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Reed Elsevier: The Tyranny of Competition - SCOAP³ Shows That Price Premium Is Difficult to Sustain in an OA World

Ticker	Rating	CUR	24 Sep 2012 Closing Price	Target Price	TTM Rel. Perf.	EPS 2011A	EPS 2012E	EPS 2013E	P/E 2011A	P/E 2012E	P/E 2013E	Yield
REL.LN	U	GBp	600.00	400.00	6.2%	46.70	47.59	48.56	12.8	12.6	12.4	4.1%
REN.NA	U	EUR	10.52	7.00	15.7%	0.83	0.90	0.92	12.7	11.7	11.5	4.3%
MSDLE15			1127.44			95.91	93.50	105.17	11.8	12.1	10.7	3.8%

O – Outperform, M – Market-Perform, U – Underperform, N – Not Rated

Highlights

Two weeks ago we published a call[1] in which we outlined the challenges facing subscription publishers like Elsevier in leveraging their existing franchise in the transition to Open Access (OA) which is increasingly spurred by politicians in several countries. Our concern is founded on the need to extract adequate Author Publication fees from the "long tail" of journals which all publishers (including Elsevier) publish. On the 21st September, Sponsoring Consortium for Open Access Publishing in Particle Physics (SCOAP³) announced the Author Publication Charges (APCs) submitted by several publishers tendering for participation to their OA initiative. This document analyzes the implications of the APCs submitted.

- **The APCs submitted by publishers to SCOAP³, the OA initiative of the high energy physics community, are well below what Reed Elsevier needs to sustain its current level of journal revenues and revenue growth.** The APCs submitted by the publishers which have agreed to participate to High Energy Physics community OA initiative were made public at the end of last week. With a range of $650 to $2,240, the APCs are probably much lower than most investors would anticipate. Elsevier's two journals in the field have offered APCs of $2,000 and $1,800 respectively, well below the sponsored publication fee of $3,000/article that Elsevier applies as a stated rule.
- **In addition to unexpectedly low APCs, the data would also suggest that journals' impact drives higher revenues (as expected), although the data points are too few to draw any firm conclusion.** Our analysis of the APCs shows that the impact factor of the journals explains to a significant extent the different APCs offered by the different publishers. While the data set is too small to be statistically meaningful, the analysis suggests that higher quality journals do extract a premium. This has significant, and not so good, implications for the STM publishing industry in general, as well as for Elsevier, in view of the "long tail" of content with little or no followership among scientists. As a reminder, 50% of the journals acquired by academic libraries account for only 3 to 7% of total article readership.
- **The timing and scope of transition to OA remains largely unpredictable, but – in view of the significant threat to the economics of Elsevier – Reed Elsevier investors should monitor changes to the regulatory landscape.** The only good news for Reed Elsevier investors is that SCOAP³ experiment may be difficult to replicate for other disciplines. In a transition to Open Access which may be driven by

[1] Please see our recent report, *Reed Elsevier: A Short History of Two Days in July (and Why Investors Should Care)*, published on 10th September, 2012.

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politicians rather than users, the timing and breadth of adoption remains cloudy. We continue to believe that a full transition to Gold OA could reduce the operating profit of *Reed Elsevier* on an ongoing basis by 10 to 25%, depending on different scenarios for the pricing of APCs.

Investment Conclusion

The key historical driver to Reed Elsevier's performance has been LexisNexis, the legal and risk management division, which in recent years contributed over 40% of operating profit growth. Investors have been increasingly concerned since 2009 about the performance of the core US legal research business and of some print businesses within LexisNexis as a result of the poor economy; in addition, starting in 2010, results confirmed that growth of Elsevier (the STM publishing division) had slowed because of pressure on academic budgets, a pattern that continued in 2011 and is still affecting the company in 2012. In addition to the cyclical issues outlined earlier, we are increasingly concerned about longer term structural issues in US legal research, such as increasing competition and a flattening in legal employment growth. We are also concerned by the prolonged decline in funding for academic libraries, which could trigger lower spending on STM journals; more recently, Open Access, an issue which had been dormant for years, returned to the forefront as politicians in various countries seemed eager to mandate change to the dissemination of publicly-funded research. Our analysis suggests that a progressive break-up of the company could yield a 20 to 30% increase to the value of the company, but we think that management is unlikely to pursue more than minor adjustments to the portfolio (such as continuing the divestiture of RBI's assets and selling the Exhibitions business) in the next year or two.

