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## Periodical Price Survey 1998: E-journals Come of Age

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# E-Journals Come of Age

By Lee Ketcham-Van Orsdel &  
Kathleen Born

**L**IKE ADOLESCENTS IN A house full of cautious adults, e-journals are upsetting the traditional order, generating debate about their proper handling and inviting speculation about their future potential. Considering that print journals outnumber their electronic siblings more than 60 to one, the attention they are receiving might appear disproportionate to their numbers. Yet e-journals will profoundly change the way we do business in the serials marketplace, even as they change the world of scholarly research.

Familiar ground is increasingly hard to find. Publishers, vendors and librarians, the historic threesome of the serials world, are being courted and challenged by players from other market segments. In the struggle to keep revenue streams intact, publishers and vendors are developing new strategies with agility and speed, forging innovative partnerships as they go. The result is a confusing array of choices and limitations that have librarians wondering if the electronic revolution is leading them where they wanted to go.

This year's periodicals price study looks at these developments, as well as

at currency issues and historical price trends, for clues about 1999 subscription prices. Three Institute for Scientific Information (ISI) databases—Arts and Humanities Citation Index, Social Sciences Citation Index, and Science Citation Index—provide the 5,208 titles used in the core study. These databases typically reflect the subscription lists of large research libraries. For smaller academic libraries, we have included an analysis of 2,398 journals in EBSCO Publishing's Academic Search. Public and school libraries will find useful data in the brief analysis of EBSCO's Magazine Article Summaries.

Cost history and other information for the study were pulled from EBSCO's database of 256,000 serial title listings. For practical reasons, the study was limited to prepriced titles (as opposed to standing-order or bill-later titles) that

can be ordered through a vendor. The data is current as of February 20, 1998.

## Let's make a deal

Consortia have become the latest strategic front in the electronic revolution. Librarians are joining forces in record numbers to leverage bargaining power, and publishers are vying for the market potential that networked consortia represent. Marketing strategies include packaging groups of e-journals into large bundles, priced like print plus a percentage above. Deals are negotiated group by group. The appeal of these packages is the access they extend to all members of a consortium. Some groups, however, have balked at the prospect of paying more for megabundles of electronic publications that offer little enhancement over their print counterparts, e.g., no citation links forward and backward.

Despite the uncertainties of pricing e-journals, their numbers continue to increase. Thirty percent of the titles (900) in Science Citation Index are available in an online edition, an increase of 237 over last year. Twenty-four percent of the titles (652) in Social Science Citation Index have an electronic version, an increase of 106. E-journal representation in the Arts and Humanities Citation Index (c.150) is around ten percent, with about 33 new online versions added since last year.

## Can you say "aggregator"?

The role of serials agent is changing faster than most customers realize. In the typical library, orders and claims for both print and online journals still come and go in familiar patterns. In many of the largest libraries, however, informed consumers of electronic publications are learning to call their agents by a new name—that of "aggregator."

In the role of aggregator, vendors such as Blackwell's, EBSCO, Faxon, and Swets not only place orders for electronic journals but also provide proprietary search engines through which a library's users can access the library's electronic subscriptions, which are usually scattered all over the web, in a relatively seamless manner. Some vendors charge a fee for this gateway service, while others give it to their customers. Development costs associated with e-journal aggregator services are substantial but appear necessary for companies intent on securing a place in the new information chain. Traditional serials

TABLE 1: AVERAGE 1998 PRICE  
FOR SCIENTIFIC DISCIPLINES

Discipline	Avg. Price Per Title
Physics	\$1,601.03
Chemistry	1,577.13
Astronomy	1,087.53
Biology	891.40
Engineering	866.99
Math & Computer Science	859.91
Technology	775.05
Geology	740.14
Botany	644.47
Zoology	641.06
General Science	607.80
Health Sciences	573.79
Food Science	440.44

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**TABLE 2: COST HISTORY GROUPED BY LC SUBJECT**

