Health Sciences	1194	236.70	256.64	<b>8.42</b>	307.17	<b>19.69</b>	337.36	<b>9.83</b>	380.06	<b>12.65</b>	<b>60.57</b>
Agriculture	177	185.63	200.26	<b>7.88</b>	241.68	<b>20.68</b>	254.22	<b>5.19</b>	292.75	<b>15.16</b>	<b>57.70</b>
Engineering & Technology	386	298.67	323.34	<b>8.26</b>	415.76	<b>28.58</b>	480.38	<b>15.54</b>	530.49	<b>10.43</b>	<b>77.62</b>
Food Science	13	254.80	256.59	<b>0.70</b>	339.03	<b>32.13</b>	367.88	<b>8.51</b>	422.85	<b>14.94</b>	<b>65.95</b>
Lib. & Information Science	62	82.65	91.52	<b>10.73</b>	106.11	<b>15.94</b>	119.82	<b>12.92</b>	127.08	<b>6.06</b>	<b>53.76</b>

**By Lee Ketcham & Kathleen Born**

**T**HE ARTFUL PERIODICALS price forecaster survives on a combination of knowledge, intuition, and luck. With an understanding of cost history, sharp intuition, and a nod to factors that can wreak havoc with library budgets, librarians can make informed, intuitive budget projections.

This study is based on three assumptions: 1) that cost history is one of the more useful indicators of future increases; 2) that foreign and domestic publications should be analyzed separately because of historic pricing differentials; and 3) that currency fluctuation dramatically affects the cost of periodicals and must be budgeted for despite its unpredictability.

Three large Institute for Scientific Information (ISI) databases were used for this analysis—Arts and Humanities Citation Index, Social Sciences Citation Index, and Science Citation Index—yielding a core list of some

4,693 titles across all disciplines. For practical reasons, the study was limited to prepriced titles that can be ordered through a vendor.

Using EBSCO Subscription Services' database of 220,000 title records, five years of cost history were culled for each title in the three indexes. The titles were sorted by Library of Congress (LC) subject heading and by continent/country of origin. Price and currency trends were analyzed, and a 1994 budget projection was developed for each of the three ISI indexes. This study is based on data that were current as of March 1, 1993.

**A look at cost trends**

Much has been written about the exploding cost of periodicals. Easily recognizable factors such as inflation, the weakness of the dollar, postage hikes, growth in volumes or pages, and mergers and splits have obviously contributed to the upward spiral. Publishers have also explained price increases in terms of ongoing competition for the best scholarly properties, the splin-

tering of disciplines and their literatures, the erosion of page subsidies, reduced audiences, canceled subscriptions, and the pressures of a publisher-perish marketplace.

While an understanding of the preceding factors is important, their very complexity limits their utility in estimating, for example, the cost of next year's biology subscriptions. On the other hand, studying the cost history of a discipline reduces much of the complexity to one set of numbers. The change in cost from year to year, expressed as a percentage, is a reliable indicator of the degree to which the factors described above are in effect.

It is not surprising that the sciences dominate the top of the tables. An examination of Table 1 shows Physics to have the highest average price in 1993 (\$1090), followed by Chemistry (\$1,042), Astronomy (\$811), Math and Computer Science (\$567), Biology (\$548), and Engineering and Technology (\$530). These six subjects have held the same relative position to each other for five years,