We rate Reed Elsevier Underperform with target prices of £4.00/€7.00 for its UK and Dutch stocks, respectively.

Details

The APCs submitted by publishers to SCOAP³ are well below what Reed Elsevier needs to sustain its current level of journal revenues and revenue growth

On the 21st September, SCOAP³ announced the Author Publication Charges (APCs) submitted by publishers participating to the initiative for the period 2014-2016. By way of background, SCOAP³ is the initiative of the High Energy Physics community to move research dissemination to Open Access (OA). In 2006, a number of High Energy Physics (HEP) institutions decided to pool resources to eliminate the need to pay subscriptions fees for journals, substituting them with centralized sponsorship of the peer- review process provided by the journals themselves. In the SCOAP³ model, dissemination will be free. The original top down goal of the initiative was to save libraries €10 million/year in subscription fees (out of a current spending for journals that we estimate in the €20 to €22 million range) while maintaining the current volume of articles for publication (about 6,600 articles/year on core HEP topics); after the bids came in, we have revised our estimates for the expected savings to be in the €10/€11 million range (**Exhibit 1**).

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Exhibit 1
The savings target of SCOAP³ could decrease the margin pool for publishers by over 80%

	€ millions
Current Economics	
Estimated spending on HEP journals	20.0
Costs	10.0
Current HEP publishing margin pool	10.0
Future Economics	
Estimated spending on Peer Review services	9.2
Operating margin	20%
Future HEP publishing margin pool	1.84

Margin pool decline = 81.6%

Source: Interviews, Bernstein analysis

The APCs disclosed last week are indeed very low, at least when compared to the average $3,000 that Elsevier indicates as its typical APC for sponsored articles (**Exhibit 2**). There may be relevant reasons why the APCs range substantially (some of the smaller publishers may be trying to gain share by offering lower APCs; a couple of journals with low incidence of SCOAP³ articles on their total volume may not particularly care about the impact of HEP and may not have made attempts to gain share). For the key journals which account for the bulk of the articles published (*Physical Review D, Journal of High Energy Physics, Physics Letters B*), however, the APCs are in a tight range of €1,200 ($1,560) to $1,900. The Elsevier journals, at $1,800 and $2,000 respectively, came in at a price point which is well below the average APC for a sponsored article ($3,000) stated by Elsevier, not to mention the implied revenues per article ($5,210). In fact, if fees in this range had been prevalent across the estimated 316,000 articles Elsevier published in 2011, journal revenues at Elsevier would have totalled only £375 million. In order to break even on these revenues, i.e. to achieve costs of £375 million, Elsevier would have to operate its journals at a 64% operating margin – which stretches credibility (**Exhibit 3** and **Exhibit 4**).

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Exhibit 2
The APCs submitted to Scoap³ by physics journals range between $650 and $2,240…

Journal	Publisher	Impact factor	APC (US$)	SCOAP³ as % of articles published	SCOAP³ articles published in 2011
Journal of Cosmology and Astroparticle Physics	Institute of Physics Publishing/SISSA	5.723	2,240	30.9%	138
Nuclear Physics B	Elsevier	4.661	2,000	100.0%	284
European Physical Journal C	Springer/Società Italiana di Fisica	3.631	1,950	100.0%	326
New Journal of Physics	Institute of Physics Publishing*	4.177	1,920	2.7%	20
Physical Review C	American Physical Society	3.308	1,900	9.9%	107
Physical Review D	American Physical Society	4.558	1,900	100.0%	2989
Physics Letters B	Elsevier	3.995	1,800	100.0%	1010
Chinese Physics C	Institute of Physics Publishing**	0.272	1,600	7.2%	16
Progress of Theoretical Physics	Oxford University Press***	2.294	1,600	36.2%	46
Journal of High Energy Physics	Springer/SISSA	5.375	1,560	100.0%	1652
Advances in High Energy Physics	Hindawi	4.552	1,000	100.0%	28
Acta Physica Polonica B	Jagellonian University	0.901	650	22.1%	23

*In collaboration with the Deutsche Physikalische Gesellschaft
**In collaboration with the Chinese Academy of Sciences
***In collaboration with the Physical Society of Japan

Source: SCOAP³, Publishers' web sites

Exhibit 3
…while we estimate Elsevier has revenues per article of over $5,000

£ million	*2011*
Total Elsevier revenues	2,058
Journals as % of total Elsevier	50%
Total journals revenues	1,029
Articles published	316,000
Revenue/article (£)	3,256
Revenue/article ($)	5,210

