

# **Report on offset agreements: evaluating current Jisc Collections deals**

Year 3 – evaluating 2017 deals

Stuart Lawson

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## Contents

1. Introduction	3
2. Data sources	4
<hr/>	
3. Agreements:	
<i>Wiley</i>	6
<i>Taylor &amp; Francis</i>	7
<i>Springer</i>	8
<i>SAGE</i>	9
<i>Institute of Physics (IOP Publishing)</i>	10
<i>De Gruyter</i>	11
<hr/>	
4. Discussion	12
5. Conclusion	19
<hr/>	
References	20
Appendix: List of the 53 higher education institutions used in the sample	24

## Introduction

Offset agreements for academic journals are designed to reduce the overall cost to academic libraries of supporting scholarly publishing. In these agreements, journal subscription costs and open access publication costs are *offset* against each other. There are different approaches to achieving this. Some offset agreements reduce the cost of article processing charges (APCs) – the fees sometimes paid to publishers to make research open access – and some reduce the amount an institution pays for a subscription in proportion to the amount it pays for APCs.<sup>1</sup> Offsetting is intended as a transitional mechanism to support progress towards a fully open access scholarly publication system, and is part of the UK’s national open access strategy.<sup>2</sup>

This report is a comparative study of the current offset agreements that Jisc Collections has negotiated on behalf of UK academic libraries. It relies on financial data provided by higher education institutions (HEIs) themselves about the amounts they have paid for subscriptions and APCs. At the time of publication, the most recent full year for which financial data was available was 2017, so this report will focus on the six offset agreements in use for the duration of that year. These are from the publishers Wiley, Taylor & Francis, Springer, SAGE, the Institute of Physics (IOP Publishing), and De Gruyter. All six agreements are pilots and therefore subject to revision in subsequent years. The Royal Society of Chemistry offsetting scheme ceased at the end of 2016<sup>3</sup> and has been replaced by a different scheme for 2017–18. Cambridge University Press and Oxford University Press both introduced offset agreements in 2018, too late to be included in this report.<sup>4</sup>

Each of the six offset agreements is analysed and compared based on the available data. The discussion section highlights key issues arising from the data, especially with regards to the total cost of publication (TCP).<sup>5</sup> The full costs of the transition to open access include more than just APCs, so the impact of additional administration costs is also considered. This report is the final of three annual reviews of offset agreements: the 2016 report used financial data for 2015, and the 2017 report used financial data for 2016.<sup>6</sup> An additional concluding report will be released later this year that summarises what has been learned.

1 Some publishers offer discounts on APCs through prepayment or membership agreements, but these schemes are independent of journal subscriptions and are not related to the total cost of publication. The six mechanisms used by the publishers analysed in this report all include some element of recognition for total combined expenditure and can thus be said to be true offset agreements.

2 Earney (2017)

3 Royal Society of Chemistry (2016)

4 Jisc (2017)

5 See Pinfield, Salter, & Bath (2015) for a definition of TCP. For more research on subscription expenditure, APC expenditure, and the total cost of publication by UK HEIs see Björk & Solomon (2014); Johnson, Pinfield, & Fosci (2015); Jubb et al. (2015); Lawson, Gray, & Mauri (2016); Pinfield, Salter, & Bath (2015, 2016); Shamash (2016, 2017).

6 Lawson (2016a, 2017a)

## Data sources

APC expenditure data has been made openly available by numerous higher education institutions (HEIs) and research funders over the past few years.<sup>7</sup> The analysis in this report is based on a sample of 53 HEIs in the UK that have made APC data for 2017 available; these institutions are listed in the appendix. This is a larger sample than in previous years, and only 33 of the HEIs are the same as in last year's sample. The sample is based on willing participation so it is not representative and is skewed towards more research-intensive institutions: the 53 HEIs contribute approximately two thirds of the sector's subscription expenditure<sup>8</sup> and have received 79% of RCUK's open access block grants (a rough proxy for APC expenditure).<sup>9</sup>