**Table 2:  
Percentage of Change in  
Cost by Subject 1989-1993**

Subject	% of Change
General Science	92.91
Engineering & Technology	77.62
Physics	72.67
Chemistry	71.36
Astronomy	68.69
Geography	67.51
Food Science	65.95
Business & Economics	64.65
Health Sciences	60.57
Math & Computer Science	59.11
Political Science	58.96
Education	58.43
Agriculture	57.70
Botany	57.66
Biology	57.62
Geology	56.41
Zoology	55.44
Sociology	54.37
Library & Information Science	53.76
Law	52.44
Psychology	50.66
Music	45.12
Philosophy & Religion	44.49
Recreation	44.33
History	37.47
Language & Literature	37.01
Art & Architecture	35.67
Anthropology	34.03
General Works	33.15

revealing a stable, historic pricing hierarchy. They are followed in the pricing hierarchy by Geology (\$444), Botany (\$440), Food Science (\$423), Zoology (\$413), Health Sciences (\$380), and General Science (\$348), which exhibit the same kind of relationship but at a lower average cost. (For the purposes of this study, medical and other health-related subjects were combined into one large grouping. As a result, the overall average for a title in the Health Sciences is moderate. For libraries that need a more detailed breakdown, EBSCO's Index Medicus™ Price Study is available.)

Astronomy emerges from the table as an interesting case, with the

**Table 3:  
Percentage of Change in  
Cost by Subject 1992-1993**

Subject	% of Change
Astronomy	23.74
Physics	17.59
Botany	16.93
Geology	16.61
General Science	15.93
Biology	15.43
Agriculture	15.16
Food Science	14.94
Education	14.86
Zoology	14.13
Chemistry	13.83
Law	13.36
Health Sciences	12.65
Philosophy & Religion	12.61
Political Science	12.56
Business & Economics	12.14
Math & Computer Science	12.06
Sociology	11.34
Engineering & Technology	10.43
Psychology	8.98
Language & Literature	8.84
Recreation	8.34
Geography	8.18
General Works	8.16
History	7.33
Art & Architecture	6.69
Library & Information Science	6.06
Music	5.75
Anthropology	1.28

third costliest average price per title in 1993. A look at individual titles reveals that ten out of the 21 astronomy titles on the core list cost more than \$500, with five costing more than \$1000.

### Projecting down the line

If costs continue to increase at their present rates, four years from now Physics, Chemistry, and Astronomy titles will remain the most expensive, at \$1,883, \$1,786, and \$1,368, respectively. Engineering and Technology titles (\$942) and Math and Computer Science titles (\$902) will move ahead of Biology (\$864). Table 2 shows the relative cost increase of the

disciplines in the last four years. It is interesting to note that 21 of the 29 subject categories increased by more than 50 percent, while library budgets increased only moderately, if at all, during the same time period. The smallest increase, in fact, was still more than 33 percent. No wonder libraries have undertaken massive periodical cancellation projects, in some cases cutting even core journals to keep up with escalating journal costs.

We were surprised to see General Science journals at the head of the list of subjects, with an increase of almost 93 percent in the last four years. A review of the 66 titles in that grouping found proceedings and transactions of learned societies and journals on cybernetics, artificial intelligence, and other esoteric subjects, which makes the large increase more understandable.

### Cost by country of origin

In addition to cost history, it is important to consider the historic difference between the pricing of U.S. and non-U.S. periodicals. As Table 4 illustrates, foreign journals cost significantly more than U.S. journals. (Table 4 is organized by broad subject category, following the organization of the ISI indexes.) A look at the numbers clearly shows the cumulative effect of the following hotly debated factors relating to foreign prices: differential pricing policies by non-U.S. publishers; demands by American libraries for faster delivery; and the impact of currency fluctuations and changing political and economic conditions around the world.

Surprisingly, the difference is most dramatic in Arts and Humanities. In 1989, for example, the average cost of a foreign journal in Arts and Humanities was 92 percent higher than that of a U.S. journal. By 1993, the margin had increased to 117 percent. These numbers suggest that titles in Arts and Humanities may require a closer budget watch in the future, particularly in libraries that order many non-U.S. titles in Arts and Humanities. A non-U.S. Social Sciences or Sciences title cost 74 percent more than its American counterpart in 1989. The differential for a non-U.S. title has since jumped to 93 percent for Social Sciences, 90 percent for Sciences.