Source: Reed Elsevier annual reports and presentations, interviews, Bernstein estimates and analysis

Exhibit 4
To break even with APCs of $1,900, Elsevier would have to operate today at a 64% operating margin

£ million	*2011*
Total Elsevier revenues	2,058
Journals as % of total Elsevier	50%
Total journals revenues	1,029
Articles published	316,000
APC/article ($)	1,900
APC/article (£)	1,188
Total implied APC revenues	375
Journal margin contribution required to break even	64%

Source: Reed Elsevier annual reports and presentations, interviews, Bernstein estimates and analysis

In addition, the SCOAP³ contract contains a number of provisions which put further limits on the revenue upside for the participating publishers. The three-year contract is expected to take effect in 2014. As of 2014, SCOAP³ will pay a maximum annual fee calculated as the product of the APC multiplied by the number of SCOAP³ articles published in 2011 (for example, for Elsevier's *Physics Letter B*, the maximum payment can be $1.818 million ($1,800 x 1,010 articles published in 2011). The total maximum payments which SCOAP³ will incur in the first year of the contract therefore, are just short of $12 million/year (€9.2 million at current exchange rates). In 2015 and 2016, the maximum annual payments (but not the APCs) are eligible to grow at a maximum of 4% for large journals (and 25% for small journals – to encourage them to try to gain share) to account for growth in the number of articles.

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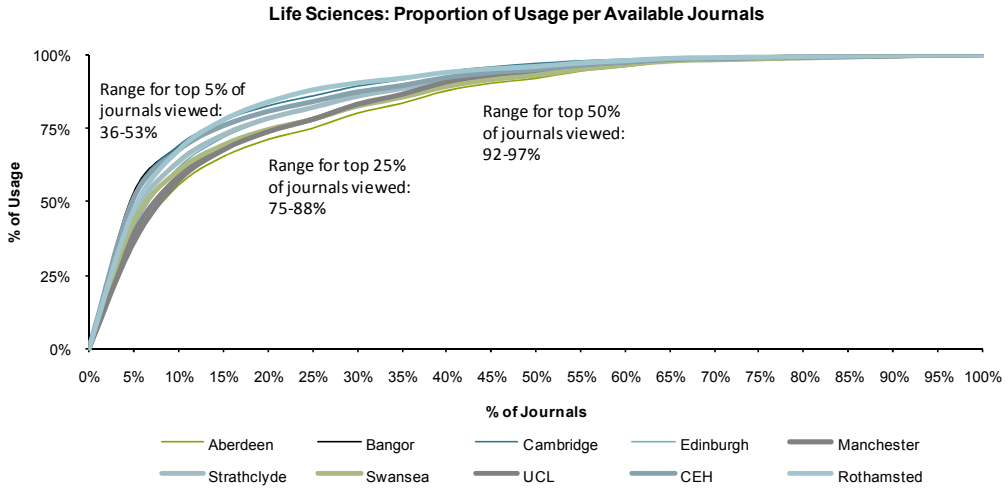
In addition to unexpectedly low APCs, the data also suggests that journals' impact drives higher revenues (although the data points are too few to draw any firm conclusion)

We have long argued that the real elephant in the room for Elsevier (and other subscription publishers) is the "long tail" of journals publishing articles of little relevance. The argument has been discussed at length in several documents we have published in the past, so here we will just summarize it.

The STM field is characterized by a small number of journals which are widely read, and a very large "long tail" of articles which get little or no attention. Data made public by 10 UK universities which looked at readership of articles in Life Sciences and Chemistry, shows that the bottom 75% or articles account for 10 to 25% of the readership (**Exhibit 5** and **Exhibit 6** respectively).

Exhibit 5

A low proportion of Life Science journals account for a high proportion of usage at a diverse range of universities in the UK…



