

# Coping with the Terrible Twins | Periodicals Price Survey 2012

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LJ

*By Stephen Bosch and Kittie Henderson*

Stuck between the rock (stagnant budgets) and the hard place (steady serials price increases), every year libraries are forced to come up with creative ways to meet the ever-growing needs of their users. But inventiveness has limits, and many libraries are nearing the end of their ability to leverage shrinking buying power.

The bad news: the National Association of State Budget Officers (NASBO) tempers optimism about the economy with some hard facts in its [Fiscal Survey of States, Fall 2011](#). The report notes that while fiscal conditions are improving generally, state budgets remain constrained by the lack of a strong national economic recovery and the withdrawal of federal stimulus funds provided through the American Recovery and Reinvestment Act of 2009 (ARRA): 29 states anticipate lower spending in FY12, compared with prerecession levels. A 2011 report from the [Center on Budget and Policy Priorities](#) (CBPP) echoes the NASBO findings, predicting that state budget cuts in 2012 will hit education, health care, and other services harder this year than in any year since 2008.

Decreases in public funding mean bad news for library budgets. Data from the National Center for Education Statistics (NCES) and the Association for Research Libraries show that over the past 25 years funding for libraries in higher education has shrunk dramatically as a percentage of total expenditures. Expenditures for libraries as a percentage of all university expenses have dropped from a high of 3.7 percent in 1982 to less than two percent in 2008. This may not sound like a large decrease, but if spending had remained at 3.7 percent, libraries in higher education would have had another \$3 billion to spend. That's a lot of serials!

In response to the 2012 EBSCO Library Collections and Budgeting Trends Survey, conducted in February 2012 (in which 395 predominantly academic libraries participated), 69 percent of libraries reported that their current-year budgets had remained flat or decreased, 52 percent indicated that they expect their budgets for the upcoming year to remain flat, and 22 percent expect their budgets to decrease. In response to these pressures, most libraries reported that they were likely to decrease spending for print journals (80 percent), print-plus-online journals (63 percent), and print books (55 percent).

The library marketplace for information resources has not yet arrived at a "new normal," though we posit that in 2012 public budgets will finally bottom out after a four-year downward spiral. Nonetheless, after a four-year downward spiral, predictions regarding public funding for libraries remain dismal—and, unfortunately, serials pricing continues to cast a large shadow over our collections' future.

**TABLE 1 AVERAGE 2012 PRICE FOR SCIENTIFIC DISCIPLINES**

DISCIPLINE	AVERAGE PRICE PER TITLE	DISCIPLINE	AVERAGE PRICE PER TITLE
Chemistry	\$4,227	Technology	\$1,746
Physics	3,649	Health Sciences	1,693
Engineering	2,507	Math & Computer Science	1,689
Biology	2,281	Food Science	1,660
Astronomy	2,162	General Science	1,449
Geology	1,913	Geography	1,348
Botany	1,781	Agriculture	1,317
Zoology	1,769		

SOURCE: LJ PERIODICALS PRICE SURVEY 2012

On the upswing: serials prices

While state and library budgets continue to decrease, research indicates that serials prices are increasing—at a rate that also seems to be escalating (see Table 4: Cost History by Library of Congress Subject). Data from the ISI indexes shows an increase in prices, from a five percent increase in 2011 to six percent in 2012. EBSCO's MasterFILE Premier (MSP; Table 5) and Academic Search Premier (ASP; Table 7) show mixed results: average prices for U.S. titles in MSP increased from 4.3 percent in 2010–11 to 5.5 percent between 2011 and 2012, while average prices for U.S. titles in ASP dropped from 7.1 percent to 6.3 percent in the same period. The Consumer Price Index, on the other hand, advanced 2.9 percent for 2011, which means serials inflation continues to far exceed general inflationary pressures. Serials prices showed some restraint in 2010, but since that time they have risen steadily. An increase in the rate of price inflation from five percent to six percent may not seem staggering, but it does represent a 20 percent uptick in the rate of increase.