A comparison of the percentage of change in cost through the years and between subjects plainly shows

**Table 4: Cost History by Broad Subject**

	Average No. of Titles	Average Cost Per Title 1989	Average Cost Per Title 1990	% of Change	Average Cost Per Title 1991	% of Change	Average Cost Per Title 1992	% of Change	Average Cost Per Title 1993	% of Change	'89-'93 % of Change
<b>ARTS &amp; HUMANITIES CITATION INDEX</b>											
U.S.	721	\$55.43	\$60.21	<b>8.6</b>	\$66.56	<b>10.5</b>	\$73.01	<b>9.7</b>	\$79.67	<b>9.1</b>	<b>43.7</b>
NON-U.S.	715	106.20	117.06	<b>10.2</b>	141.69	<b>21.0</b>	153.57	<b>8.4</b>	172.86	<b>12.6</b>	<b>62.8</b>
<b>SOCIAL SCIENCES CITATION INDEX</b>											
U.S.	729	\$74.08	\$81.89	<b>10.5</b>	\$89.52	<b>9.3</b>	\$99.51	<b>11.2</b>	\$109.49	<b>10.0</b>	<b>47.8</b>
NON-U.S.	529	129.13	141.19	<b>9.3</b>	177.06	<b>25.4</b>	193.19	<b>9.1</b>	211.20	<b>9.3</b>	<b>63.6</b>
<b>SCIENCE CITATION INDEX</b>											
U.S.	1073	\$223.77	\$245.25	<b>9.6</b>	\$274.96	<b>12.1</b>	\$309.92	<b>12.7</b>	\$345.99	<b>11.6</b>	<b>54.6</b>
NON-U.S.	1622	390.21	416.37	<b>6.7</b>	518.27	<b>24.5</b>	576.22	<b>11.2</b>	658.78	<b>14.3</b>	<b>68.8</b>