Subject	Average No. of Titles 1994-98	Average Cost Per Title 1994	Average Cost Per Title 1995	% of Change '94-'95	Average Cost Per Title 1996	% of Change '95-'96	Average Cost Per Title 1997	% of Change '96-'97	Average Cost Per Title 1998	% of Change '97-'98	'94-'98 % of Change
Agriculture	181	\$293.56	\$326.02	11.06	\$383.21	17.54	\$417.56	8.96	\$419.04	0.35	42.74
Anthropology	38	143.20	157.10	9.71	176.07	12.08	189.79	7.79	207.45	9.31	44.87
Art & Architecture	60	87.17	92.24	5.82	97.99	6.23	101.06	3.13	102.30	1.23	17.36
Astronomy	18	746.36	840.93	12.67	993.03	18.09	1,071.36	7.89	1,087.53	1.51	45.71
Biology	236	556.93	620.18	11.36	731.84	18.00	824.81	12.70	891.40	8.07	60.06
Botany	58	422.25	475.10	12.52	556.14	17.06	607.42	9.22	644.47	6.10	52.63
Business & Economics	281	194.94	227.43	16.67	271.13	19.21	307.21	13.31	339.55	10.53	74.18
Chemistry	185	1,006.70	1,106.09	9.87	1,319.23	19.27	1,467.35	11.23	1,577.13	7.48	56.66
Education	110	125.39	136.45	8.82	150.99	10.66	165.03	9.30	178.53	8.18	42.38
Engineering	240	523.24	575.28	9.95	695.69	20.93	785.93	12.97	866.99	10.31	65.70
Food Science	21	272.22	308.20	13.22	352.20	14.28	385.11	9.34	440.44	14.37	61.80
General Science	76	369.40	416.28	12.69	487.86	17.20	548.10	12.35	607.80	10.89	64.54
General Works	94	63.09	66.73	5.77	76.04	13.95	80.66	6.08	80.53	-0.16	27.64
Geography	66	305.27	340.79	11.64	391.43	14.86	452.85	15.69	493.93	9.07	61.80
Geology	81	469.41	516.08	9.94	628.26	21.74	703.95	12.05	740.14	5.14	57.67
Health Sciences	1450	367.24	403.28	9.81	461.07	14.33	517.24	12.18	573.79	10.93	56.24
History	201	76.83	83.27	8.38	91.45	9.82	95.62	4.56	99.26	3.81	29.19
Language & Literature	316	71.24	77.83	9.25	87.34	12.22	90.60	3.73	92.55	2.15	29.91
Law	81	97.22	105.21	8.22	119.16	13.26	123.80	3.89	138.78	12.10	42.75
Library & Information Science	60	136.23	153.58	12.74	172.45	12.29	181.35	5.16	202.30	11.55	48.50
Math & Computer Science	175	566.94	619.31	9.24	728.84	17.69	805.26	10.49	859.91	6.79	51.68
Military & Naval Science	8	133.50	153.75	15.17	168.00	9.27	184.13	9.60	209.50	13.78	56.93
Music	45	52.75	57.50	9.00	60.89	5.90	65.27	7.19	67.93	4.08	28.78
Philosophy & Religion	135	81.48	91.30	12.05	101.25	10.90	105.99	4.68	107.14	1.09	31.49
Physics	179	1,035.81	1,144.93	10.53	1,358.19	18.63	1,510.45	11.21	1,601.03	6.00	54.57
Political Science	62	105.37	119.91	13.80	138.24	15.29	151.75	9.77	166.05	9.42	57.59
Psychology	143	163.91	182.67	11.45	207.48	13.58	234.12	12.84	257.69	10.07	57.21
Recreation	29	59.82	61.30	2.47	68.73	12.12	71.54	4.09	75.94	6.15	26.95
Sociology	302	149.41	156.42	4.69	181.84	16.25	201.66	10.90	222.23	10.20	48.74
Technology	202	457.94	519.93	13.54	621.97	19.63	702.67	12.97	775.05	10.30	69.25
Zoology	102	421.74	471.55	11.81	539.72	14.46	594.28	10.11	641.06	7.87	52.00

agents have been joined by both commercial and not-for-profit companies (including universities trying to save on serials costs) in the rush to provide aggregator services.