This year we continue to examine titles in the combined ISI Arts and Humanities, Science Citation, and Social Sciences Citation indexes, which offer published online subscription rates, and were able to obtain standard pricing for approximately half of the covered titles. The average online price per subject (presented in Table 3: Average 2012 Price for Online Journals in the ISI Indexes) includes a range of pricing models: online-only, print-plus-free-online, and the first tier of any tiered pricing, with the common element being electronic format.

As was the case in 2011, half of the titles in the combined indexes are from five major publishers—Elsevier, Wiley, Springer, Taylor & Francis, and SAGE. Also as noted last year, all five publishers offer Big Deal packages with increases in the cost of the package dictated by contracts, which may differ from market rates for print. Compared with last year's data, this set of online titles increased in price by 4.5 percent, slightly lower than that for print titles. An analysis of the more than 18,000 e-journal packages handled by EBSCO in 2011 reflected increases in the three percent to six percent range, with the average being 5.1 percent. Because the number of titles in Table 3 is small, it is difficult to draw solid conclusions about e-journal prices, compared with print. This is compelling data, but it is too limited to conclude that e-journal prices are lower and are not increasing as quickly as print subscriptions.

Prices for science, technology, and medical (STM) serials remain the highest, compared with prices for serials in other subject areas, but this is no surprise. Chemistry has historically seen the highest average serials prices, and that has not changed: recent reports show that the average price for chemistry journals hovers around \$4000 annually. There were only slight shifts in the overall average prices for serials broken down by subject area.

**TABLE 2 AVERAGE 2012 PRICE PER TITLE BY COUNTRY**

COUNTRY	NO. OF ISI TITLES	AVG. PRICE PER TITLE	COUNTRY	NO. OF ISI TITLES	AVG. PRICE PER TITLE
Russia	51	\$4,715	Austria*	25	\$2780
Ireland	36	3,522	Japan	63	525
Hungary	12	2,886	Sweden	11	510
Australia*	50	635	France	122	487
Netherlands	554	2,721	Norway	13	417
Singapore	19	2,538	Canada	91	383
Germany	431	1,995	New Zealand	15	320
Switzerland	84	1,947	Italy	59	317
England	1,990	1,685	Scotland	22	315
United States	2,601	1,117	Spain	17	215
China	10	829			

**AVERAGE COST OF ALL TITLES: \$1,517**

SOURCE: LJ PERIODICALS PRICE SURVEY 2012

\*Table has been corrected for Australia and Austria, for which figures were initially transposed.

### Responding to the Terrible Twins

As noted above, more than two-thirds of library respondents to EBSCO's recent survey reported flat or decreased budgets in FY12 and said they expect them to remain so in FY13. Per the 2012 EBSCO survey, serials cancellations and reductions in monographic purchases remain the primary tools used to control costs. Other approaches, though to a much smaller degree, are changing or dropping journal packages and using pay-per-view (PPV) instead of subscriptions as a purchase mechanism.

Faced with the Terrible Twins and their equally fierce sister, Relentless Change, libraries, publishers, and vendors are implementing creative strategies. Here are some of the current trends affecting the information landscape and tactics for navigating its challenging terrain.

### The Big Deal

From the North American Serials Interest Group (NASIG) presentation by David Fowler (Univ. of Oregon) and Jonathan Nabe (Southern Illinois Univ. at Carbondale) to the Research Libraries UK consortium's [announcement](#) that it would not renew deals with Elsevier and Wiley owing to cost, there was a lot of buzz about the breakup of Big Deal packages in 2011. In last year's EBSCO survey, almost 60 percent of librarians reported that they would consider breaking up e-journal packages to achieve budget objectives. The 2012 EBSCO survey indicates that 34 percent of libraries responding to the survey actually canceled e-journal packages in 2011. More than half of the 58 predominately STM and society publishers responding to the 2012 EBSCO Publisher Survey, also conducted in February, indicated that they saw an increase in e-journal package business.

Some libraries have dropped or altered select journal packages, but publishers overall reported they are still seeing increases in their e-journal package business. The survey results show that change is coming, but dropping journal packages is not an easy task. Seventy-five percent of library respondents to the 2012 EBSCO survey indicated they plan either to make no changes or increase journal packages in 2012.

