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Periodical Price Survey 1997: Unsettled Times, Unsettled Prices; the State of the Periodicals Marketplace Mid-Revolution

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Unsettled Times, Unsettled Prices

By Lee Ketcham & Kathleen Born

REVOLUTIONS HAVE A way of unsettling all the players sooner or later. The Electronic Revolution, on the horizon of the serials marketplace for over a decade, is causing all of the players—scholars, librarians, publishers, and vendors—to question their traditional roles in the production, sale, dissemination, access, and storage of scholarly information.

Like most revolutions, this has given birth to powerful hopes among the participants. Scholars talk of faster and wider dissemination of their works. Librarians look for a break in the cost of acquiring and accessing journal articles. Publishers experiment with new pricing models, convinced that their revenue streams can be maintained in the unbundled world of electronic information. And vendors explore new ways to fill in the gaps between producers and purchasers, believing their role as intermediary will grow.

It is too soon to tell whose hopes will be realized and whose dashed. But early indicators give little hope of lower prices and cheaper access. If anything, some publishers appear to be increasing prices of print journals at a faster rate than before; print cancellations may be

taking a toll on revenues, and publishers may be padding print prices now in anticipation of market uncertainty. Publishers may also be trying to recover some of the high costs of developing and supporting new electronic delivery systems. Few producers are forecasting a drop in the overall cost to libraries for their products, regardless of the method or format of delivery.

This year's periodical price study looks at these developments and at traditional indicators, including currency issues and pricing trends for print subscriptions, which will affect the cost of journals in 1998. Three ISI (Institute for Scientific Information) databases—Arts and Humanities Citation Index, Social Sciences Citation Index, and Science Citation Index—provide the 5,490 titles used in the core study. Most of the charts are derived from an analysis of these databases, which typically reflect the sub-

scription lists of larger libraries. For smaller academic libraries, we have included an analysis of 1,756 journals indexed 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 each of the studies 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 5, 1997.

Redirecting serials dollars

Although publishers keep the exact numbers confidential, librarians report they are continuing to cancel print subscriptions in record numbers. The evidence does not suggest that libraries are spending less on serials overall, but that significant dollars are being diverted from print subscriptions to electronic access of all kinds, including article-on-demand services and full-text periodical databases. "Virtual libraries," with periodical index/abstract/full-text files, are springing up across the United States.

In addition to shifting serials dollars around to purchase more access, librarians are putting pressure on publishers to come up with new ways to purchase and to archive their journals in this era of new possibilities. "Unbundled subscriptions" and "consortia pricing" are two concepts librarians are banking on to leverage purchasing power in the electronic market. Both are antithetical to the centuries-old practice of journal articles bundled into issues and sold as annual subscriptions to one library at a time. Foreign to publishers, as well, is the possibility that they may be expected to take ongoing responsibility for archiving backfiles. Publishers are understandably wary of the new marketplace, and it shows in their cautious approach both to pricing and distributing their publications electronically.

What about E-journals?

In 1996-97 none of the large STM (scientific, technical, and medical) publishers offered their full complement of scholarly journals in separately priced online versions, or E-journals. Where online versions were offered, most came as free add-ons to print subscribers. Some of the largest STMs have *no* electronic journals, although

TABLE 1: AVERAGE 1997 PRICE FOR SCIENTIFIC DISCIPLINES

Discipline	Avg. Price Per Title
Physics	\$1,494.47
Chemistry	1,359.22
Astronomy	1,084.32
Biology	824.05
Math & Computer Science	817.72
Engineering	814.38
Technology	706.95
Geology	692.83
Botany	612.78
Zoology	599.11
Health Sciences	543.32
General Science	530.39
Food Science	501.73

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TABLE 2: COST HISTORY GROUPED BY LC SUBJECT