In this year's report, the date used to determine inclusion in the dataset is the date of APC payment. This differs from the previous two years' reports, when the date that the APC was applied for (represented by the field 'Date of initial application by author') was used. The primary reason for switching this year was the higher quality of the data in the 'Date of APC payment' field. The change should be noted when comparing this year's report to the previous years; however, as footnotes in the analysis in last year's report show,<sup>10</sup> the APC expenditure is quite similar whichever date is used. A total of 3,652 APCs in the dataset recorded a payment date for 2017. In addition, 685 APCs did not have an entry in 'Date of APC payment', but did have a 2017 date for 'Date of initial application by author', so these were included as well, bringing the total to 4,337 APCs. A copy of the APC and subscription data used in this report is available at: <https://doi.org/10.6084/m9.figshare.7265093>.<sup>11</sup>

Subscription expenditure by HEIs with major publishers during the years 2010–16 is openly available for almost all higher education institutions in the UK. This data was obtained through sending Freedom of Information (FOI) requests to HEIs.<sup>12</sup> All publishers with offset agreements in this report are included in the public data for the year 2016 (see Table 1). Data for 2017 is not yet available, so figures for the year are estimates. These estimates can be calculated with a reasonable degree of accuracy. If an institution subscribes to a deal negotiated by Jisc Collections on behalf of the sector, annual changes in subscription prices are stated in the contract. Therefore the amounts paid in 2017 can be reasonably assumed to be the same as 2016 plus a certain percentage increase. The percentage increase for each publisher is noted below at the relevant points. For institutions that are not subscribers to the deals, the contracted price increases do not apply, but as a general estimate they are likely to be reasonably accurate.

7 See Lawson (2016) for a figshare collection containing the majority of this data.

8 For the six publishers in question, 65% (£37,509,107 out of £57,298,133) of what was paid in 2016.

9 £74,363,795 of the £93,683,544 made available by RCUK to 118 institutions from 2013/14 to 2017/18 (see Lawson 2018).

10 See Lawson (2017a).

11 See Shamash (2018) for a complete dataset of public APC payments collated by Jisc.

12 See Lawson & Meghreblian (2014), Lawson (2017).

**Table 1: Subscription expenditure of UK HEIs with six publishers, 2015–17<sup>13</sup>**

	<b>2015</b>	<b>2016</b>	<b>2017*</b>
Wiley	£19,149,348	£19,875,300	£20,272,806
Taylor & Francis	£14,231,266	£16,483,429	£17,142,766
Springer	£8,759,854	£9,897,706	£9,923,440
SAGE	£8,082,882	£9,037,365	£9,353,673
Institute of Physics	£1,543,231	£1,630,076	£1,681,097
De Gruyter	£326,437	£374,257	£385,484

\* estimated

13 Figures in this table for 2015 and 2016 sourced from Lawson (2017).

## Wiley

Institutions that subscribe to the Jisc Collections 2015–17 Wiley agreement are eligible to join the offsetting pilot if they open a pre-pay Wiley Open Access Account (WOAA). This account is used to accrue credit to pay for APCs in Wiley journals.

This ‘offset credit’ is calculated based on total customer spend with Wiley on journal subscriptions, including fees for access to unsubscribed titles, and APC fees. This means institutions are tiered by total spend with Wiley – the more they spend, the more offset credit they receive to pay future APCs with.

The level of offset credit in 2016 was calculated based on an institution’s spend for 2015. Wiley created a separate WOAA credit account run in parallel with the institution’s regular WOAA account. Provided there is cash in the credit account all APCs are deducted from there. Unused pre-payment funds are rolled over.

All institutions receive a 25% discount on the standard APC rate.

Duration of deal: 2015–2017

Duration of offset pilot: 2015–2017

**Table 2: 2017 Wiley expenditure by sample of 53 HEIs**

Subscription spend:	£13,693,957 <sup>14</sup>
APC spend:	£2,358,768
Total spend (subscriptions + APCs):	£16,052,725
Number of APCs published under offset deal:	168
Amount saved through offsetting:	£302,400 <sup>15</sup>
Discount on hypothetical total cost of publication:	1.9%

The offset amount of 1.9% has been calculated by comparing the actual TCP (£16,052,725) with an estimate for what the TCP may have been without offsetting (£16,355,125).

14 In 2017, the estimated total paid by the consortium was £20,272,806 and the total paid by the sample was £13,693,957. This is based on a 2% increase over 2016 figures.