**TABLE 3 AVERAGE 2012 PRICE FOR ONLINE JOURNALS IN THE ISI INDEXES\***

DISCIPLINE	AVERAGE PRICE PER TITLE	DISCIPLINE	AVERAGE PRICE PER TITLE
Chemistry	\$3,890	Psychology	\$795
Physics	3,185	Social Sciences	775
Biology	2,070	Business & Economics	733
Engineering	2,009	Sociology	713
Astronomy	1,877	Education	708
Zoology	1,842	Political Science	619
Botany	1,760	Anthropology	570
Health Sciences	1,593	Law	565
Geology	1,485	Recreation	549
Technology	1,341	Library Science	491
Math & Computer Science	1,328	General Works	482
Food Science	1,277	Arts & Architecture	481
General Science	1,261	Philosophy & Religion	404
Agriculture	1,075	History	383
Geography	973	Language & Literature	351
Military & Naval Science	827	Music	295

\*Prices represent print-plus-free-online, online-only, and the first tier of tiered pricing

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2012

### The subscription model

Discussions about the future of the subscription business model as the core means for acquiring serials have surfaced on the LibLicense-L discussion forum, in *Against the Grain*, and on *The Scholarly Kitchen* blog. Some say that selling serials only through subscriptions is not a sustainable model. Pricing and budget data appear to support this claim, as decreasing funds eventually will be unable to cover increasing costs. The model worked for print because the journal container was a convenient way to deliver content. This is not the case in the digital environment, however, because content can be acquired on an article-by-article basis. Sometimes referred to as the Little Deal, PPV access has been offered as an alternative to Big Deal e-journal package access.

Despite ongoing discourse about libraries offering subsidized PPV access to journal content to which they do not subscribe and a number of publishers offering individual-article access, the majority of librarians responding to EBSCO's survey indicate that their institutions do not currently offer this service, nor do they plan to do so in 2013. Detractors have pointed out that wholesale shifts to business models based on single-article delivery would probably lead publishers to raise per article costs to fairly high levels to compensate for a loss of subscription revenue, but the option of PPV access to content is here to stay.

**TABLE 4 COST HISTORY BY LIBRARY OF CONGRESS SUBJECT**

SUBJECT	AVERAGE NO. OF TITLES 2010–2012	% OF CHANGE 2009–2011	AVERAGE COST PER TITLE 2010	AVERAGE COST PER TITLE 2011	% OF CHANGE 2011	AVERAGE COST PER TITLE 2012	% OF CHANGE 2012
Agriculture	181	2	\$1,191	\$1,252	5	\$1,317	5
Anthropology	51	3	472	499	6	518	4
Arts & Architecture	101	2	307	327	6	344	5
Astronomy	28	1	1,988	2,041	3	2,162	6
Biology	261	0	2,035	2,166	6	2,281	5
Botany	67	2	1,626	1,712	5	1,781	4
Business & Economics	405	2	969	1,036	7	1,093	6
Chemistry	247	3	3,746	4,028	8	4,227	5
Education	128	2	647	694	7	725	4
Engineering	456	0	2,224	2,367	6	2,507	6
Food Science	20	0	1,463	1,564	7	1,660	6
General Science	80	3	1,274	1,354	6	1,449	7
General Works	80	-2	187	201	8	209	4
Geography	92	-1	1,205	1,283	6	1,348	5
Geology	99	-5	1,688	1,807	7	1,913	6
Health Sciences	1,653	15	1,505	1,593	6	1,693	6
History	328	8	299	314	5	333	6
Language & Literature	460	31	279	291	4	306	5
Law	87	0	334	352	5	366	4
Library Science	51	0	590	618	5	663	7
Math & Computer Science	221	4	1,539	1,610	5	1,689	5
Military & Naval Science	13	0	639	689	8	735	7
Music	59	2	193	201	4	210	5
Philosophy & Religion	205	9	293	314	7	335	7
Physics	247	-3	3,332	3,442	3	3,649	6
Political Science	79	1	609	658	8	695	6
Psychology	166	1	707	753	7	793	5
Recreation	30	1	437	464	6	506	9
Social Sciences	59	1	678	703	4	738	5
Sociology	304	2	707	757	7	801	6
Technology	68	2	1,567	1,655	6	1,746	5
Zoology	128	3	1,619	1,672	3	1,769	6
<b>AVERAGE</b>		<b>0</b>	<b>1,336</b>	<b>1,406</b>	<b>5</b>	<b>1,485</b>	<b>6</b>