Subject	Average No. of Titles 1993-97	Average Cost Per Title 1993	Average Cost Per Title 1994	% of Change '93-'94	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	'93-'97 % of Change
Agriculture	197	\$274.98	\$286.91	4.34	318.68	11.07	\$373.34	17.15	\$402.49	7.81	46.37
Anthropology	38	127.18	138.93	9.24	155.55	11.96	174.08	11.91	186.44	7.10	46.60
Art & Architecture	67	91.46	93.01	1.69	98.14	5.52	103.88	5.85	108.21	4.17	18.31
Astronomy	22	829.55	755.95	-8.87	855.81	13.21	1,005.71	17.52	1,084.32	7.82	30.71
Biology	231	536.19	555.75	3.65	621.64	11.86	732.98	17.91	824.05	12.42	53.69
Botany	58	416.02	427.85	2.84	482.01	12.66	560.97	16.38	612.78	9.24	47.30
Business & Economics	238	190.95	204.90	7.31	236.64	15.49	280.80	18.66	319.26	13.70	67.20
Chemistry	186	933.88	940.88	0.75	1,035.01	10.00	1,224.50	18.31	1,359.22	11.00	45.55
Education	89	123.33	128.76	4.40	140.58	9.18	155.29	10.46	169.12	8.91	37.13
Engineering	241	491.36	534.98	8.88	591.13	10.50	718.91	21.62	814.38	13.28	65.74
Food Science	16	328.07	351.00	6.99	398.09	13.42	456.60	14.70	501.73	9.88	52.93
General Science	76	342.47	368.10	7.48	410.11	11.41	471.40	14.94	530.39	12.51	54.87
General Works	76	61.68	67.40	9.27	72.98	8.28	84.04	15.15	89.73	6.77	45.48
Geography	62	277.62	297.58	7.19	334.51	12.41	382.52	14.35	442.90	15.78	59.53
Geology	81	444.69	461.13	3.70	511.99	11.03	615.08	20.14	692.83	12.64	55.80
Health Sciences	1373	355.34	372.29	4.77	414.75	11.41	487.34	17.50	543.32	11.49	52.90
History	198	73.31	77.86	6.21	85.40	9.68	92.86	8.74	96.46	3.88	31.58
Language & Literature	328	67.48	69.37	2.80	75.87	9.37	86.30	13.75	\$89.73	3.97	32.97
Law	87	93.39	95.85	2.63	103.49	7.97	115.75	11.85	119.83	3.52	28.31
Library & Information Science	59	144.34	152.94	5.96	170.30	11.35	187.99	10.39	198.04	5.35	37.20
Math & Computer Science	169	526.84	582.34	10.53	631.04	8.36	743.09	17.76	817.72	10.04	55.21
Military & Naval Science	9	99.00	111.44	12.57	129.33	16.05	142.00	9.80	154.67	8.92	56.23
Music	45	53.59	55.07	2.76	59.24	7.57	62.59	5.65	67.33	7.57	25.64
Philosophy & Religion	140	86.28	87.21	1.08	97.55	11.86	108.28	11.00	112.70	4.08	30.62
Physics	184	994.93	1,020.57	2.58	1,130.57	10.78	1,341.46	18.65	1,494.47	11.41	50.21
Political Science	57	117.52	123.55	5.13	139.89	13.23	161.71	15.60	178.30	10.26	51.72
Psychology	134	152.87	167.98	9.88	188.67	12.32	213.67	13.25	238.09	11.43	55.75
Recreation	18	71.44	76.73	7.40	79.14	3.14	88.45	11.76	92.72	4.83	29.79
Sociology	242	145.64	155.83	7.00	172.63	10.78	196.90	14.06	215.20	9.29	47.76
Technology	196	430.22	474.47	10.29	531.37	11.99	631.07	18.76	706.95	12.02	64.32
Zoology	106	402.83	424.30	5.33	474.57	11.85	545.88	15.03	599.11	9.75	48.73

that will change by the end of 1997. Mid-sized publishers in particular seem to be holding back on the move to on-line, perhaps waiting for greater market consensus on pricing models, more user demand, improvement of technological standards and capabilities, better delivery and control procedures, and clarification of archiving responsibilities—the same issues generating lively discussion on library list servs.