### Publisher strategies

The majority of e-journal publishers encourage the growth of aggregator services because they, too, want help with the expensive and complicated demands of electronic distribution. Vendor-supplied aggregator services support the publishers' efforts at marketing, distributing, controlling access, and providing technical support to customers.

While many publishers are looking to vendors for new services, some are trying to cut out the vendor altogether, forcing libraries to deal directly with them for electronic products and sup-

**TABLE 3: AVERAGE PRICE PER TITLE BY COUNTRY 1998**

Country	No. of ISI Titles	Avg. Price Per Title	Country	No. of ISI Titles	Avg. Price Per Title
The Netherlands	394	\$1,530.63	Sweden	19	249.96
Ireland	44	1,292.78	Israel	9	239.00
Switzerland	124	1,236.39	Australia	53	234.28
Austria	22	925.46	Norway	26	208.36
Germany	274	789.24	Czech Republic	9	182.36
England	1122	697.96	Spain	7	163.29
Scotland	24	381.14	Italy	58	152.81
Denmark	51	368.11	Canada	103	123.51
United States	2511	334.12	Belgium	17	107.03
New Zealand	23	306.00	Brazil	6	\$73.50
Russia	36	300.19	Mexico	7	\$72.57
Japan	69	293.95	India	7	\$68.57
France	145	274.33	South Africa	13	\$65.45

**AVERAGE COST OF AN ISI TITLE: \$542.95**



**TABLE 4: COST HISTORY BY CONTINENT/COUNTRY OF ORIGIN**

Continent/Country	Average No. of Titles 1994-98	Average Cost 1994	Average Cost 1995	% of Change '94-'95	Average Cost 1996	% of Change '95-'96	Average Cost 1997	% of Change '96-'97	Average Cost 1998	% of Change '97-'98	'94-'98 % of Change
<b>NORTH AMERICA</b>											
United States	2500	\$217.34	\$242.49	11.57	\$272.21	12.26	\$301.56	10.78	\$334.12	10.80	53.73
Canada	103	93.25	98.76	5.91	109.01	10.38	118.73	8.92	123.51	4.03	32.45
Other	11	79.61	73.54	-7.63	78.19	6.33	80.42	2.84	80.38	-0.05	0.96
<b>Average for all No. America</b>	<b>2614</b>	<b>\$211.90</b>	<b>\$236.04</b>	<b>11.39</b>	<b>\$264.97</b>	<b>12.25</b>	<b>\$293.43</b>	<b>10.74</b>	<b>\$324.79</b>	<b>10.69</b>	<b>53.28</b>
<b>EUROPE</b>											
France	144	\$215.19	241.19	12.08	283.38	17.49	285.81	0.86	274.33	-4.02	27.48
Germany	285	542.72	599.66	10.49	719.58	20.00	756.79	5.17	789.24	4.29	45.42
Ireland	44	709.81	760.79	7.18	978.77	28.65	1,163.59	18.88	1,292.78	11.10	82.13
Italy	57	135.20	144.64	6.98	145.61	0.67	153.60	5.49	152.81	-0.51	13.03
The Netherlands	385	991.96	1,030.85	3.92	1,307.45	26.83	1,484.25	13.52	1,530.63	3.12	54.30
Switzerland	124	751.56	866.27	15.26	1,059.25	22.28	1,197.31	13.03	1,236.39	3.26	64.51
United Kingdom	1140	419.82	462.98	10.28	534.75	15.50	607.74	13.65	688.70	13.32	64.05
Other	207	253.41	282.19	11.36	319.45	13.20	326.01	2.05	329.60	1.10	30.07
<b>Average for all Europe</b>	<b>2387</b>	<b>\$512.44</b>	<b>\$561.82</b>	<b>9.64</b>	<b>\$675.01</b>	<b>20.15</b>	<b>\$753.61</b>	<b>11.64</b>	<b>\$808.16</b>	<b>7.24</b>	<b>57.71</b>
<b>ASIA</b>											
Japan	69	\$274.76	\$283.33	3.12	\$297.98	5.17	\$299.50	0.51	\$293.95	-1.85	6.98
Other	33	130.31	140.94	8.15	158.62	12.55	183.53	15.70	195.23	6.38	49.82
<b>Average for all Asia</b>	<b>102</b>	<b>\$227.08</b>	<b>\$235.41</b>	<b>3.67</b>	<b>\$251.53</b>	<b>6.85</b>	<b>\$263.55</b>	<b>4.78</b>	<b>\$263.35</b>	<b>-0.08</b>	<b>15.97</b>
<b>AUSTRALIA AND NEW ZEALAND</b>											
	75	\$168.60	\$184.32	9.32	\$210.39	14.14	\$236.85	12.58	\$255.99	8.08	51.83
<b>SOUTH AMERICA</b>											
	15	\$61.04	\$65.97	8.08	\$72.04	9.19	\$73.29	1.74	\$74.66	1.88	22.31
<b>AFRICA</b>											
	15	\$59.33	\$63.81	7.54	\$67.85	6.34	\$74.03	9.10	\$84.39	14.00	42.24