SOURCE: LJ PERIODICALS PRICE SURVEY 2012

### The decline of print

Print-only orders continued to wane during 2011. In both 2011 and 2012, approximately 80 percent of library respondents to EBSCO's survey said they are likely to reduce the number of print subscriptions while planning to increase the number of e-journal subscriptions. Responses from publishers during the same time period mirror the decline in print-only orders, with print-plus-online also reflecting decreased orders. Sixty-eight percent of publishers reported decreases in print subscriptions, and 52 percent reported drops in print-plus-online subscriptions.

As funds and revenues tighten, smaller publishers will continue to be bought by larger ones, so consolidation in the industry will continue. Last year, online discussion lists were abuzz with reports that Reed Elsevier was up for sale. Only parts of the company were sold, mostly those that dealt with trade and business-to-business publications, as well as components of the Congressional Information Service (CIS).

Springer has purchased parts of Kluwer, specifically its pharmaceuticals-focused marketing and publishing services journals. Publishers also continue to offer expanded package content to capture market share: examples include the expansion of JSTOR Current Scholarship and Project MUSE and the creation of the Independent Scholarly Publishers Group (ISPG). Another continuing trend is that of commercial publishers acquiring open access publishers, as in the case of De Gruyter, which recently purchased Berkeley Electronic Press and Versita.

### Open access

Open access (OA) continues to evolve, with an estimated four OA journals being added to the Directory of Open Access Journals (DOAJ) per week. Sixty-seven percent of librarians responding to the 2012 EBSCO survey indicated that they were likely to seek OA content as a strategy to achieve budget goals.

In a 2011 study conducted by the Study of Open Access Publishing (SOAP), researchers rated “accessibility of content to readers, perceived quality of the journal, the journal’s Impact Factor, and the absence of fees” as the four most important factors for publishing in an OA journal. Reporting on research about OA journal-processing charges, David Solomon and Bo-Christer Björk reveal that in their 2010 study of 1370 journals, article-processing fees range from \$8 to \$3900 per article, with the average charge being \$906 per article. Biomedical titles had the highest charges per discipline. Six OA titles are included in the merged ISI indexes set for 2012, and the average 2012 cost for a health sciences title in the merged indexes is \$1,593.

Unfortunately, not all OA journals adhere to the principles of the movement. Jeffrey Beall of the University of Colorado at Denver maintains a list of what he calls “predatory” publishers and journals on his [Scholarly Open Access](#) blog.

## Periodical Prices for High School and Small Public Libraries

Overall price increases for titles in EBSCO Publishing’s MasterFILE Premier are expected to be in the 5% to 6% range.

**TABLE 5 COST HISTORY FOR TITLES IN MASTERFILE PREMIER**

MASTERFILE PREMIER	NO. OF TITLES 2010–2012	AVERAGE COST PER TITLE 2010	AVERAGE COST PER TITLE 2011	% OF CHANGE '10–'11	AVERAGE COST PER TITLE 2012	% OF CHANGE '11–'12
U.S.	728	\$104	\$109	4.3	\$115	5.5
NON-U.S.	158	225	237	5.3	248	5.3

SOURCE: LJ PERIODICALS PRICE SURVEY 2012

### Pricing models

Discussions about alternative pricing models continued in 2011, as publishers sought different ways to price content and librarians searched for models that met both informational and budget objectives. While there was not a wholesale movement to tiered pricing (pricing based upon institutional size, concentration in specific disciplines, or usage for the previous year) for 2012 orders, a number of publishers report considering it for 2013. In the 2012 EBSCO survey, 36 percent indicated that they would consider changing pricing models, and 30 percent noted that they would consider moving to a tiered model.

### Usage statistics

Librarians and publishers find common ground on usage. The consensus: use it or lose it. With Google and library discovery platforms driving the use of electronic resources, both groups seek to document the value of content through usage statistics. In the recent EBSCO surveys, 98 percent of librarians listed usage as the most important variable in content acquisition or retention decisions, rating it above historical price increases; 87 percent of publishers rank increasing usage as a goal, second only to increasing sales.