EBSCO's database currently includes around 850 E-journal titles with one or more active orders. About half (470) can be ordered separately from the print version at costs ranging from under \$40 to \$15,000. More typically, however, a library will order the online version in combination with the print. For most of the non-STM publishers, E-journals are currently free with the print subscription. On the other hand, the majority of STM publishers charge an additional fee for

TABLE 3: AVERAGE PRICE PER TITLE BY COUNTRY 1997

Country	No. of ISI Titles	Avg. Price Per Title	Country	No. of ISI Titles	Avg. Price Per Title
The Netherlands	386	\$1,474.34	Sweden	19	219.63
Ireland	42	1,169.26	Israel	12	202.75
Switzerland	123	1,141.72	Australia	54	200.03
Austria	23	841.70	Czech Republic	9	198.92
Germany	350	710.73	Norway	23	190.92
England	1,087	616.42	Romania	5	186.60
China	5	436.11	Italy	70	156.29
Denmark	55	364.07	Spain	10	154.74
Japan	80	332.41	Ukraine	5	150.56
Scotland	26	326.65	Canada	108	118.90
United States	2,276	321.90	Brazil	6	93.50
New Zealand	22	297.44	Belgium	17	91.38
France	157	293.78	Mexico	5	76.20
Russia	54	267.95	India	10	59.10
Singapore	5	251.20	South Africa	13	54.23

AVERAGE COST OF AN ISI TITLE: \$512.56

TABLE 4: COST HISTORY BY CONTINENT/COUNTRY OF ORIGIN

Continent/Country	Average No. of Titles 1993-97	Average Cost 1993	Average Cost 1994	% of Change '93-'94	Average Cost 1995	% of Change '94-'95	Average Cost 1996	% of Change '95-'96	Average Cost 1997	% of Change '96-'97	'93-'97 % of Change
NORTH AMERICA											
United States	2272	\$209.17	\$232.38	11.10	\$259.35	11.61	\$290.82	12.13	\$321.90	10.69	53.89
Canada	107	85.84	94.70	10.32	99.69	5.27	109.58	9.92	118.90	8.51	38.51
Other	8	74.68	93.02	24.56	80.83	-13.10	89.39	10.59	92.45	3.42	23.80
Average for all No. America	2387	\$203.30	\$225.81	11.07	\$251.47	11.37	\$281.98	12.13	\$311.97	10.64	53.45
EUROPE											
France	155	\$217.23	\$220.39	1.45	\$248.46	12.74	\$287.88	15.87	\$293.78	2.05	35.24
Germany	340	526.17	508.55	-3.35	566.91	11.48	675.36	19.13	710.73	5.24	35.08
Ireland	42	747.03	705.52	-5.56	762.64	8.10	978.16	28.26	1,169.26	19.54	56.52
Italy	70	132.27	133.36	0.82	145.05	8.77	147.59	1.75	156.29	5.89	18.16
The Netherlands	368	952.17	990.24	4.00	1,028.22	3.84	1,300.43	26.47	1,474.34	13.37	54.84
Switzerland	123	675.31	714.97	5.87	827.41	15.73	1,010.41	22.12	1,141.72	13.00	69.07
United Kingdom	1095	388.58	422.08	8.62	463.67	9.85	535.84	15.56	608.15	13.50	56.51
Other	244	252.56	233.22	-7.66	268.14	14.98	298.36	11.27	308.83	3.51	22.28
Average for all Europe	2437	\$482.75	\$495.41	2.62	\$545.10	10.03	\$653.11	19.81	\$727.54	11.40	50.71
ASIA											
Japan	79	\$234.08	\$289.16	23.53	\$299.90	3.71	\$321.93	7.35	\$332.41	3.26	42.01
Other	43	123.60	136.16	10.16	144.50	6.12	157.08	8.71	172.13	9.58	39.26
Average for all Asia	121	\$194.49	\$234.79	20.72	\$244.31	4.05	\$263.83	7.99	\$278.10	5.41	42.98
AUSTRALIA AND NEW ZEALAND											
	76	\$151.63	\$163.30	7.70	\$178.34	9.21	\$203.12	13.90	\$228.23	12.36	50.52
SOUTH AMERICA											
	17	\$65.09	\$74.23	14.03	\$76.41	2.95	\$81.51	6.67	\$82.45	1.15	26.66
AFRICA											
	16	\$64.85	\$62.72	-3.29	\$66.63	6.25	\$70.40	5.65	\$79.37	2.74	22.39