15 Number of offset APCs (168) multiplied by amount of discount on each (£1,800 – the standard hybrid APC price for Wiley). Figure excludes VAT. The offset deal does include full open access journals as well as hybrid, so an article-level analysis may reveal a slightly different total if some articles are published in journals with higher or lower APCs.

## Taylor & Francis

Institutions participating in the Jisc Collections 2015–17 Taylor & Francis agreement are included in the offset pilot for 2015 and 2016. Participating institutions received vouchers entitling them to heavily discounted APCs in hybrid journals.

The level of discount depends on the institution's total expenditure. Each voucher gives a 75% discount on one APC in a hybrid journal, reducing the APC from £1,788 to £450 (excluding VAT). The number of vouchers issued is calculated by institutional spend divided by the average hybrid APC price (£1,788):

$$\text{number of vouchers} = \text{institutional spend} / \text{average APC price}$$

For example, if institutional spend is £120,000, then the number of vouchers is  $120,000/1788 = 67$  vouchers.

Duration of deal: 2015–2017

Duration of offset pilot: 2015–2017

**Table 3: 2017 Taylor & Francis expenditure by sample of 53 HEIs**

Subscription spend:	£10,382,565 <sup>16</sup>
APC spend:	£376,729
Total spend (subscriptions + APCs):	£10,759,294
Number of APCs published under offset deal:	371
Amount that has been offset:	£496,398 <sup>17</sup>
Discount on hypothetical total cost of publication:	4.4%

The offset amount of 4.4% has been calculated by comparing the actual TCP (£10,759,294) with an estimate for what the TCP may have been without offsetting (£11,255,692).

16 In 2017, the estimated total paid by the consortium was £17,142,766 and the total paid by the sample was £10,382,565. This is based on a 4% increase over 2016 figures. The actual contracted price increase varies from 3.75–4.5% depending on the subscription option chosen.

17 Number of offset APCs (371) multiplied by amount of discount on each (£1,338 – the standard hybrid APC price for Taylor & Francis is £1,788 and this was reduced to £450). Figure excludes VAT.

## Springer

The Springer Compact agreement enables researchers from the 90 participating UK institutions to publish their articles immediately as open access in around 1,600 Springer journals as well as to access all content published in approximately 2,500 Springer journals.

The agreement is a move away from the historical print model and as such aims to reduce cost and administration barriers to hybrid open access publishing and to promote a move towards open access publication. Moreover, it allows all UK articles published in eligible Springer Open Choice hybrid journals to be made open access immediately upon publication with no additional APC payment needed.

Duration of deal: 2016–2018

Duration of offset pilot: 1 October 2015 – 31 December 2018

**Table 4: 2017 Springer expenditure by sample of 53 HEIs**

Subscription spend:	£7,400,229 <sup>18</sup>
APC spend:	£181,928
Total spend (subscriptions + APCs):	£7,582,157
Number of APCs published under offset deal:	3,045
Amount that has been offset:	£5,821,320 <sup>19</sup>
Discount on hypothetical total cost of publication:	43%

The offset amount of 43% has been calculated by comparing the actual TCP (£7,582,157) with an estimate for what the TCP may have been without offsetting (£13,403,477).

18 In 2017, the total paid by the consortium was £9,923,440 and the total paid by the sample was £7,400,229. This is based on a 0.26% increase over 2016 figures. Note that all figures for Springer given in this report exclude Nature or BioMed Central titles.

19 The number of offset APCs in the dataset (1,674) multiplied by amount of discount on each (£2,200 – the standard hybrid APC price for Springer, which converts to £1,920 based on average yearly exchange rate for 2017 of 0.8725, see UK Government 2018) totals £3,214,080. In a separate dataset provided to Jisc directly by Springer, the 53 institutions are shown to have 3,045 articles made open access under the terms of the deal, with a value of €6,672,000 (£5,821,320). The total value to the consortium of 3,818 published articles was €8,364,600 (£7,298,114). In Table 4, the Springer-provided figure of £5,821,320 has been used as a basis, because it is known that some institutions chose not to record articles in their APC expenditure data if they were covered by the Springer Compact deal, so the Springer-provided data is likely to be more accurate. Subscription spend now technically includes APCs within it – see Marques (2017) for more details.