port. Such a strategy may give the publisher better control of its revenue stream, but it complicates life for librarians and frustrates attempts to provide a common gateway for the library's entire list of electronic subscriptions.

**The cost of chaos**

The effect of all this chaos on the periodicals market is hard to determine, with one exception: costs to libraries are going up, not down. Publishers seem to be banking on the lure of the electronic to hold their print customer base intact.

Of the 2200 e-journal titles with active orders in EBSCO's database, more than half come free with a print subscription. If the online is not free with the print, it typically costs between ten and 20 percent extra. There are not many discounts for the library willing to forgo print altogether, as discounts for online-only subscriptions tend to be in the five to ten percent range, when offered at all. Some publishers actually charge more for an online version than they do for its print counterpart.

The cost of technology is a factor

in the rise of both print and e-journal subscription prices for publishers worldwide, more than offsetting any savings in overhead they can realize from reduced printing, binding, and postal costs. Print cancellations continue to take a toll on publisher revenues, as well. Publisher consolidations, fueled by market uncertainties, may also be affecting prices by reducing competition. This effect may be felt most strongly in the scientific, technical, and medical (STM) fields, where the number of large publishing houses has

**TABLE 5: COST HISTORY BY BROAD SUBJECT**

Citation Index	Average No. of Titles 1994-98	Average Cost Per Title 1994	Average Cost Per Title 1995	% of Change '94-'95	Average Cost Per Title 1996	% of Change '95-'96	Average Cost Per Title 1997	% of Change '96-'97	Average Cost Per Title 1998	% of Change '97-'98	'94-'98 % of Change
<b>ARTS &amp; HUMANITIES</b>											
U.S.	916	\$76.88	\$83.48	8.6%	\$91.07	9.1%	\$97.17	6.7%	\$105.79	8.9%	37.6%
NON-U.S.	655	155.67	171.65	10.3%	198.50	15.6%	213.22	7.4%	224.28	5.2%	44.1%
<b>SOCIAL SCIENCES</b>											
U.S.	1,486	\$158.90	\$176.06	10.8%	\$197.10	12.0%	\$217.62	10.4%	\$241.17	10.8%	51.8%
NON-U.S.	1,183	380.34	420.26	10.5%	504.03	19.9%	566.06	12.3%	612.16	8.1%	61.0%
<b>SCIENCE</b>											
U.S.	1,369	\$307.94	\$345.32	12.1%	\$388.79	12.6%	\$431.27	10.9%	\$479.99	11.3%	55.9%
NON-U.S.	1,592	647.76	711.42	9.8%	855.47	20.2%	956.42	11.8%	1,020.31	6.7%	57.5%



# Periodical Prices for Public and School Libraries

The titles in EBSCO Publishing's general index, Magazine Article Summaries (MAS), are those most often subscribed to by school and public libraries in the United States based on data from EBSCO Subscription Services. Table 8 provides historical data for 500 titles in the index.