the online-print combination.

No one knows exactly how many E-journals are on the market. To gain a better sense of the penetration of online journals into the core of the scholarly literature, we scanned the three ISI indexes for titles that can be ordered in an online format. Predictably, the index with the most penetration is Science Citation Index, with almost 24% (665 of 2,729) of titles available in an online version. In the Social Sciences Citation Index, 19% (546 of 2,866) of titles are offered electronically. Only 10% (118 of 1,135)

of Arts and Humanities Citation Index titles have an online version. These numbers illustrate the current commitment to electronic distribution among publishers in the three broad disciplines.

What about print?

So far, libraries have little incentive to cancel print subscriptions and replace them with online versions. In 1997 relatively few discounts were offered for purchasing an online journal without its corresponding print version. Where discounts were offered, they tended to be a

modest 10%-20%. These discounts may be introductory enticements that will disappear as publishers gain confidence in their electronic products and in their market. In addition, the absence of archived backfiles may negate whatever benefit is offered by the small discounts.

Studies of user behavior with E-journals are almost nonexistent. Given the number of unresolved issues surrounding their acquisition, use, and storage, electronic journals are not yet widely accepted as viable alternatives to print. As a consequence, the 1998

TABLE 5: COST HISTORY BY BROAD SUBJECT

Citation Index	Average No. of Titles 1993-97	Average Cost Per Title 1993	Average Cost Per Title 1994	% of Change '93-'94	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	'93-'97 % of Change
ARTS & HUMANITIES											
U.S.	562	\$57.98	\$61.98	6.9%	\$66.32	7.0%	\$71.15	7.3%	\$75.41	6.0%	30.1%
Non-U.S.	554	114.87	116.15	1.1%	128.39	10.5%	144.22	12.3%	150.99	4.7%	31.4%
SOCIAL SCIENCES											
U.S.	1,465	\$154.06	\$169.74	10.2%	\$187.57	10.5%	\$209.53	11.7%	\$230.11	9.8%	49.4%
Non-U.S.	1,370	326.26	341.22	4.6%	374.72	9.8%	445.12	18.8%	498.32	12.0%	52.7%
SCIENCE											
U.S.	1,076	\$344.44	\$382.94	11.2%	\$429.82	12.2%	\$484.07	12.6%	\$537.17	11.0%	56.0%
Non-U.S.	1,608	628.36	642.31	2.2%	708.55	10.3%	850.18	20.0%	949.23	11.7%	51.1%

TABLE 6: 1998 COST PROJECTIONS BY BROAD SUBJECT

Citation Index	No. of Titles	% of List	1997 Cost	% of Cost	Projected % of Increase	Projected 1998 Cost	% of Cost	Projected Overall % Increase
ARTS & HUMANITIES								
U.S.	563	49.6	\$42,456	33.0	7.0	\$45,428	33.6	5.0
Non-U.S.	572	50.4	86,367	67.0	4.0	89,822	66.4	
SOCIAL SCIENCES								
U.S.	1,464	51.1	\$336,887	32.5	11.0	\$373,945	33.3	8.3
Non-U.S.	1,402	48.9	698,640	67.5	7.0	747,545	66.7	
SCIENCE								
U.S.	1,084	39.7	\$582,287	27.2	12.0	\$652,161	27.9	9.1
Non-U.S.	1,645	60.3	1,561,491	72.8	8.0	1,686,410	72.1	
PROJECTED OVERALL INCREASE FOR ALL ISI TITLES: 8.7%								

renewal season will look very much like the seasons before, with librarians struggling to maintain a core of print journals.

