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Reed Elsevier: Transitioning to Open Access - Are the Cost Savings Sufficient to Protect Margins?

Ticker	Rating	CUR	23 Nov 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	624.50	400.00	8.0%	46.70	47.78	48.99	13.4	13.1	12.7	3.9%
REN.NA	U	EUR	10.77	7.00	14.8%	0.83	0.90	0.92	13.0	12.0	11.7	4.2%
MSDLE15			1113.94			96.53	93.47	102.41	11.5	11.9	10.9	4.0%

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

Highlights

We recently published a call (Reed Elsevier: A Short History of Two Days in July (and Why Investors Should Care), dated 10th September 2012) in which we argued that the "political risk" associated with the introduction of Open Access mandates is rising and that revenue loss for Elsevier – should such transition occur – could lead to a decline in the profitability of Reed Elsevier in the range of -14 to -27%. At the time, we cautioned readers that these estimates did not account for any possible cost savings. Spurred by the reading of Peter Suber's book "Open Access"[1], which argues that publishers would incur in meaningful savings in the transition to OA, we recently worked with the finance team of a subscription-funded publisher to identify in detail the cost savings which could be achieved in an OA model.

- **We estimate that a full transition to OA could lead to savings in the region of 10-12% of the cost base of a subscription publisher.**
  - As we mentioned, we worked alongside the finance team of a subscription publisher to estimate the savings deriving from transitioning to a full OA model. We estimate that the net savings would be in the region of 10% to 15% of total costs, deriving primarily from discontinuing physical print, the elimination of production management, and the phase out of the sales force. There would also be savings in IT (DRM costs), but they would be partially offset by higher server and communications costs (because of the need to accommodate a larger flux of downloads) and in customer service (since subscriber services would be largely eliminated).
  - On the negative side, the largest impact would be the need to ramp up marketing costs, some additional administrative expenses (since invoicing would likely be more fragmented and complex) and – most of all – the loss of advance revenues (about 80% of subscription revenues are paid in November/December of the previous year, and even a model where APCs are received at the time of publication could lead to the loss of an average of 6-7 months of float – and more, if payments were received a couple of months later.
- **While this data lessens the estimated potential impact of a transition to OA on the profitability of Reed Elsevier, the message does not change much.** Even taking into account a 12% cost reduction, the impact of an OA transition on the profitability of the journal business of Elsevier would be significant. We now estimate that the decline in the Operating Profit of Elsevier's journal business (which we

[1] Peter Suber, "Open Access", The MIT Press, Cambridge 2012

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estimate at 40% of revenues, on the calculated basis of revenues of £1,029 million in 2011) would range between -41 and -89%.

- **The potential impact on the profitability of Reed Elsevier should not be underestimated.** We estimate that STM journals represent only 17% of Reed Elsevier group revenues, but they may account for as much as 25% of the group operating profit. In the past, we have argued that the budget constraints affecting academic libraries would impede returning to organic growth in the 5%+ region, as the journals achieved before the onset of the recession of 2008. Our model is still based on the assumption that OA would not happen, and that investors would see the impact of this budget crisis primarily through the progressive decline of the organic revenue growth rate below consensus expectations. A collapse of the profitability of Elsevier as a result of the realization of one of our OA transition scenarios would be catastrophic for Reed Elsevier. Looking at our 2015 forecasts, a 41% decline in the profitability of the Elsevier journals (our best case) following a global shift to Gold OA would reduce group adjusted operating profit by c. -6%. At the other end of the range, an 89% decline in the profitability of the journals would shrink the group operating profit by c.-22%.

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 the beginning of 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, 2010 results confirmed that growth of Elsevier (the STM publishing division) had slowed because of pressure on academic budgets a pattern that has continued in 2011. In addition to the cyclical issues outlined earlier, we are increasingly concerned about longer term structural issues in US legal research and about a prolonged decline in funding for academic libraries which could trigger lower spending on STM journals. 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.

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Details

We estimate that a full transition to OA could lead to savings in the region of 10% of the cost base of a subscription publisher

Over the past few days we worked alongside the finance team of a subscription publisher to estimate the savings deriving from transitioning to a full OA model. Savings would derive primarily from discontinuing physical print, the elimination of production management, and the phase out of the sales force. There would also be savings in IT (DRM costs), but they would be partially offset by higher server and communications costs (because of the need to accommodate a larger flux of downloads) and in customer service, since subscriber services would be largely eliminated (in working with this publisher, we estimated that 34% of customer service costs would remain).

On the negative side, the largest impact would be the need to ramp up marketing costs, some additional administrative expenses (since invoicing would likely be more fragmented and complex) and – most of all – the loss of advance revenues. About 70% of subscription revenues are paid in November/December of the previous year, and even assuming that the prevailing model would see APCs being billed on the date of publication and payments with a two week lag, this could lead to the loss of an average of 6-7 months of float (and more if payments were received a couple of months later). In aggregate, our analysis shows a 12% decline in costs, which may underestimate the additional marketing costs (since competition for articles to publish would be significant, particularly at the low end where impact factors would not play a differentiating role) (**Exhibit 1**).