Despite early publisher predictions last year that magazines with advertising would increase about four percent, actual increases appeared to be higher. Taking that into account, along with the relative stability of the dollar and the U.S.

economy, our projection for overall increases for 1998 popular magazine subscriptions is 6.5 percent.

**TABLE 7: 1999 COST PROJECTIONS FOR TITLES IN MAGAZINE ARTICLE SUMMARIES**

Index	No. of Titles	1998 Cost	Projected % of Increase	Projected 1999 Cost
Mag. Article Summaries	503	\$35,871	6.5	\$38,203

**TABLE 8: COST HISTORY FOR TITLES IN MAGAZINE ARTICLE SUMMARIES**

Magazine Article Summaries	Average No. of Titles '94-'98	Average Cost Per Title 1994	Average Cost Per Title 1995	% of Change '94-'95	Average Cost Per Title 1996	% of Change '95-'96	Average Cost Per Title 1997	% of Change '96-'97	Average Cost Per Title 1998	% of Change '97-'98	'94-'98 % of Change
U.S.	479	\$52.69	\$55.62	5.6	\$59.29	6.6	\$62.91	6.1	\$66.90	6.3	27.0
NON-U.S.	21	128.61	131.49	2.2	146.39	11.3	162.27	10.8	172.52	6.3	34.1

shrunk dramatically in the last five years due to buyouts.

Changes in the world economy often factor into the cost of subscriptions in the United States. This year, for example, Asian libraries were hit by the currency crisis in their region. Unable to sustain regular subscribing patterns, they canceled massive numbers of orders, which may tempt some publishers to make up the losses in their more stable markets, like the United States. More favorable economic conditions don't necessarily translate into savings for U.S. libraries, however. For example, record low inflation did not deter U.S. publishers from raising their journal prices about 11 percent on average. Nor did a strong U.S. dollar deter some publishers on the Continent from raising prices to U.S. libraries last year when all economic indicators suggested they would come down.

### Cost trends by subject

While e-journal pricing issues are stirring things up, the cost of print journals continues to be the major concern in most academic libraries. Traditional price study information indicates that recent trends are holding steady. As Table 1 indicates, STM publications dominated the cost charts in 1997, just as they have for the nine years of data we have available. For the fifth straight year, physics journals take the prize as the most costly, with an average price of \$1,601.03. Chemistry runs a close second, with an average cost of \$1,577.13. Price history for the major disciplines is detailed in Table 2, while price history for broad disciplines is charted in Table 5.

### Cost trends by country of origin

A few publishers in a few European countries account for a very large percentage of periodical expenditures

in the United States, and Table 3 gives some indication of what these countries are and why they impact serials budgets so heavily. Note that it takes 20 countries at the bottom of the chart, including the United States, to balance out the six at the top, using the average cost of all ISI titles (\$542.95) as the balance point.

Table 4 tracks domestic and foreign periodical prices to U.S. libraries over the last four renewal seasons. Looking at the continent of Europe, the effects of currency exchange on U.S. purchases is fairly clear. Consider that European publishers have average inflationary increases of around ten percent each year. The actual price increase to a U.S. library, however, is rarely ten percent because exchange rates usually have the effect of driving that figure up or down. For example, the British pound gained about three percent in strength last year against the U.S. dollar. That strength is evident in the line on the chart that shows journals from the UK up by 13 percent (ten percent base increase plus three percent currency impact). Outside the UK, currencies of most European countries were relatively weak against the dollar, and those countries show average cost increases well below ten percent.