Cost trends by subject

Despite dramatic changes taking place in today's serials market, cost history analysis still gives some of the best clues to future trends in prices. Price histories for the various disciplines, grouped by LC Subject Headings, are found in Table 2. Thirteen scientific, technical, and medical fields dominate the averages, as Table 1 illustrates. With only minor changes, these same 13 disciplines have maintained a stable hierarchy in pricing for the eight years of data available. For the third year in a row, Physics held the top spot at

\$1,494.47 per average subscription, followed by Chemistry at \$1,359.22.

Cost trends by country of origin

When looking at Tables 3 and 4, it helps to remember the two international realities that drive the cost of journals to North American libraries every year: currency exchange rates and the pricing strategies of the major STM publishers in Europe. Because virtually all major European STM publishers now set their rates in U.S. dollars, the impact of these two factors has become harder to separate. In years past, it has been a rule of thumb that when price increases for European journals are higher or lower than about 10%, we are seeing the effects of currency exchange rates rather than true price increases. This is because most

European publishers have held base price increases to about 10% for the last several years.

For 1997, it appears that some publishers may have set base price increases above the normal 10%-11% range. Based on the strength of the dollar in relation to European currencies, we would have expected price increases for European publications to be at or below the overall base range. Using the

"10% rule," what happened in Germany, France, and Italy followed recent norms because overall price increases to U.S. libraries were a mere 2%-6%. By contrast, increases in Ireland, the Netherlands, and Switzerland averaged between 13% and 19.54%, which were outside recent norms. It is too soon to tell whether the rule is a thing of the past.

The foreign-domestic price gap

According to Table 5, for the eighth year in a row the average foreign title cost just about double that of the average U.S. title across all three indexes. Table 5 reveals another noteworthy pricing blip: with increases in the other broad disciplines pushing the high side of recent norms, that U.S. arts and humanities titles were well below the range

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. Table 8 provides historical data for 412 titles in the index. For 1997 the average cost of a U.S. title was \$45.47, up 4.6% from the previous year. The average foreign title cost rose by 4.9% to \$80.43, almost double that of the typical U.S. title.

If early publisher predictions hold

true, U.S. magazines that carry large amounts of advertising should increase no more than 4%, while those with little advertising can be expected to increase by 5%-9%. Some journals from Europe may actually see a decrease if the dollar remains strong against those currencies. The largest increases on non-U.S. titles may come from British publications if the pound maintains its current strength

against the dollar. Weighting the mix of titles in MAS for these factors, our projection for overall increases for popular magazines in 1998 is 4.5%.

TABLE 7: 1998 COST PROJECTIONS FOR TITLES IN MAGAZINE ARTICLE SUMMARIES

Index	No. of Titles	1997 Cost	Projected % of Increase	Projected 1998 Cost
Mag. Article Summaries	418	\$19,775	4.5	\$20,665

TABLE 8: COST HISTORY FOR TITLES IN MAGAZINE ARTICLE SUMMARIES

Magazine Article Summaries	Average No. of Titles '93-'97	Average Cost Per Title 1993	Average Cost Per Title 1994	% of Change '93-'94	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	'93-'97 % of Change
U.S.	390	\$38.83	\$40.05	3.1	\$41.17	2.8	\$43.45	5.5	\$45.47	4.6	17.1
Non-U.S.	22	60.04	63.67	6.0	70.51	10.7	76.70	8.8	80.43	4.9	34.0

of recent increases. Where price increases in the past ranged between 6.9% and 7.3% for titles in the Arts and Humanities Citation Index, the average in-

crease in 1997 was just 6%.