Exhibit 1
The transition to OA should lead to decreasing costs by 10-12%

	% cost base
Total costs in subscription model	100.00%
Decreasing costs	
Print publishing	4.36%
Physical distribution	0.04%
Production Management	4.36%
Salesforce	8.18%
Customer service[1]	1.08%
Increasing costs	
Additional marketing	0.58%
Loss of advance payments[2]	3.88%
Total costs in OA model	88.16%

[1] We are assuming that only 2/3 of current costs are phased out

[2] Assuming 10% cost of capital, average lag of 15 days between invoicing and payment, and 70% of subscription revenues being payed in Nov./Dec.

Source: SCB Interviews

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While this data lessens the estimate of the overall impact on the profitability of Reed Elsevier, the message does not change much

Even taking into account a 12% cost reduction, the impact of an OA transition on the profitability of the journal business of Elsevier would be significant. We now estimate that the decline in the Operating Profit of Elsevier's journal business (which we estimate at 40% of revenues, on the calculated basis of revenues of £1,029 million in 2011) would range between -41 and -89%.

In our September call, we outlined four different scenarios for the revenues of Elsevier in the case of the transition to an OA model, which we are now updating with the results of this additional analysis. As a reminder, we currently estimate that journals account for 50% of Elsevier revenues (£2,058 million in 2011), and that the journals operate at a 40% operating margin (which equates to an Operating Profit of £ 411.6 million).

(Our first (best case) scenario assumes that 50% of Elsevier journals achieve average APCs of £4,000 (roughly a 100% increase on the current average APC of £2,000/article) and 50% earn APCs of £650 – the high end of the range for OA APCs charged by commercial publishers according to Solomon and Bjork, who have recently surveyed the APCs of OA journals[2]. 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 Operating profit would decline by 53% and in the base case it would decline by 89% (**Exhibit 2** and **Exhibit 3**).

European Media

[2] *http://www.openaccesspublishing.org/apc2/preprint.pdf*

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Exhibit 2
In our best case OA-only scenario, the profitability of Elsevier's journal business would decline by 53%...

£ 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 - subscription model	617
OA cost savings (@12% of costs)	74
Total costs - Open Access model	543
OA Operating profit	192
Operating profit %	26.1%
Current Operating Profit	412
Change in Operating Profit	(220)
% change in Operating Profit	-53%

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

Exhibit 3
…and in our base by close to 90%

£ 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 - subscription model	617
OA cost savings (@12% of costs)	74
Total costs - Open Access model	543
OA Operating profit	46
Operating profit %	4.5%
Current Operating Profit	412
Change in Operating Profit	(366)
% change in Operating Profit	-89%

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

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We have then simulated two additional cases, in which Elsevier takes the estimated 534,000 articles it receives but does not publish (the difference between 850,000 articles the company indicates it receives and 316,000 we estimate they publish) and we have 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 £192 to £245 million in our best case and from £46 to £100 million in the base case scenario, still respectively a 41% and a 76% decline compared to our estimate of the 2011 operating profit (**Exhibit 4** and **Exhibit 5**).

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Exhibit 4
Launching OA "megajournals" would reduce the Operating profit decline from 53 to 41% in our best case scenario…

£ 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 - legacy business	735
Total costs - subscription model	617
OA cost savings (@12% of costs)	74
Total costs - Open Access model	543
OA Operating profit - legacy business	192
Operating profit % - legacy business	26.1%
Current Operating Profit	412
New OA "megajournal" articles	534,000
Average APC of "megajournal" articles (£)	750
Average cost of "megajournal" articles (£)	650
Incremental Operating Profit from "megajournals"	53
Total OA Operating Profit (legacy + Megajournals)	245
Current Operating Profit	412
Change in Operating Profit	(167)
% change in Operating Profit	-41%

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

Exhibit 5
…and from 89 to 76% in our base case

£ 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 - legacy business	589
Total costs - subscription model	617
OA cost savings (@12% of costs)	74
Total costs - Open Access model	543
OA Operating profit - legacy business	46
Operating profit %	4%
Current Operating Profit	412
New OA "megajournal" articles	534,000
Average APC of "megajournal" articles (£)	750
Average cost of "megajournal" articles (£)	650
Incremental Operating Profit from "megajournals"	53
Total OA Operating Profit (legacy + Megajournals)	100
Current Operating Profit	412
Change in Operating Profit	(312)
% change in Operating Profit	-76%

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

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The potential impact on the profitability of Reed Elsevier should not be underestimated.

We estimate that STM journals represent 17% of Reed Elsevier group revenues, and that they account for as much as 25% of the group operating profit. In the past, we have argued that the budget constraints affecting academic libraries would impede returning to organic growth in the 5%+ region, as the journals achieved before the onset of the recession of 2008. Our model is still based on the assumption that OA would not happen, and that investors would see the impact of this budget crisis primarily through the progressive decline of the organic revenue growth rate below consensus expectations.