(Continued on page 45)

**TABLE 6: 1999 COST PROJECTIONS BY BROAD SUBJECT**

Citation Index	No. of Titles	% of List	1998 Cost	% of Cost	Projected % of Increase	Projected 1999 Cost	% of Cost	Projected Overall % Increase
<b>ARTS &amp; HUMANITIES</b>								
U.S.	921	58.2	\$97,436	39.7	9.0	\$106,205	39.9	8.4
NON-U.S.	661	41.8	148,247	60.3	8.0	160,107	60.1	
<b>SOCIAL SCIENCES</b>								
U.S.	1,492	55.5	\$359,825	33.0	11.0	\$399,406	33.2	10.3
NON-U.S.	1,195	44.5	731,530	67.0	10.0	804,683	66.8	
<b>SCIENCE</b>								
U.S.	1,372	46.3	\$658,550	28.8	11.5	\$734,283	29.2	10.1
NON-U.S.	1,594	53.7	1,626,368	71.2	9.5	1,780,873	70.8	
<b>PROJECTED OVERALL INCREASE FOR ALL ISI TITLES: 10.0%</b>								



## Periodical Prices for College and Medium-Sized University Libraries

An analysis of EBSCO Publishing's Academic Search is included for the benefit of smaller academic libraries, for whom the ISI indexes may

be too comprehensive. Table 10 gives price history by LC Subject Headings for the 2,398 titles in the index. For mid-sized libraries whose collections fall somewhere between ISI and Academic Search in comprehensiveness, Table 10 can be used in conjunction

with Table 2 to establish a range for a given discipline.

Despite the strength of the dollar against Continental currencies, we estimate the overall cost of non-U.S. subscriptions in Academic Search will rise an average of 12 percent. This projec-

tion allows for the high concentration of British titles and assumes the continuing strength of the pound against the dollar. Domestic prices are estimated to increase around ten percent, raising the overall cost for this combination of titles by just under 11 percent.

**TABLE 9: 1999 COST PROJECTIONS FOR TITLES IN ACADEMIC SEARCH**

Academic Search	No. of Titles	% of List	1997 Cost	% of Cost	Projected % of Increase	Projected 1999 Cost	% of Cost	Projected Overall % Increase
U.S.	1,910	78.8	251,589	56.8	10.0	276,748	56.4	10.9
NON-U.S.	514	21.2	191,227	43.2	12.0	214,174	43.6	

**TABLE 10: COST HISTORY FOR TITLES IN ACADEMIC SEARCH**

Subject	Average No. of Titles 1994-98	Average Cost Per Title 1994	Average Cost Per Title 1995	% of Change '94-'95	Average Cost Per Title 1996	Average % of Change '95-'96	Average Cost Per Title 1997	Average % of Change '96-'97	Average Cost Per Title 1998	% of Change '97-'98	'94-'98 % of Change
Agriculture	34	\$50.97	\$54.04	6.02	\$58.38	8.03	\$63.12	8.12	\$71.62	13.47	40.51
Anthropology	26	121.35	132.19	8.93	151.36	14.50	161.63	6.79	173.31	7.23	42.82
Art & Architecture	43	73.67	79.07	7.33	85.16	7.70	92.28	8.36	96.72	4.81	31.29
Astronomy	4	292.25	332.74	13.85	369.24	10.97	419.49	13.61	484.48	15.49	65.78
Biology	27	318.78	350.42	9.93	397.56	13.45	434.41	9.27	470.04	8.20	47.45
Botany	4	133.75	143.50	7.29	153.50	6.97	161.25	5.05	164.13	1.79	22.71
Business & Economics	451	153.97	174.38	13.26	202.64	16.21	228.67	12.85	259.52	13.49	68.55
Chemistry	6	578.11	650.60	12.54	753.91	15.88	800.50	6.18	886.67	10.76	53.37
Education	164	100.83	107.52	6.63	119.91	11.52	130.46	8.80	139.66	7.05	38.51
Engineering	129	143.16	166.68	16.43	188.96	13.37	206.48	9.27	233.57	13.12	63.15
Food Science	26	64.41	69.11	7.30	77.50	12.14	83.42	7.64	89.33	7.08	38.69
General Science	33	127.45	140.76	10.44	155.24	10.29	171.48	10.46	188.98	10.21	48.28
General Works	85	43.11	44.39	2.97	47.10	6.10	50.32	6.84	53.57	6.46	24.26
Geography	27	169.81	190.18	12.00	216.08	13.62	247.83	14.69	279.51	12.78	64.60
Geology	15	334.59	349.39	4.42	409.33	17.16	441.33	7.82	460.79	4.41	37.72
Health Sciences	202	157.62	172.54	9.47	195.55	13.34	217.42	11.18	242.25	11.42	53.69
History	166	68.73	73.97	7.62	80.18	8.40	84.20	5.01	89.47	6.26	30.18
Language & Literature	176	60.77	65.39	7.60	71.14	8.79	74.29	4.43	79.47	6.97	30.77
Law	52	81.01	88.24	8.92	97.99	11.05	97.76	-0.23	110.44	12.97	36.33
Lib. & Information Science	54	123.61	137.99	11.63	153.16	10.99	161.57	5.49	183.95	13.85	48.81
Math & Computer Science	51	150.93	159.72	5.82	178.82	11.96	192.97	7.91	209.89	8.77	39.06
Military & Naval Science	20	36.04	37.76	4.77	39.69	5.11	41.27	3.98	42.63	3.30	18.29
Music	21	50.81	53.95	6.18	57.68	6.91	62.06	7.59	65.11	4.91	28.14
Philosophy & Religion	70	60.00	64.98	8.30	72.33	11.31	78.05	7.91	81.82	4.83	36.37
Physics	12	360.42	393.42	9.16	433.00	10.06	466.17	7.66	511.83	9.79	42.01
Political Science	73	78.52	85.64	9.07	96.58	12.77	106.12	9.88	115.33	8.68	46.88
Psychology	68	153.19	173.02	12.94	188.78	9.11	211.98	12.29	236.09	11.37	54.12
Recreation	27	50.26	51.85	3.16	56.17	8.33	58.76	4.61	62.72	6.74	24.79
Sociology	242	127.66	141.13	10.55	156.10	10.61	168.87	8.18	190.82	13.00	49.48
Technology	73	122.48	137.76	12.48	156.04	13.27	171.45	9.88	187.71	9.48	53.26
Zoology	11	138.86	150.94	8.70	162.07	7.37	176.83	9.11	185.30	4.79	33.44