Source: Research Information Network, Bernstein estimates and analysis

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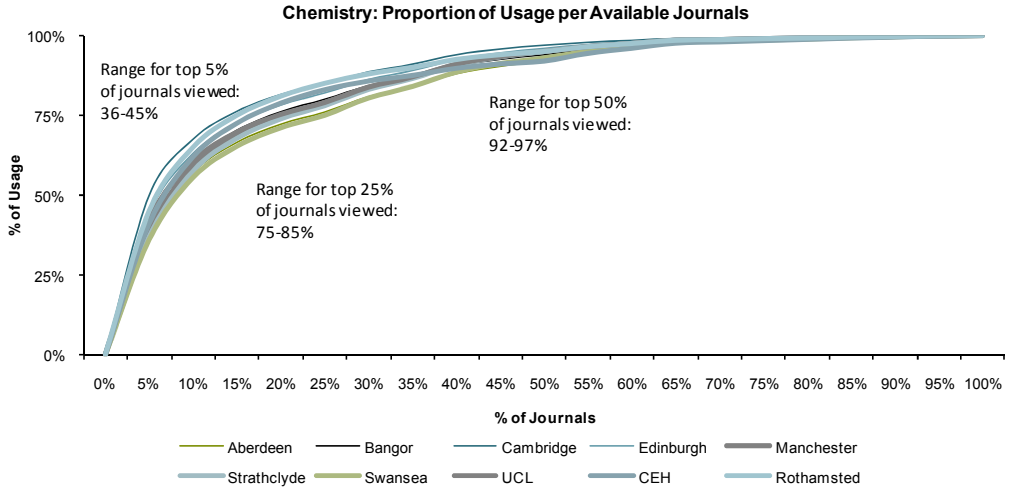
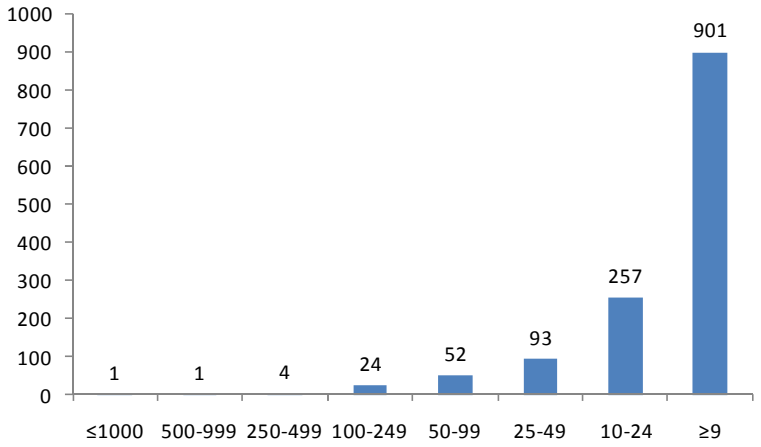
Exhibit 6
…it is a near identical story for Chemistry journals



Source: Research Information Network, Bernstein estimates and analysis

Elsevier does not fare much better: data made public by New Mexico State University in 2010, when it discontinued two "big deal" contracts which include Elsevier ("big deal" is the name the STM sector uses to describe the acquisition of entire collections of journals online in exchange for a single fee) shows a similar pattern (**Exhibit 7**). Academic librarians of universities which have discontinued "big deals" with major publishers have found that they could satisfy their core constituencies (faculty, researchers, doctoral candidates) by acquiring a handful of titles, accomplishing significant savings even when forced to pay list prices for the remaining subscriptions.

Exhibit 7
NMSU reported that more than two thirds of the journals included in two "big deals" and discontinued at the end of 2010 were accessed once a month or less; less than 9% had been accessed once a week or more.