## SAGE

UK institutions that subscribe to the SAGE Premier collection receive a discount on APCs in hybrid titles. The discounted APC is currently reduced to £200 for authors publishing in titles within the SAGE Choice scheme (hybrid open access journals) and SAGE Premier titles. Authors enter a code and an invoice is raised at the discounted rate.

Subscription pricing of hybrid journals: where the number of articles or financial contribution of these paid Gold OA articles reaches a relatively low threshold, SAGE will moderate the subscription rate proportionally. Once this threshold is reached, SAGE will transition from the author discounts to moderating the journal's pricing and it reserves the right to withdraw the title from the discount scheme at its own discretion.

Duration of deal: 2017–2018

Duration of offset pilot: 2017–2018

**Table 5: 2017 SAGE expenditure by sample of 53 HEIs**

Subscription spend:	£5,382,499 <sup>20</sup>
APC spend:	£117,106
Total spend (subscriptions + APCs):	£5,499,605
Number of APCs published under offset deal:	138 <sup>21</sup>
Amount that has been offset:	£201,113 <sup>22</sup>
Discount on hypothetical total cost of publication:	3.5%

The offset amount of 3.5% has been calculated by comparing the actual TCP (£5,499,605) with an estimate for what the TCP may have been without offsetting (£5,700,718).

20 In 2017, the estimated total paid by the consortium was £9,353,673 and the total paid by the sample was £5,382,499. This is based on a 3.5% increase over 2016 figures.

21 These fall into three categories: 89 APCs at £200, 26 at £400, and 23 at other miscellaneous amounts that were mostly paid in USD.

22 The standard hybrid APC price for SAGE is £1,600 plus VAT. The figure given here is the sum of the number of £200 offset APCs (89) multiplied by amount of discount on each (£1,400 – so a total of £141,600), plus the number of £400 offset APCs (26) multiplied by amount of discount on each (£1,200 – so a total of £31,200), plus the savings from the miscellaneous other offset amounts (£28,313).

## Institute of Physics (IOP Publishing)

Hybrid APCs for articles published in one year are offset against institutions' expenditure on subscription and licence fees in the following year, as long as they maintain subscriptions to IOPscience. Ninety per cent of a university's expenditure in one year on APCs is offset, or the total cost of their subscriptions, whichever is the greater.

IOP will monitor articles published on an open access basis in hybrid journals by authors at participating institutions during the course of each year and report to each institution at the end of the year on the number of published articles and their publication costs.

Offsets cannot exceed the value of subscription and licence fees. For example, an institution with an expenditure of £50,000 in hybrid APCs in 2014 and of £40,000 in licence fees in 2015 will be able to offset a maximum of £40,000 in 2015. APCs for fully open access journals will not be offset, as they have no subscription or licence income against which to offset.

Duration of deal: 2017–2019

Duration of offsetting pilot: 2017–2019

**Table 6: 2017 IOP expenditure by sample of 53 HEIs**

Subscription spend:	£1,283,321 <sup>23</sup>
APC spend:	£429,614
Total spend (subscriptions + APCs):	£1,712,935
Number of APCs published under offset deal:	n/a
Amount that has been offset:	£270,053 <sup>24</sup>
Discount on hypothetical total cost of publication:	13.6%

The offset amount of 13.6% has been calculated by comparing the actual TCP (£1,712,935) with an estimate for what the TCP may have been without offsetting (£1,982,988).

23 In 2017, the estimated total paid by the consortium was £1,681,097 and the total paid by the sample was £1,283,321. This is based on a 3.13% increase over 2016 figures. Although the increase in the agreement is 5%, this is reduced by a global offset of 1.87%, so the actual increase is 3.13%.

24 If all institutions in the sample were also in the offset agreement, the offset figure would be £330,062, because this is 90% of the amount spent by them on IOP APCs in 2016 (£366,735). (Note that not all institutions in the sample provided APC data for 2016, so this figure may be an underestimate.) However, not all of the sampled institutions are in the offset agreement. IOP have supplied a figure of £270,053 for the total amount offset, so this has been used in the analysis instead.