### The Academic Spring

Recently, academia has experienced a wave of revolutionary activity, dubbed the “Academic Spring” in a February 4, 2012, [article](#) in *The Economist*. The current scholarly publishing model was big news in January 2012, as Elsevier became [the target of a boycott](#) by academicians. The scenario started with a blog post by Timothy Gowers, an award-winning mathematician at the University of Cambridge. Picking up on a thread in his post, a website surfaced that allowed academics to pledge that they would refrain from publishing, refereeing, or doing editorial work for Elsevier. Among the criticisms leveled at the publisher were its high prices and business practices that sold content in bundles, in addition to its support for efforts like the Stop Online Piracy Act, the Protect IP Act, and the Research Works Act. Some commentators believed Elsevier was being unfairly targeted, since other large STM publishers engage in similar practices.

The boycott may not change Elsevier’s overall business model, but the company did [reverse its stance](#) on the Research Works Act—a move that was subsequently followed by the Research Works Act being removed from further consideration in Congress.

The Elsevier boycott clearly indicates the frustration with the current publishing model associated with academic scholarly communications. Opinions about the Elsevier boycott also point out that there are no easy answers or solutions to the issues raised. But as long as the promotion and tenure systems in academia place a high value on journals perceived as having the highest impacts in their fields, significant change is unlikely.

**TABLE 6 2013 COST PROJECTIONS BY BROAD SUBJECT**

	NO. OF TITLES	% OF LIST	2012 COST	% OF COST	PROJECTED % OF INCREASE	PROJECTED 2013 COST	% OF COST	PROJECTED OVERALL % INCREASE
<b>ARTS AND HUMANITIES CITATION INDEX</b>								
U.S.	450	34	\$82,687	21	7.1	\$88,558	21	6.9
NON-U.S.	863	66	317,057	79	6.9	338,934	79	
<b>SOCIAL SCIENCES CITATION INDEX</b>								
U.S.	934	47	568,764	34	6.4	605,066	34	5.5
NON-U.S.	1,074	53	1,101,728	66	5.1	1,157,916	66	
<b>SCIENCE CITATION INDEX</b>								
U.S.	1,333	39	2,335,195	30	6.9	2,496,323	30	6.2
NON-U.S.	2,115	61	5,454,956	70	5.9	5,779,152	70	
<b>PROJECTED OVERALL INCREASE FOR ALL TITLES: 6.1%</b>								
SOURCE: LJ PERIODICALS PRICE SURVEY 2012								

### Social media

People really “like” social media. In fact, Facebook has more users than any other website except Google. The explosion of social media will affect how information is discovered and used.

The digital delivery of serials started the process of disintegrating the journal as the primary “wrapper” for articles, as direct linking from DOIs and URL resolvers bypass the journal to get to article-level content. Current discovery systems rely on users actively searching for information, but social networks could very well change this process and increase the rate of erosion for traditional information containers.

Content used to be king. Good content attracted users to websites, journals, and books. But with the explosive growth of the web, content has become ubiquitous. Flat bibliographic metadata is no longer sufficient to ensure that users can find good content. Context has now become an important part of discovery and brings it to the attention of users: Who has reviewed/recommended/liked/tweeted/bought content? Is it being cited? A lot of web content allows users to create context immediately by recommending content to Google groups, “liking” it on Facebook, forwarding it via email, sending out tweets, etc. When this content is purchased or used, that fact is then used to push it to other users.

These developments will continue to shift the focus of information consumers away from the containers to the actual content. Articles, not journals, tend to be the recommended items. As article-level usage data becomes more accessible, a pattern of small numbers of articles attracting the most use will emerge.

#### Mobile access

Mobile devices are becoming more important to serials delivery, with 73 percent of publishers that responded to the 2012 EBSCO survey indicating that they plan to increase access to content via mobile apps. But apps are not yet a transformative serials platform, except among trade and consumer publications.