Currency fluctuation always accounts for some of the gap in foreign and domestic pricing. As the exchange

rate line dips (Chart 1), European currencies weaken (i.e., the U.S. dollar strengthens), and U.S. libraries pay less for European publications. Between the time when 1996 and 1997 subscriptions were purchased, the dollar strengthened by 4.4% against the European composite. The corresponding downward turn of the price line illustrates the degree to which European publishers passed along the cost-lowering effect to U.S. customers.

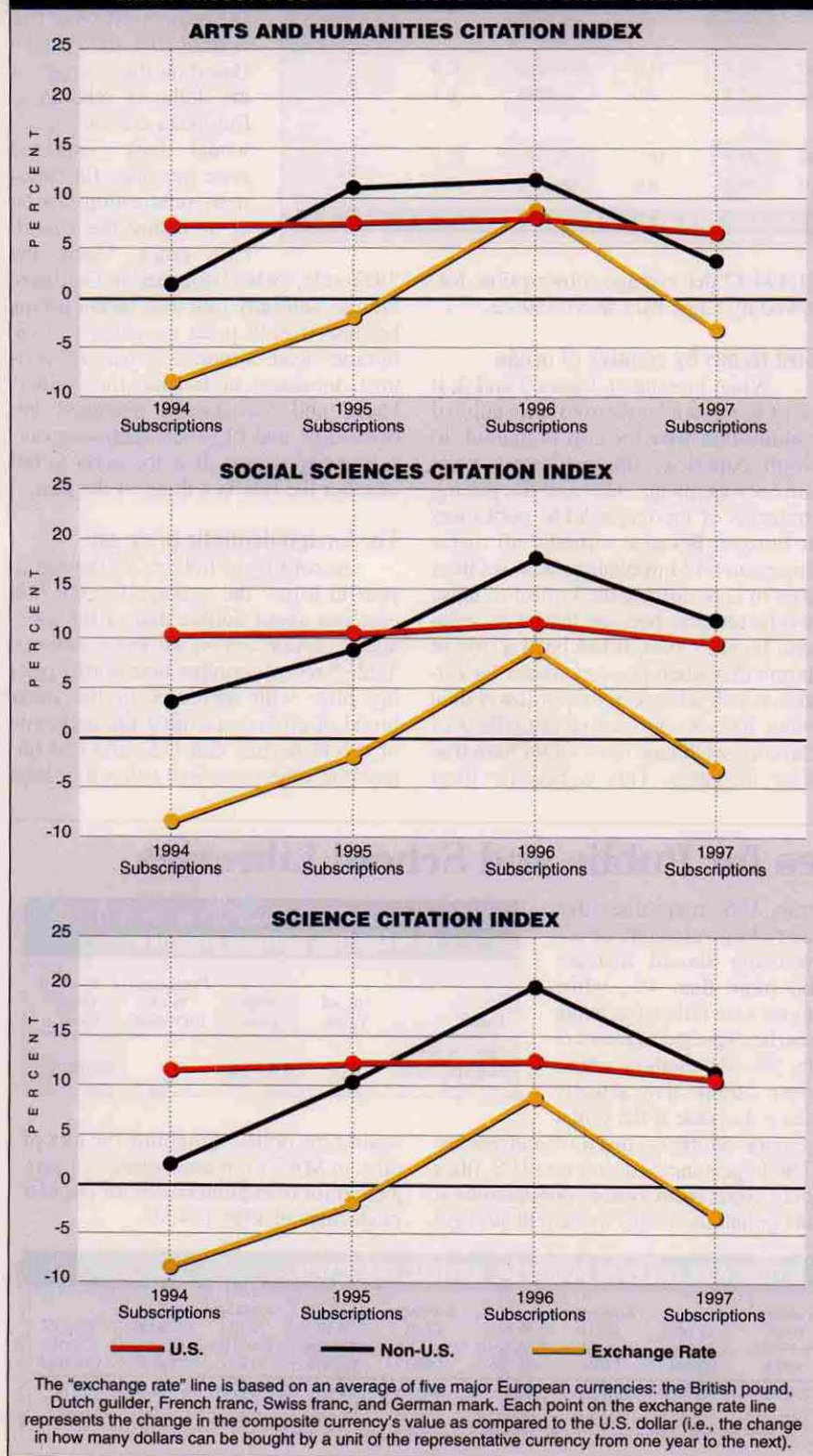
Budgeting for 1998

The earliest information from publishers indicates base increases for 1998 subscriptions in the 8%–12% range for STM publishers, in the 6%–9% range for university presses, and under 4% for consumer journals with commercial advertising. The continuing effect of market uncertainties, including extraordinary pressure on publishers to invest heavily in electronic technologies, may push some publishers to the high side of these estimates, as it presumably did last year.

The U.S. dollar continues to be strong against European currencies outside the UK, which bodes well for U.S. libraries purchasing European journals in 1998 if the current situation remains stable. Although the dollar has strengthened in relation to the pound somewhat since the fall of 1996, UK prices may be the ones to watch closely this summer when publishers set their rates for 1998, since British publications account for almost 40% of the cost of the social sciences list and about one-third of the science list. On the positive side, the scheduled hikes in international postage mentioned in last year's survey did not materialize. Protests from major European countries reduced the rate hikes and delayed their implementation.