## De Gruyter

For institutions participating in the Walter De Gruyter Jisc Collections SMP 2016–2018 agreement, hybrid APCs for articles published in one year are offset against institutions' expenditure on subscriptions in the following year.

Institutions pay 100% of APCs up front, and then 90% of a university's expenditure in one year on APCs is offset the following year.

Duration of deal: 2016–2018

Duration of offset pilot: 2016–2018

**Table 8: 2017 De Gruyter expenditure by sample of 53 HEIs**

Subscription spend:	£282,766 <sup>25</sup>
APC spend:	£10,406
Total spend (subscriptions + APCs):	£293,172
Number of APCs published under offset deal:	n/a
Amount that has been offset:	£8,383 <sup>26</sup>
Discount on hypothetical total cost of publication:	2.8%

The offset amount of 2.8% has been calculated by comparing the actual TCP (£293,172) with an estimate for what the TCP may have been without offsetting (£301,555).

25 In 2017, the estimated total paid by the consortium was £385,484 and the total paid by the sample was £282,766. This is based on a 3% increase over 2016 figures.

26 This figure is 90% of the amount spent by HEIs in the sample on De Gruyter APCs in 2016 (£9,315). Note that not all institutions in the sample provided APC data for 2016, so this figure may be an underestimate.

## Discussion

### Value

Offsetting has reduced the total cost of publication (TCP) compared to projected expenditure levels if no deals were in place. For the sample of 53 UK institutions in this report, the combined value of offset agreements across all publishers is £7.1m, or a hypothetical discount of 14.5% (see Table 8). Since the HEIs in the sample represent over three-quarters of the sectors' APC expenditure,<sup>27</sup> the total value of the six offset agreements in 2017 can be estimated at £9m. As explained below, this figure represents cost avoidance rather than cash savings.

**Table 8: The value of publishers' offset agreements compared**

	Wiley	T&F	Springer	SAGE	IOP	De Gruyter	Total
Subscription spend:	£13,693,957	£10,382,565	£7,400,229	£5,382,499	£1,283,321	£282,766	£38,425,337
APC spend:	£2,358,768	£376,729	£181,928	£117,106	£429,614	£10,406	£3,474,551
Total spend:	£16,052,725	£10,759,294	£7,582,157	£5,499,605	£1,712,935	£293,172	£41,899,888
Number of APCs published under offset deal:	168	371	3,045	138	n/a	n/a	3,722
Amount offset:	£302,400	£496,398	£5,821,320	£201,113	£270,053	£8,383	£7,099,667
Discount on TCP:	1.9%	4.4%	43%	3.5%	13.6%	2.8%	14.5%

This is a significant amount of money for the sector, and higher than last year's estimate of £8m for 2016.<sup>28</sup> However, there are important caveats to consider. Firstly, the sample is skewed towards the most research-intensive institutions,<sup>29</sup> and the level of savings generated through offsetting differs depending on institutions' level of expenditure – for instance, the Wiley agreement tends to benefit high-spending institutions more, whereas the Springer agreement can have greater benefit for low-spending institutions (if they publish a lot of open access articles). Secondly, the 'savings' calculated in this report are against projected expenditure levels for 2017, i.e. the amounts that institutions might have paid in the absence of offset agreements, and this is difficult to estimate accurately. The reason for this is that although there is no firm evidence yet of authors changing where they publish based on the presence of offset agreements, some APCs that were offset may simply not have been paid if there were no agreements in place. It is therefore more accurate to regard the value of the deals as *cost avoidance* rather than savings.

27 See Note 9 on p.4 for calculations of the figure (79%).

28 Lawson (2017a)

29 For high-spending institutions, the Wiley agreement can lead to great variation in the amount of credit each year, with the total amount paid swinging higher and lower in alternate years. This creates problems for the institution and analytical difficulties in making year-on-year comparisons.