Source: NMSU Library, Bernstein analysis

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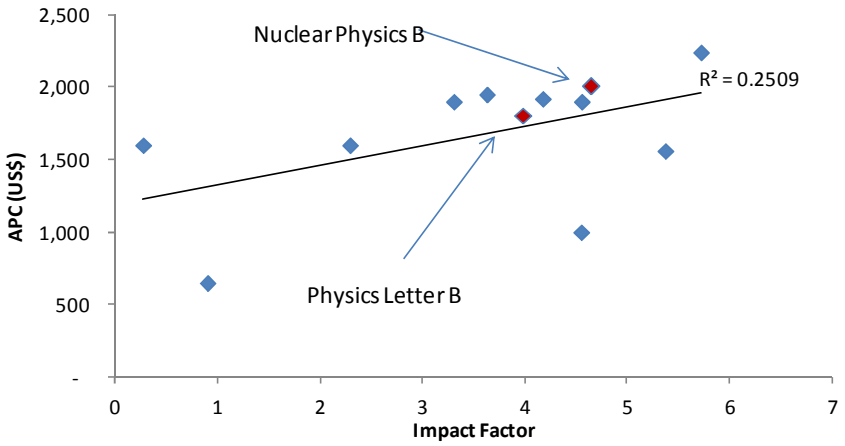
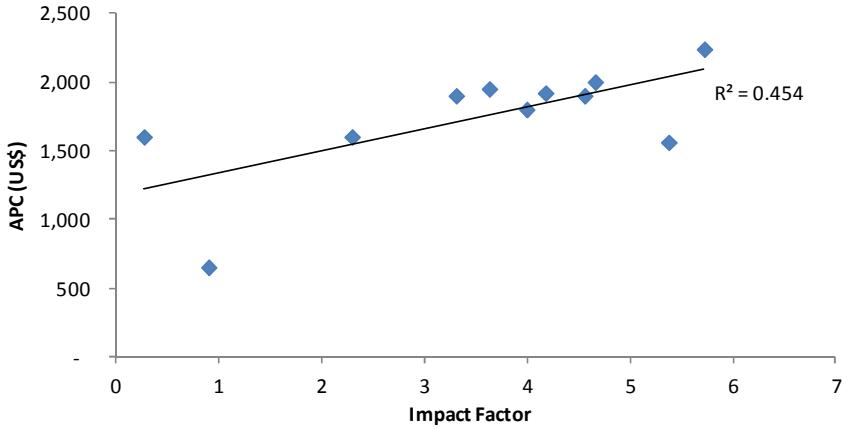
The SCOAP³data begs the question whether journals with higher "impact factor" (a number which measures the importance and prestige of a journal by comparing how much articles are cited in subsequent publications) can command higher APCs, or whether impact bears no weight on APCs. Looking at the SCOAP³ data, apparently there is a small correlation (about 25% - **Exhibit 8**). After adjusting for one publication which is an obvious outlier (*Advances in High Energy Physics*, published by Hindawi), however, a visible correlation emerges, with 45% of the APC explained by the impact factor (**Exhibit 9**).

Exhibit 8
Looking at the SCOAP³ data, there is a small correlation between impact factor and APCs…



Source: SCOAP³, Bernstein analysis

Exhibit 9
…but after adjusting for one outlier (Hindawi), the correlation is significant



Source: SCOAP³, Bernstein analysis

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We think the reason why the impact factor explains only partially this outcome, incidentally, is because SCOAP³ was designed to accomplish a number of factors, rewarding both low APCs and good journal quality. In theory, SCOAP³ could have simply adopted a mechanical formula, offering to pay a fixed amount per article on the basis of the impact factor of the journal. This would have led to a perfect correlation, but would have not necessarily fostered incremental competition among the publishers. By adopting a formula which rewards both quality and price per APC and caps the spending at a target amount, the process threatened to cut off publishers which came in with prices which were too high relative to their impact factors (or impact factors which were too low for the APC demanded).

Readers should be cautious about drawing too many conclusions from these data points. We are dealing with just a handful of journals, with APCs which were determined for the first time to meet the procurement process of CERN (which operates on behalf of SCOAP³), and which may therefore not represent the trend one would observe across a large base of journals or in the contest of individual negotiations with academic institutions or funding bodies.

Should additional OA APC price points and contracts confirm these early and preliminary observations, however, the implications would be very important. If, in fact, only a handful of journals could support high APCs, the economics of Elsevier would be severely challenged. As we pointed out in the document we published two weeks ago, investors can contemplate many scenarios for what a transition to OA would do to the economics of Reed Elsevier, and the range of price points Elsevier can expect to charge for different tiers of journals remain unknown. The SCOAP³ data, however, suggests that price points may be lower than we modelled even for leading journals, as competition tends to compress margins (and outliers tend to leverage competitive cost positions to try taking share).

The timing and scope of transition to OA remains largely unknown, but, in view of the significant threat to the economics of Elsevier, Reed Elsevier investors should monitor changes to the regulatory landscape

It is too early to estimate the applicability of the SCOAP³ lesson to other disciplines. Open Access supporters will look at the SCOAP³ APC price points as a tool to limit significantly higher charges. Subscription publishers, on the other hand, will argue that the HEP community is unique for a number of reasons which make transferring practises (and price points) to other disciplines very difficult.

HEP is indeed unique. It is a relatively small community (approximately 20,000 scientists worldwide), limited and stable scientific output (7,000 articles/year), a small number of publications (the top 3 journals publish 80% of all articles on HEP), a limited group of funding bodies (the high cost of empirical research in HEP requires extensive government funding, concentrated in a handful of institutions like CERN) and a history of fostering Open Access (the HEP community started in 1991 arXiv, a pre-publication repository which contains about 95% of published, peer-reviewed HEP literature – see **Exhibit 10**. It would be presumably more difficult to introduce successfully a model similar to SCOAP³ in broader communities (like medical sciences). Nonetheless, if SCOAP³ succeeds in substantially lowering the budget for dissemination, we expect several other academic communities will try to reproduce this model.