The average increase projected for U.S. publications (Table 6) in the arts and humanities is 7%; for social science titles, 11%; and for science titles, 12%. Projections for their non-U.S. counterparts are 4%, 7%, and 8%, respectively. We base these projections on the following assumptions: that the dollar will keep most of its current strength relative to the European currencies; that cancellations and the cost of technology will drive print prices up at rates pushing the high side of historic norms; and that price-setting practices of the STM publishers will continue to drive the market. ■

CHART 1: COST & CURRENCY FLUCTUATION BY BROAD SUBJECT



Periodical Prices for College and Medium-Sized University Libraries

Prices in the three ISI indexes that comprise the core of this price study range from widely held, basic academic journals to highly esoteric and specialized

publications, many of which are beyond the budgets and the needs of mid-sized and smaller academic institutions. For this reason, we include an analysis of the titles in EBSCO Publishing's Academic Search, an indexing and abstracting service for core academic journals.

In Table 10, the 1,756 titles in Academic Search are arranged by grouped LC Subject Headings so that

cost trends in a given discipline can be seen. Comparing both average cost per discipline and rate of increase of this core list to the data drawn from the comprehensive ISI title list shown in Table 2 may be helpful for librarians whose periodical collections fall somewhere between the two indexes in terms of comprehensiveness.

About 19% of the titles included in

this core index are published outside of the United States, but they comprise 43% of the total cost of the list. We estimate that non-U.S. publications, with the aid of a strong U.S. dollar, will increase by 6.5% in 1998, while domestic publications are projected to rise by 7.5%. The overall average increase for titles in this index is predicted to be somewhere in the range of 7.1%.

TABLE 9: 1998 COST PROJECTIONS FOR TITLES IN ACADEMIC SEARCH

Academic Search	No. of Titles	% of List	1997 Cost	% of Cost	Projected % of Increase	Projected 1998 Cost	% of Cost	Projected Overall % Increase
U.S.	1,388	81.3	\$142,549	56.7	7.5	\$153,240	56.9	7.1
Non-U.S.	320	18.7	109,035	43.3	6.5	116,122	43.1	