It is clear that some agreements are better value than others, and reduce the total cost of publication more than others. The Springer Compact agreement proportionally reduces the TCP significantly more than the rest. The agreement also provides by far the largest cost avoidance to the sector due to the fact that it covers the highest number of APCs – 3,818 articles were published under the agreement in 2017.<sup>30</sup> The agreement appears to be effective in terms of both reducing costs and in being easy to administer for institutions. A recent report<sup>31</sup> has shown that Springer’s share of APCs among top publishers rose dramatically in 2016, the first full year of the offset agreement. This demonstrates the value to publishers of having a relatively frictionless deal in place. The value to institutions is also clear – in 2017, institutions published 732 more open access articles under the Springer agreement than in 2016, with a below-inflation increase in expenditure.<sup>32</sup>

The fact that offsetting deals ‘save’ money while making more work open access, but actually lead to increased overall expenditure, has parallels with the logic behind subscription big deals, i.e. big deals give access to more content for a relatively small upfront increase in price and so ‘save’ money in a relative way, but they lead to higher absolute levels of expenditure. Since the total combined expenditure by UK HEIs on journal subscriptions and APCs is over £200m a year and shows no signs of decreasing (unless centralised funding of APCs is affected by HE policy changes, see below), a saving of £9m is fairly significant but still relatively small when considering the total cost of publication at a sector-wide level. The goal of true offsetting with the aim of transitioning to a fully open access publication system is still a long way off.

### **Data accuracy**

As mentioned above, the limitation of the method used in this report to calculate the value of offset agreements is that some APCs that were offset may simply not have been paid if there was no offset agreement in place, in which case the baseline TCP used in the calculations would have been lower. It is not possible to control for this accurately. The extent to which this is a major issue probably varies between different institutions and different publishers. In addition, the quality of the available APC data varies, so there are undoubtedly payments made by institutions in this sample that have been missed from the analysis.

For subscription expenditure, if the increases estimated for 2017 have been underestimated, then the value of offsetting has been *overestimated*. However, this does not appear to be the case, because if price increases were taken to be in line with the increase from 2015 to 2016, then the value of offsetting would remain very similar. For instance, the increase in expenditure with Wiley from 2015 to 2016, for the sample of 53 institutions, was 4.8%. If the expenditure in 2017 was also 4.8% higher than in 2016, rather than the 2% rise used in the calculations above – i.e. £14,064,499 rather than £13,693,957 – the value of offset would be

30 Earney (2018). See also OpenAPC (2018) for open APC data about the Springer Compact agreement.

31 Jubb et al. (2017: 43)

32 Earney (2018). Indeed, ‘By 2017, 29 institutions (32%) had published open access articles to the value or in excess of their Springer Compact fee’ (Jisc 2018a).

1.8% rather than 1.9%. The fact the the difference is so small indicates that the estimated subscription figures used in the analysis are accurate enough for calculating the approximate value of offset agreements.

The sample includes some institutions that have not signed up to offset agreements, so although the figures given in Table 8 are fairly accurate for a sector-wide view, an individual institution could potentially see far greater savings that average if it makes full use of the offset opportunities. Greater uptake of the deals would thus enhance their value.

### Administration costs

The administrative burden of implementing open access is significant for institutions<sup>33</sup> but appears to be greatly outweighed by cash savings (or cost avoidance). Various arrangements have been put into place in an attempt to streamline the administration process. Pre-payment deals, where a bulk sum is paid up front, is one such arrangement and has been found to save time over invoicing.<sup>34</sup> Vouchers or discount codes for APC payments have also been used – sometimes as part of a pre-payment deal – although these are not recommended by most institutions who use them because of the extra administrative work.<sup>35</sup>

It is possible to estimate what the administrative cost of APCs would be *if* they were paid outside of an offset agreement and processed as usual (see Table 9). The per-article administration cost for gold open access has been calculated variously at £88<sup>36</sup> and £25-103.<sup>37</sup> Since the £88 estimate is based on a much bigger – albeit less detailed – dataset and has subsequently been used in other analyses,<sup>38</sup> it has also been used in this report.