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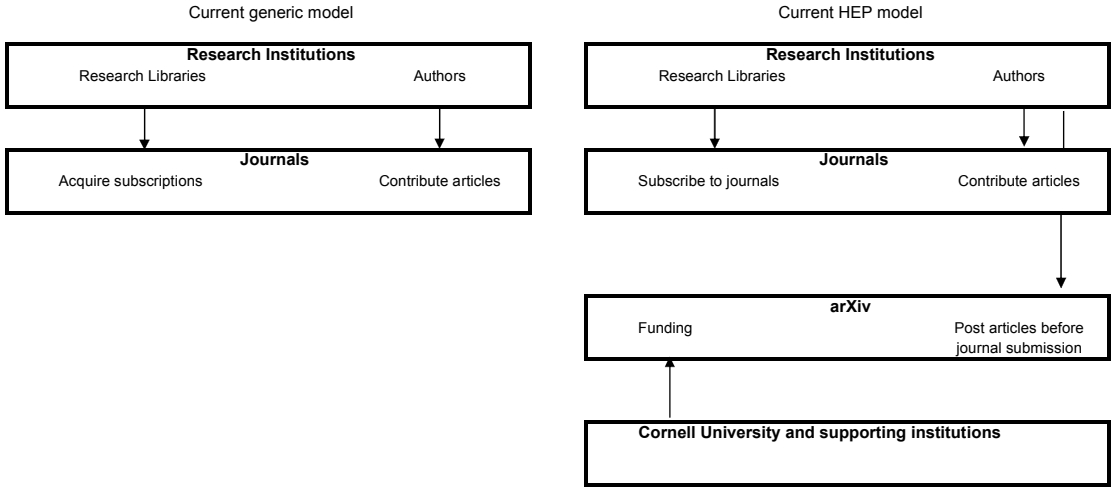
Exhibit 10
Contrary to the prevailing model, the HEP community has supported since 1991 an Open Access repository which contains about 90% of the HEP literature, but the for-profit journals have not been displaced



Source: Interviews, Travis *Brooks Open Access Publishing in Particle Physics: A Brief Introduction for the non-Expert*

We have recently tried to estimate the impact of OA on the economics of Reed Elsevier and have four simulations that take into account a wide range of possible APCs.

We have built a best case scenario which assumes that 50% of Elsevier journals achieve average APCs of £4,000 (roughly a 100% increase on the current average APC and over three times the average APC offered to SCOAP³) and 50% earn APCs of £650 – the high end of the range for OA APCs charged by commercial publishers according to Solomon and Bjork. We have also built a base case, in which 33% of journals earn APCs of £4,000, 33% earn APCs of £1,000 and the final 33% earn APCs of £650. In both cases, the profitability of Elsevier would plummet substantially (again, assuming that costs do not change): in our best case, which looks generous to us, Elsevier's journal margin would plummet to 16% and in the base case it would turn negative (**Exhibit 11** and **Exhibit 12**).

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Exhibit 11
In our best case OA-only scenario, the profitability of Elsevier's journal business would decline to 16%...

£ million	2011
Total Elsevier revenues	2058
Journals as % of total Elsevier	50%
Total current Journals revenue	1029
Articles published	316,000
Top Tier articles as % ot total articles	50%
Average APC of Top Tier articles (£)	4,000
Low Tier articles as % ot total articles	50%
Average APC of Low Tier articles (£)	650
Total OA revenues	735
Total costs	617
Operating profit	118
Operating profit %	16.0%

Source: Reed Elsevier annual reports and presentations, interviews, Bernstein estimates and analysis

Exhibit 12
…and in our base it would turn slightly negative (before any cost cuts)

£ million	2011
Total Elsevier revenues	2058
Journals as % of total Elsevier	50%
Total Journals revenue	1029
Articles published	316,000
Top Tier articles as % ot total articles	33%
Average APC of Top Tier articles (£)	4,000
Mid Tier articles as % ot total articles	33%
Average APC of Mid Tier articles (£)	1,000
Low Tier articles as % ot total articles	33%
Average APC of Low Tier articles (£)	650
Total OA revenues	589
Total costs	617
Operating profit	(28)
Operating profit %	(4.7)%

Source: Reed Elsevier annual reports and presentations, interviews, Bernstein estimates and analysis