The relationship between currency and cost, so far as it can be determined by journal prices, is illustrated in Chart 1, where increases in U.S. and non-U.S. journal costs are plotted in comparison to the fluctuations of currency. U.S. libraries benefit when the yellow currency line turns downward, because that means the composite of European currencies is losing strength against the dollar, driving the cost of European journals down. The degree of deviation between the black and the yellow lines is an indicator of how much of the currency benefit is being passed along to U.S. customers in any given year.

### Budgeting for 1999

Base price increases for 1999 print subscriptions should be in the eight to 11 percent range for STM publishers on both sides of the Atlantic, six to nine percent for university presses, and under seven percent for consumer publishers. Costs for e-journals, separately and in combination with print, will probably stay in their current range, as most publishers seem to be approaching the market very tentatively in regard to pricing. Decisions about the purchase of third-party aggregator services will add yet another uncertainty to the serials budget planning process.

The vast majority of publishers that do business with EBSCO now set their U.S. rates in U.S. dollars, which obscures the customer's ability to determine how the rates were actually calculated. Based on prices over the last couple of years, two assumptions might be wise. First, expect both European and U.S. publishers to push the high side of the range for inflationary increases. Secondly, even if the dollar remains strong against the continental currencies, do not expect all of the major STM publishers to pass along the full benefit.

In addition to the assumptions above, projections for the coming year are based on the belief that the U.S. economy will continue its steady growth with inflation under control. Projections for non-U.S. publications include speculations that the pound-dollar relationship will not change dramatically and that the dollar will remain relatively strong against the Deutsche mark, the guilder, and the Swiss franc.

Taking into account the uncertainties in the market, economic prospects for 1998, and historical pricing trends, we forecast an average overall increase

of ten percent for the ISI titles in the study. Separate projections for the areas covered in the three indexes are provided in Table 6. Factors to watch, as the

1998 subscription season approaches, include the Asian financial crisis, publisher mergers, and progress toward a single European currency. ■

**CHART 1: COST & CURRENCY FLUCTUATION BY BROAD SUBJECT**