**Table 5: Cost History by Continent/Country of Origin**

Continent/Country	Average No. of Titles	Average Cost Per Title 1989	Average Cost Per Title 1990	% of Change	Average Cost Per Title 1991	% of Change	Average Cost Per Title 1992	% of Change	Average Cost Per Title 1993	% of Change	'89-'93 % of Change
<b>North America</b>											
United States	2146	\$141.89	\$155.80	<b>9.80</b>	\$173.87	<b>11.60</b>	\$194.34	<b>11.77</b>	\$216.43	<b>11.37</b>	<b>52.53</b>
Canada	104	55.96	60.46	<b>8.04</b>	76.37	<b>26.31</b>	82.55	<b>8.09</b>	82.11	<b>-0.53</b>	<b>46.73</b>
Other	7	37.63	38.94	<b>3.50</b>	37.58	<b>-3.49</b>	37.63	<b>0.14</b>	40.71	<b>8.19</b>	<b>8.21</b>
Total Avg. for all N.A.	2257	137.88	151.28	<b>9.72</b>	168.88	<b>11.64</b>	188.52	<b>11.63</b>	209.40	<b>11.07</b>	<b>51.88</b>
<b>Europe</b>											
France	148	138.21	155.35	<b>12.40</b>	186.55	<b>20.08</b>	192.57	<b>3.23</b>	218.88	<b>13.66</b>	<b>58.37</b>
Germany	311	376.59	407.32	<b>8.16</b>	483.87	<b>18.79</b>	477.60	<b>-1.30</b>	582.19	<b>21.90</b>	<b>54.60</b>
Ireland	37	435.79	507.32	<b>16.41</b>	606.60	<b>19.57</b>	674.25	<b>11.15</b>	890.36	<b>32.05</b>	<b>104.31</b>
Italy	53	110.84	120.89	<b>9.07</b>	134.77	<b>11.48</b>	139.44	<b>3.47</b>	140.84	<b>1.00</b>	<b>27.07</b>
Netherlands	309	590.92	633.00	<b>7.12</b>	833.46	<b>31.67</b>	869.25	<b>4.29</b>	1066.37	<b>22.68</b>	<b>80.46</b>
Switzerland	128	448.23	461.71	<b>3.01</b>	638.48	<b>38.29</b>	634.72	<b>-0.59</b>	714.71	<b>12.60</b>	<b>59.45</b>
United Kingdom	1021	249.86	276.74	<b>10.76</b>	340.07	<b>22.88</b>	404.29	<b>18.88</b>	427.39	<b>5.71</b>	<b>71.05</b>
Other	205	145.24	153.84	<b>5.92</b>	189.08	<b>22.91</b>	213.63	<b>12.98</b>	249.28	<b>16.69</b>	<b>71.63</b>
Total Avg. for all Europe	2212	308.07	333.87	<b>8.37</b>	418.95	<b>25.48</b>	463.58	<b>10.65</b>	530.88	<b>14.52</b>	<b>72.33</b>
<b>Asia</b>											
Japan	81	202.87	202.83	<b>-0.02</b>	216.13	<b>6.56</b>	225.50	<b>4.34</b>	246.72	<b>9.41</b>	<b>21.61</b>
Other	43	80.66	83.45	<b>3.46</b>	102.47	<b>22.80</b>	119.99	<b>17.09</b>	127.33	<b>6.12</b>	<b>57.86</b>
Total Avg. for all Asia	124	159.80	159.25	<b>-0.34</b>	175.47	<b>10.19</b>	189.76	<b>8.14</b>	207.89	<b>9.56</b>	<b>30.10</b>
<b>Australia and New Zealand</b>											
	70	96.81	106.31	<b>9.81</b>	119.13	<b>12.06</b>	125.32	<b>5.19</b>	128.22	<b>2.32</b>	<b>32.44</b>
<b>South America</b>											
	16	55.33	56.59	<b>2.28</b>	60.16	<b>6.31</b>	62.01	<b>3.07</b>	69.62	<b>12.29</b>	<b>25.84</b>
<b>Africa</b>											
	14	29.79	33.67	<b>13.02</b>	69.76	<b>107.19</b>	56.09	<b>-19.60</b>	61.81	<b>10.20</b>	<b>107.48</b>

the persistent upward pressure of inflation on U.S. titles, an effect that becomes more exaggerated as you move from Arts and Humanities through Social Sciences and on to Sciences. Percentages of change are more erratic for non-U.S. titles, both from year to year and from category to category, reflecting the effects of both price increases and currency fluctuation.

### Foreign publications' big role

When cost history is broken down by continent or country (Table 5), the impact of foreign publications on the periodicals budget becomes even more evident. U.S. publications make up 46 percent of the core list under study and account for 28 percent of the cost. Three European nations dominate the bulk of the non-U.S. titles. Journals from Germany make up seven percent of the title core and 11 percent of the overall total cost. Dutch publications also are seven percent of the core, but account for 20 percent of the total cost. The United Kingdom holds the largest non-

U.S. share of the market with 22 percent of the list and 26 percent of the total cost. Since the majority of non-U.S. publications ordered by American libraries come from these three countries, the inverse proportion of titles to dollars is worth noting.

The tables that track percentage change in cost, by country (Tables 8 and 9), are best used in conjunction with Table 5. One should note that large percentage increases do not always result in large overall expenditure increases, as the presence of Africa at the top of Table 8 illustrates. African journals may have increased by 107 percent in the last four years, but they started from a base average in 1989 of just under \$30. At the other extreme is Ireland, which places second and first respectively on Tables 8 and 9. In this case, large percentages of an increase were being applied to a very high average cost, resulting in an average cost for an Irish journal of \$890 by 1993.

Tables 8 and 9 are dominated by the same group of European coun-

tries—Ireland, the Netherlands, the UK, Switzerland, France, and Germany—with the exception of the UK in 1992-93. For 1993 subscriptions, a weakened pound made many UK publications less expensive to U.S. libraries, causing the UK to drop to a lower position on the table. However, over a four-year period, the UK rated third highest among European nations in percentage of increase.