We have then added two more hypothetical cases, in which Elsevier launches journals to publish the 534,000 articles it receives but does not publish at present (the difference between 850,000 and 316,000). We have then added those revenues to our best and base cases. This number is possibly too high, as it is possible that some articles rejected on top Elsevier journals are then published by another one, but we conservatively considered them "unique rejections". We then assumed that Elsevier published all these 534,000 articles in new OA journals with no editorial screening (i.e. journals which will publish every article submitted, provided it passes its peer review process). It is difficult to know the stand alone costs of publishing these articles – but Solomon and Bjork found that "megajournals" publishing everything can charge APCs of $1000/1500, equivalent to £600/900. Assuming that these hypothetical Elsevier "OA megajournals" would charge a mid-price APC of £750 and incur additional costs per article that would only 33% of the costs incurred on the existing journals (i.e. £650/article), the total profit of the journal business would rise from £118 to £171 million in our best case and from -£28 to + £26 million in the base case scenario, still respectively a 58% and a 94% decline compared to our estimate of the 2011 operating profit (**Exhibit 13** and **Exhibit 14**).

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Exhibit 13
Launching OA "megajournals" would improve the economics to some extent…

£ million	2011
Total Elsevier revenues	2058
Journals as % of total Elsevier	50%
Total current Journals revenue	1029
Articles published	316,000
Top Tier articles as % ot total articles	50%
Average APC of Top Tier articles (£)	4,000
Low Tier articles as % ot total articles	50%
Average APC of Low Tier articles (£)	650
New OA "megajournal" articles	534,000
Average APC of "megajournal" articles (£)	750
Total OA revenues	1,135
Total costs	964
Operating profit	171
Operating profit %	15.1%

Source: Reed Elsevier annual reports and presentations, interviews, Bernstein estimates and analysis

Exhibit 14
…but would not change the overall conclusions

£ million	2011
Total Elsevier revenues	2058
Journals as % of total Elsevier	50%
Total Journals revenue	1029
Articles published	316,000
Top Tier articles as % ot total articles	33%
Average APC of Top Tier articles (£)	4,000
Mid Tier articles as % ot total articles	33%
Average APC of Mid Tier articles (£)	1,000
Low Tier articles as % ot total articles	33%
Average APC of Low Tier articles (£)	650
New OA "megajournal" articles	534,000
Average APC of "megajournal" articles (£)	750
Total OA revenues	990
Total costs	964.1
Operating profit	26
Operating profit %	2.6%

Source: Reed Elsevier annual reports and presentations, interviews, Bernstein estimates and analysis

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Valuation Methodology

Reed Elsevier

For Professional Publishers in our coverage, including Reed Elsevier, we base our target prices on a priceto-earnings methodology. In order to calculate our target prices, we look at each company's current relative multiple (company price to earnings ratio, P/E, relative to MSCI Europe P/E) and then apply a target relative multiple given each company's future EPS growth prospects to 2014 (**Exhibit 15**). We believe that the period between 2011 and 2014 represents a valid timeframe to assess the EPS growth prospects to 2014.

Exhibit 15
Valuation Methodology – Reed Elsevier

Company	Rating	Currency	Market Cap	24-Sep-12 Price	EPS CAGR 2011-14E	2012E EPS	2012E P/E	Relative P/E Multiple	Target Relative P/E Multiple	Target Price	% Upside Downside
Reed Elsevier PLC	U	GBP	£7,182	600.0p	3.2%	47.6p	12.6x	105%	90%	400p	-33%
Reed Elsevier NV	U	EUR	€ 7,690	€ 10.52	5.2%	€ 0.90	11.7x	97%	90%	€ 7.00	-33%
MSCI Europe					**7-8%**		**12.1x**				

Source: Company reports, Bloomberg, Bernstein estimates and analysis

Risks

Reed Elsevier

The key risk to our thesis and 12 month target prices for Reed Elsevier derives primarily from the impact of the economic cycle and from M&A activity. While most of the revenues should be relatively stable irrespective of changes in economic activity, some segments (and in particular business to business advertising and exhibitions) are more sensitive than others, as none of them is fully insulated from a deep and lasting slow down of economic activity and, conversely, a faster than expected improvement of the economic cycle could drive an acceleration of earnings growth.

We are assuming that – in the next 12 months – management will continue to try "fixing" the structural issues we have identified, rather than selling assets. A divestiture of significant parts of the portfolio (the exhibition business or LexisNexis Legal & Professional) would probably trigger a re-rating of the stock.