With so many apps, it is no surprise that the blogosphere is saturated with talk about app fatigue. Some believe app creation is a great way to make targeted content available on mobile devices, while others suggest that the evolution of web design from advances like HTML5 will negate the need for numerous apps. While separate apps for individual resources may drive usage, they are not an attractive option for libraries.

#### The coming year

Rising costs are but one variable in the current information landscape. Along with cost inflation and revenue stagnation, changes in technology, user expectation, and the library environment require librarians to be both vigilant and agile. The same applies to publishers and vendors.

Serials pricing is a complex mosaic of variables, all of which are almost constantly in motion. Any number of factors can impact price changes, including the overall health of the world’s economy, rates for currency exchange, publishing industry trends, and subscription cancellations. Prices are currently trending up. The average price increase dropped to 4.2 percent in 2010, the lowest percentage increase in decades, but by 2012, it was six percent. Next year, it is likely to be in the six to seven percent range. It is only May, and the market kaleidoscope is likely to change a number of times before prices are firmly established for 2013.

## Periodical Prices for University and College Libraries

Overall price increases for titles in EBSCO’s Academic Search Premier are expected to be in the 5% to 7% range for 2013.

**TABLE 7** 2013 COST PROJECTIONS FOR TITLES IN ACADEMIC SEARCH PREMIER

ACADEMIC SEARCH PREMIER	NO. OF TITLES	% OF LIST	2012 AVERAGE COST PER TITLE	% OF COST	PROJECTED % OF INCREASE	PROJECTED 2013 AVERAGE COST PER TITLE	% OF COST	PROJECTED OVERALL % INCREASE
U.S.	1,256	38.8	\$671	33.1	7.1	\$719	33.3	6.3
NON-U.S.	1,983	61.2	1,359	66.9	5.9	\$1,439	66.7	

SOURCE: LJ PERIODICALS PRICE SURVEY 2012

**TABLE 8 COST HISTORY FOR TITLES IN ACADEMIC SEARCH PREMIER**

SUBJECT	AVERAGE NO. OF TITLES 2010-2012	% OF CHANGE '09-'11	AVERAGE COST PER TITLE 2010	AVERAGE COST PER TITLE 2011	% OF CHANGE 2011	AVERAGE COST PER TITLE 2012	% OF CHANGE 2012
Agriculture	75	0	\$1,071	\$1,158	8	\$1,221	5
Anthropology	25	1	484	513	6	535	4
Arts & Architecture	44	0	277	293	6	309	6
Astronomy	16	0	2,387	2,539	6	2,705	7
Biology	104	0	1,890	2,032	7	2,145	6
Botany	25	1	1,545	1,658	7	1,746	5
Business & Economics	106	1	455	509	12	532	4
Chemistry	70	1	3,439	3,704	8	3,889	5
Education	212	2	450	484	8	510	5
Engineering	205	2	1,547	1,673	8	1,774	6
Food Science	16	0	581	650	12	694	7
General Science	45	-1	919	983	7	1,088	11
General Works	73	0	121	129	6	134	4
Geography	47	0	762	830	9	888	7
Geology	27	-1	957	1,058	10	1,136	7
Health Sciences	730	11	1,174	1,267	8	1,345	6
History	244	-1	298	321	8	340	6
Language & Literature	148	1	229	253	11	269	6
Law	86	4	382	402	5	428	6
Library Science	51	0	208	214	3	224	5
Math & Computer Science	139	8	1,498	1,610	7	1,712	6
Military & Naval Science	18	0	325	378	16	394	4
Music	20	0	182	198	9	207	5
Philosophy & Religion	166	1	315	339	8	356	5
Physics	101	0	3,331	3,519	6	3,821	9
Political Science	68	2	516	557	8	586	5
Psychology	86	0	686	741	8	768	4
Recreation	15	0	228	257	13	285	11
Social Sciences	30	0	306	323	5	338	5
Sociology	187	1	545	588	8	622	6
Technology	28	0	1,028	1,088	6	1,143	5
Zoology	44	0	1,157	1,235	7	1,311	6
<b>AVERAGE</b>		<b>0</b>	<b>955</b>	<b>1,031</b>	<b>8</b>	<b>1,093</b>	<b>6</b>

SOURCE: LJ PERIODICALS PRICE SURVEY 2012

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