### Confounding currency fluctuations

Currency fluctuation is one of the most confounding factors of periodical cost projecting. For any library subscribing to a significant number of foreign titles, currency fluctuation can devastate budgets. The U.S. dollar's ability to keep pace with European currency is closely related to a library's ability to pay for European publications. This tenet is illustrated by Table 10, which tracks the percentage change in the average cost of U.S. and non-U.S. subscriptions from year to year, and the corresponding percentage change for a composite of European

## Magazine Article Summaries Analysis

For public and smaller libraries not likely to subscribe to a large proportion of the titles indexed in the ISI databases, an analysis of EBSCO Publishing's general indexing/abstracting database Magazine Article Summaries is included here. The 353 titles included in the database are those most often subscribed to by school and public libraries in the United States, based on data from EBSCO Subscription Services. The titles are fairly evenly divided among

three broad disciplines: Arts and Humanities; Social Sciences; and Science. Table 6 provides historical data for all titles indexed in Magazine Article Summaries. As shown, the cost of subscribing to all indexed titles has increased by 26 percent since 1989. The projected 1994 cost for all indexed titles is 8.9 percent (as shown in Table 7) based on a 10.5 percent increase in the cost of U.S. titles and a net 5.5 percent increase in the cost of non-U.S. titles.

**Table 6: Magazine Article Summaries Cost History**

Index	Average No. of Titles	Average Cost Per Title 1989	Average Cost Per Title 1990	% of Change	Average Cost Per Title 1991	% of Change	Average Cost Per Title 1992	% of Change	Average Cost Per Title 1993	% of Change	'89-'93 % of Change
Magazine Article Summaries	304	\$36.54	\$38.08	4.21	\$42.85	12.53	\$43.87	2.38	\$46.10	5.08	26.16

**Table 7: 1994 Cost Projections for Magazine Article Summaries**

	No. of Titles	% of List	1993 Cost	% of Cost	Projected % of Increase	Projected 1994 Cost	% of Cost	Projected Overall % Increase
<b>MAGAZINE ARTICLE SUMMARIES</b>								
U.S.	267	86.7	\$9,756	68.7	10.5	\$10,780	69.7	8.9
NON-U.S.	41	13.3	4,442	31.3	5.5	4,686	30.3	

currencies at the time orders were placed for each year's subscriptions. Chart 1 (p. 48) shows a close correlation between the cost of foreign periodicals and the strength of European currencies as compared to the U.S. dollar. Simply stated, when the exchange rate line rises, the European currencies are stronger and the cost of European publications is higher to U.S. libraries. However, a look at Chart 1 shows that when the dollar grows stronger, costs do not fall with the same intensity as they do when they rise subject to the dollar weakening.

### Making projections

After reviewing all the data, there is little room for doubt that the cost of periodicals is driven from year to year by an array of forces that are easy to identify but hard to predict. The cost projections that follow establish a model for a budget forecast process that can be followed by any library, ideally in partnership with the library's periodicals vendor.

The vendor will likely begin the process by gathering information as early as possible from major publishers regarding basic price increases for the coming subscription year. The publishers' estimates will take into account expected inflation, page and volume expansion, postage increases, the effect of cancellations, etc. If the publisher is outside the United States, a currency conversion factor must be added to the publisher's price projection. The volatility of exchange rates

**Table 8:  
Percentage of Change in  
Cost by Continent/Country  
1989-1993**

Continent/Country	% Of Change
Africa	107.48
Ireland	104.31
Netherlands	80.46
United Kingdom	71.05
Switzerland	59.45
France	58.37
Germany	54.60
United States	52.53
Canada	46.73
Australia and New Zealand	32.44
Italy	27.07
South America	25.84
Japan	21.61