While market shares are relatively stable, fluctuations deriving from failure to win individual contracts or clients can negatively or positively affect the revenues of some divisions for a few years, since many contracts are typically multi-year and switching costs are high.

In addition to the risks mentioned above, Reed Elsevier is highly exposed to currency fluctuations: approximately 55% of its revenue is denominated in US dollars. A 1% change in the US Dollar causes around a 0.6% change in EPS. Any major devaluation of the sterling and/or the Euro relative to the US dollar would have a direct positive effect both on EPS and on the value of assets located in the United States.

SRO REQUIRED DISCLOSURES

- References to "Bernstein" relate to Sanford C. Bernstein & Co., LLC, Sanford C. Bernstein Limited, Sanford C. Bernstein (Hong Kong) Limited, and Sanford C. Bernstein (business registration number 53193989L), a unit of AllianceBernstein (Singapore) Ltd. which is a licensed entity under the Securities and Futures Act and registered with Company Registration No. 199703364C, collectively.
- Bernstein analysts are compensated based on aggregate contributions to the research franchise as measured by account penetration, productivity and proactivity of investment ideas. No analysts are compensated based on performance in, or contributions to, generating investment banking revenues.
- Bernstein rates stocks based on forecasts of relative performance for the next 6-12 months versus the S&P 500 for stocks listed on the U.S. and Canadian exchanges, versus the MSCI Pan Europe Index for stocks listed on the European exchanges (except for Russian companies), versus the MSCI Emerging Markets Index for Russian companies and stocks listed on emerging markets exchanges outside of the Asia Pacific region, and versus the MSCI Asia Pacific ex-Japan Index for stocks listed on the Asian (ex-Japan) exchanges - unless otherwise specified. We have three categories of ratings:

  Outperform: Stock will outpace the market index by more than 15 pp in the year ahead.

  Market-Perform: Stock will perform in line with the market index to within +/-15 pp in the year ahead.

  Underperform: Stock will trail the performance of the market index by more than 15 pp in the year ahead.

  Not Rated: The stock Rating, Target Price and estimates (if any) have been suspended temporarily.
- As of 09/21/2012, Bernstein's ratings were distributed as follows: Outperform - 41.1% (0.5% banking clients) ; Market-Perform - 49.2% (0.4% banking clients); Underperform - 9.7% (0.0% banking clients); Not Rated - 0.0% (0.0% banking clients). The numbers in parentheses represent the percentage of companies in each category to whom Bernstein provided investment banking services within the last twelve (12) months.
- Accounts over which Bernstein and/or their affiliates exercise investment discretion own more than 1% of the outstanding common stock of the following companies REL.LN / Reed Elsevier PLC.

12-Month Rating History as of 09/23/2012

Ticker	Rating Changes
REL.LN	U (RC) 03/10/11
REN.NA	U (RC) 03/10/11

Rating Guide: O - Outperform, M - Market-Perform, U - Underperform, N - Not Rated
Rating Actions: IC - Initiated Coverage, DC - Dropped Coverage, RC - Rating Change

REL.LN / Reed Elsevier PLC

Date	Rating	Target(GBp)
07/16/09	O	625.00
07/31/09	O	500.00
05/07/10	M	500.00
03/10/11	U	450.00
09/14/11	U	400.00

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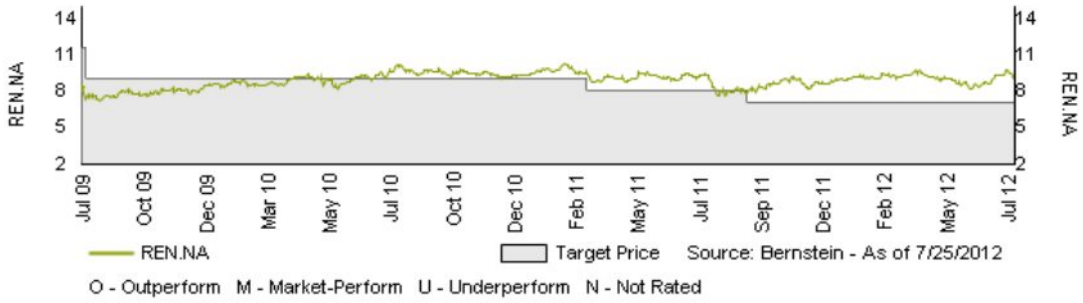
Date	Rating	Target(EUR)
07/16/09	O	11.50
07/31/09	O	9.00
05/07/10	M	9.00
03/10/11	U	8.00
09/14/11	U	7.00



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