A collapse of the profitability of Elsevier as a result of the realization of one of our OA transition scenarios would be catastrophic for Reed Elsevier. Looking at our 2015 forecasts, a 53% decline in the profitability of the Elsevier journals (our best case) following a global shift to Gold OA would reduce group adjusted operating profit by c. -9%. At the other end of the range, an 89% decline in the profitability of the journals would shrink the group operating profit by c.-22%. (**Exhibit 6**). Adding on top the estimated operating profit from hypothetical "megajournals" would shrink this decline to a range of -6 to -19% (**Exhibit 7**).

Exhibit 6

Our best and base case for a transition to OA (without megajournals) would imply that the 2015 Adjusted Operating Profit would decline by c. -9 and c. -22%, respectively…

	2015e	
Reed Elsevier (£million)	**Best**	**Base**
Elsevier Revenue, £m	2,191	2,191
Est. Journals, % Elsevier Revenues	50%	50%
Est. Elsevier Journals Revenue, £m	1,095	1,095
Elsevier Journals OPM, %	40.0%	40.0%
Elsevier Journals OPM, £m	438	438
Elsevier Journals OPM, % (reduced)	26.1%	4.5%
Elsevier Journals OPM, £m	286	49
Reduction, £m	(152)	(389)
Reed Elsevier Group OPM, £m	1,788	1,788
Reduction, % total	**(9%)**	**(22%)**

Source: Bernstein estimates and analysis

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Exhibit 7
…and even hypothetical "megajournals" would only shrink the decline to -6 to -19%

Reed Elsevier (£million)	2015e Best	2015e Base
Elsevier Revenue, £m	2,191	2,191
Est. Legacy Journals, % Elsevier Revenues	50%	50%
Est. Elsevier Legacy Journals Revenue, £m	1,095	1,095
Elsevier Legacy Journals OPM, %	40.0%	40.0%
Elsevier Legacy Journals OP, £m	438	438
Elsevier Legacy Journals OPM, % (reduced)	26.1%	4.5%
Elsevier Legacy Journals OP, £m	286	49
Elsevier "megajournals" additional OP, £m	53	53
Elsevier Legacy + "mergajournals" OP, £m	339	102
Reduction, £m	(99)	(336)
Reed Elsevier Group OPM, £m	1,788	1,788
Reduction, % total	**(6%)**	**(19%)**

Source: Bernstein estimates and analysis

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Valuation Methodology

For Professional Publishers in our coverage, we base our target prices on a price-to-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 or S&P500, in the case of Thomson Reuters) and then apply a target relative multiple given each company's future EPS growth prospects to 2014. We believe that the period between 2011 and 2014 represents a valid timeframe to assess the EPS growth prospects to 2014 (**Exhibit 8**).

Exhibit 8
Valuation Methodology – Reed Elsevier

Company	Rating	Currency	Market Cap	23-Nov-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	£7,475	624.5p	3.5%	47.8p	13.1x	110%	90%	400p	-36%
Reed Elsevier NV	U	EUR	€ 7,873	€ 10.77	5.5%	€ 0.90	12.0x	100%	90%	€ 7.00	-35%
MSCI Europe					**5-7%**		**11.9x**				

Source: Company reports, Bloomberg, Bernstein estimates and analysis

Risks

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.

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- As of 11/23/2012, Bernstein's ratings were distributed as follows: Outperform - 41.1% (0.4% banking clients) ; Market-Perform - 47.9% (0.4% banking clients); Underperform - 11.0% (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 11/22/2012

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

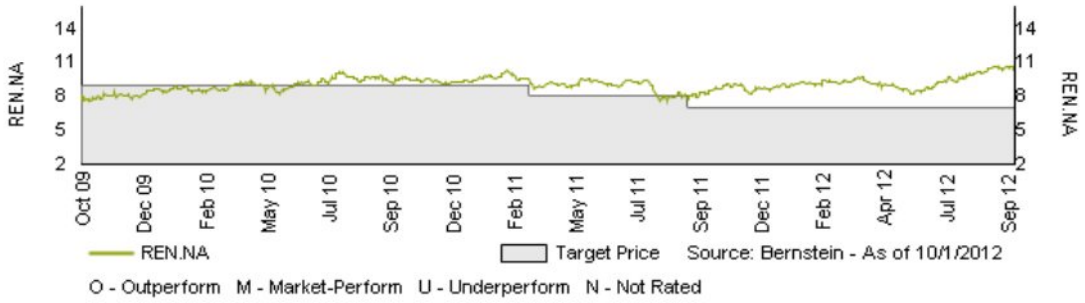
Rating Guide: O - Outperform, M - Market-Perform, U - Underperform, N - Not Rated
Rating Actions: IC - Initiated Coverage, DC - Dropped Coverage, RC - Rating Change

REL.LN / Reed Elsevier PLC

Date	Rating	Target(GBp)
09/22/09	O	500.00
05/07/10	M	500.00
03/10/11	U	450.00
09/14/11	U	400.00

REN.NA / Reed Elsevier NV

Date	Rating	Target(EUR)
09/22/09	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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