**Table 9:  
Percentage of Change in  
Cost by Continent/Country  
1992-1993**

Continent/Country	% Of Change
Ireland	32.05
Netherlands	22.68
Germany	21.90
France	13.66
Switzerland	12.60
South America	12.29
United States	11.37
Africa	10.20
Japan	9.41
United Kingdom	5.71
Australia and New Zealand	2.32
Italy	1.00
Canada	-0.53

makes this factor the most difficult to predict. The currency issue affects periodical costs in two ways, depending on how publishers set their prices. Many publishers use a fixed conversion rate. Once their subscription prices and conversion rates are established, currency fluctuation ceases to be an issue for U.S. subscribers. Other publishers simply set their subscription prices and require the subscriber to pay based on the exchange rate in effect when the order is placed.

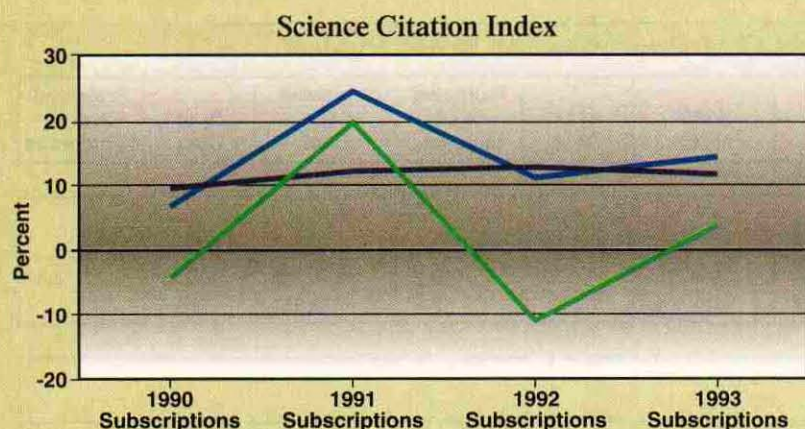
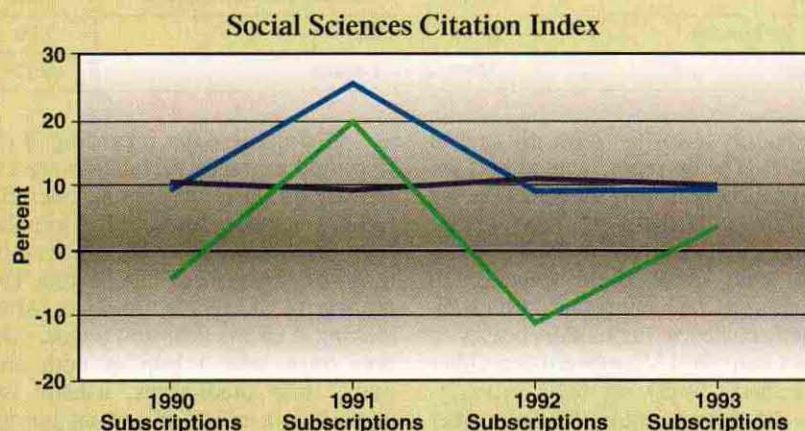
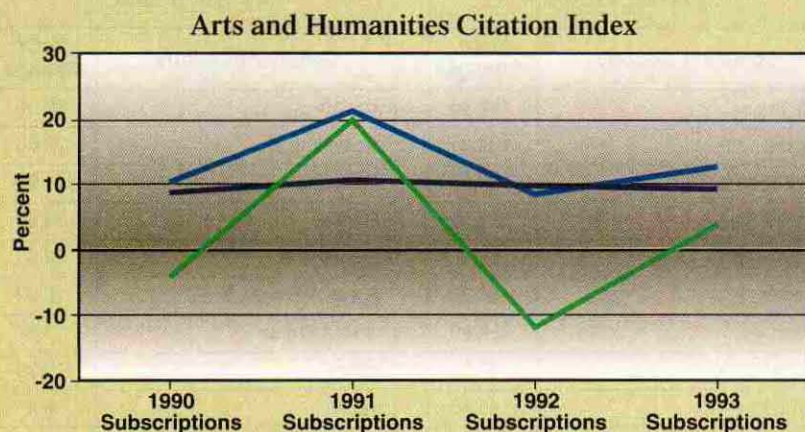
Historical data regarding both price and currency fluctuation are extremely useful in developing cost projections because they supply a foundation of "knowns" over which estimates of "unknowns" can be laid. The process is ultimately intuitive. After looking at all the facts and trends, vendors must take a leap of faith and make their predictions, usually expressed as a range of percentages for foreign and domestic cost increases.