TABLE 10: COST HISTORY FOR TITLES IN ACADEMIC SEARCH

Subject	Average No. of Titles 1993-97	Average Cost Per Title 1993	Average Cost Per Title 1994	% of Change '93-'94	Average Cost Per Title 1995	Average % of Change '94-'95	Average Cost Per Title 1996	Average % of Change '95-'96	Average Cost Per Title 1997	% of Change '96-'97	'93-'97 % of Change
Agriculture	19	\$33.88	\$34.51	1.86	\$36.51	5.80	\$38.30	4.90	\$40.30	5.22	18.95
Anthropology	21	108.62	121.06	11.45	137.03	13.19	151.05	10.23	161.32	6.80	48.52
Art & Architecture	30	52.18	53.97	3.43	56.96	5.54	59.56	4.56	64.07	7.57	22.79
Astronomy	3	28.67	29.67	3.49	29.65	-0.07	32.65	10.12	35.32	8.18	23.19
Biology	21	241.55	261.00	8.05	291.10	11.53	319.38	9.71	357.67	11.99	48.07
Botany	3	118.33	121.67	2.82	128.67	5.75	139.33	8.28	149.67	7.42	26.49
Business & Economics	354	152.55	167.97	10.11	188.22	12.06	219.82	16.79	249.55	13.52	63.59
Chemistry	3	929.67	1,017.67	9.47	1,145.33	12.54	1,328.33	15.98	1,405.00	5.77	51.13
Education	131	84.56	88.95	5.19	96.25	8.21	105.92	10.05	113.31	6.98	34.00
Engineering	25	76.95	82.01	6.58	88.01	7.32	98.60	12.03	104.16	5.64	35.36
Food Science	22	46.53	48.17	3.52	50.04	3.88	55.85	11.61	57.94	3.74	24.52
General Science	27	124.33	134.65	8.30	146.99	9.16	159.28	8.36	175.03	9.89	40.78
General Works	73	38.44	40.19	4.55	41.40	3.01	43.51	5.10	46.20	6.18	20.19
Geography	17	52.21	55.37	6.05	57.83	4.44	61.50	6.35	67.86	10.34	29.98
Geology	11	167.24	171.99	2.84	181.99	5.81	200.99	10.44	247.35	23.07	47.90
Health Sciences	113	118.08	124.78	5.67	132.07	5.84	146.63	11.02	157.03	7.09	32.99
History	134	63.84	68.60	7.46	73.31	6.87	79.15	7.97	81.96	3.55	28.38
Language & Literature	144	51.35	54.27	5.69	57.46	5.88	61.56	7.14	64.80	5.26	26.19
Law	25	96.12	99.45	3.46	107.20	7.79	120.85	12.73	130.70	8.15	35.98
Library & Information Sc	43	121.00	124.21	2.65	135.44	9.04	154.53	14.09	160.09	3.60	32.31
Math & Computer Science	26	112.34	118.51	5.49	118.27	-0.20	130.79	10.59	140.00	7.04	24.62
Military & Naval Science	20	26.95	32.09	19.07	33.99	5.92	35.14	3.38	36.38	3.53	34.99
Music	18	43.00	46.67	8.53	49.11	5.23	52.00	5.88	57.11	9.83	32.81
Philosophy & Religion	64	62.86	63.95	1.73	69.10	8.05	76.65	10.93	81.84	6.77	30.19
Physics	6	142.67	150.33	5.37	158.00	5.10	172.00	8.86	183.33	6.59	28.50
Political Science	50	66.86	71.92	7.57	76.64	6.56	85.64	11.74	93.79	9.52	40.28
Psychology	47	143.71	155.85	8.45	175.96	12.90	192.73	9.53	216.26	12.21	50.48
Recreation	25	41.04	45.44	10.72	46.24	1.76	50.58	9.39	53.06	4.90	29.29
Sociology	169	118.35	125.92	6.40	136.51	8.41	151.20	10.76	161.29	6.67	36.28
Technology	47	118.65	128.50	8.30	132.58	3.18	151.21	14.05	169.05	11.80	42.48
Zoology	7	122.28	139.28	13.90	157.57	13.13	164.45	4.37	182.88	11.21	49.56