The final prediction is made by the

**Table 10: 1994 Cost Projections by Broad Subject**

	No. of Titles	% of List	1993 Cost	% of Cost	Projected % of Increase	Projected 1994 Cost	% of Cost	Projected Overall % Increase
<b>ARTS &amp; HUMANITIES CITATION INDEX</b>								
U.S.	730	50.8	\$58,158	32.2	10.5	\$64,265	33.3	7.1
NON-U.S.	707	49.2	122,212	67.8	5.5	128,934	66.7	
<b>SOCIAL SCIENCES CITATION INDEX</b>								
U.S.	735	57.8	\$80,473	41.6	10.5	\$88,923	42.7	7.6
NON-U.S.	536	42.2	113,203	58.4	5.5	119,429	57.3	
<b>SCIENCE CITATION INDEX</b>								
U.S.	1,078	39.9	\$372,978	25.9	10.5	\$412,141	26.7	6.8
NON-U.S.	1,624	60.1	1,069,864	74.1	5.5	1,128,707	73.3	

**Chart 1: Cost & Currency Fluctuation  
By Broad Subject**



— U.S. TITLES — NON-U.S. TITLES — EXCHANGE RATES

The "exchange rate" line is based on an average of five major European currencies: the British pound; Dutch guilder; French franc; Swiss franc; and German mark. Each point on the exchange rate line represents the change in the composite currency's value as compared to the U.S. dollar (i.e., the change in how many dollars can be bought by a unit of the representative currency from one year to the next).

librarian, based on knowledge of the mix of titles in the collection and the library's budgeting philosophy. The conservative approach would be to budget based on known facts and assume the worst regarding the unknowns. A more moderate approach would emphasize the knowns but hedge a bit against the predicted unknowns. The risk-taking approach would consider the knowns while giving high credibility to the predicted unknowns.

Table 10 illustrates a moderate approach to forecasting based on the knowns and the predicted unknowns as they stand at the time this article is being written. Both European and American publishers estimate price inflation of about 10.5 percent for 1994 subscriptions. If orders for 1994 were paid today, the 10.5 percent inflationary increase for non-U.S. titles could be offset completely by the current strength of the dollar against European currencies, depending on the country-of-origin mix. The risk-taker would be comfortable budgeting for no cost increase for foreign titles.

However, there is no certainty that the dollar will maintain its current strength. In light of that, the moderate approach suggests hedging a bit and allowing for some weakening of the dollar by the time orders are placed for 1994 subscriptions. The 5.5 percent non-U.S. cost increase factor on the table assumes that the 10.5 percent price inflation for foreign titles will be only partially offset by a stronger dollar.

The conservative budget manager, on the other hand, will accept the inflation factor of 10.5 percent for foreign titles but will not make the assumption that a stronger dollar will offset any of the price increase.

Periodical price forecasting may be more of an art than a science, but it is clear that the process is informed by the use of historical data on cost and currency trends. Knowledge of the library's list of titles relative to country of origin also increases the ability to be able to apply forecasting data intelligently. When choosing a budget strategy, one must understand the complex variables involved and make an intuitive decision that anticipates their volatility.

The authors wish to thank EBSCO staff members Allen Powell, CPA, and Laura Ralstin for their contributions to this study.