**Table 9: Hypothetical administration costs of processing APCs**

<b>Publisher</b>	<b>Number of APCs</b>	<b>Potential admin cost of APCs</b>
Wiley	168	£14,784
T&F	371	£32,648
Springer	3,045	£267,960
SAGE	138	£12,144
IOP	-	-
De Gruyter	-	-
<b>Total</b>	<b>3,722</b>	<b>£327,536</b>

33 Burgess (2015: 21–25), De Castro (2015), Johnson, Pinfield, & Fosci (2015)

34 Holliday & Jones (2015, 2015a)

35 Jisc OA Good Practice Pathfinder project (2016)

36 Johnson, Pinfield, & Fosci (2015)

37 Holliday & Jones (2015)

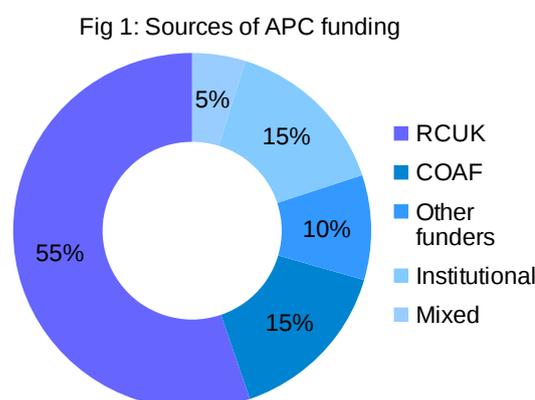
38 Such as Pinfield, Salter, & Bath (2016).

The total of £327,536, or 0.8%, is very similar to earlier estimates of the admin costs of the TCP at 0.6%.<sup>39</sup> (In previous reports the estimate was slightly smaller: 0.5% for 2016, and 0.3% for 2015). However, this figure only takes into account administration costs associated with individual APC transactions, and not further overheads such as the management costs associated with setting up offset agreements, decisions on how to implement offsetting within the institution, or advocacy and communication of deals to researchers. It is possible that if these additional labour costs were included in the calculations then the proportion of TCP attributed to administration may be higher – but the labour costs of administering *subscriptions* is also significant, so if TCP calculations factored in librarians' labour costs in supporting scholarly publications, it is unclear what the overall effect would be. Notably, around 335 FTE staff are now working on supporting and implementing open access in the UK.<sup>40</sup>

The administrative burden of different offset agreements has been investigated from a qualitative perspective<sup>41</sup> which provides valuable insight – telling us that, for example, the SAGE and IOP agreements appear to have been easier to implement than the discontinued RSC one, and the administrative efficiency of the Springer Compact is highly valued – but this brings us no closer to accurately quantifying the costs. Since some offset agreements remove the need for invoicing individual APCs it may be the case that they tend to have slightly lower overheads than the average, thus balancing out any extra administration costs accompanying the deals, but this is purely speculative and not measurable at present.

## Research funding

Research funders provide most of the money spent on APCs by UK institutions.<sup>42</sup> In 2014–15, 12% of the total cost of publication was spent on APCs.<sup>43</sup> In the sample of 53 institutions, 70% of all money used to pay APCs in 2017 came from two research funders: RCUK (now UKRI) and the Wellcome Trust/COAF (see Fig 1).<sup>44</sup> So institutions are relying largely on funders to cover the costs of the transition to open access. This is a situation that offsetting aims to change.



39  $\text{£}327,536 / \text{£}41,899,888 = 0.8\%$ . For the 0.6% figure see Johnson, Pinfield, & Fosci (2015) and Pinfield, Salter, & Bath (2016).

40 Fraser et al. (2018: 59–63)

41 Jones (2015); Manista (2016)

42 Fraser et al. (2018: 6, 47)

43 Shamash (2016: 18). The same figure is given by Pinfield, Salter, & Bath (2016). It is worth noting that this only refers to *known* APC payments made from centrally-managed funds. Pinfield & Middleton (2016) estimate that non-centrally funded APCs add 17% to the total known APC spend at the University of Nottingham, while Andrew (2016) estimates 20% at the University of Edinburgh.

44 COAF is the Charity Open Access Fund, a joint fund from several medical research funders that is administered by the Wellcome Trust.

UKRI will continue to provide a similar level of funding for APCs until 2020.<sup>45</sup> However, it is not clear what the long-term future of APC funding will look like – and only a minority of institutions have developed additional funding streams to pay for APCs themselves.<sup>46</sup> Therefore although APC funding will continue until at least 2020, if there is a withdrawal of funding at a later date this would almost certainly lead to a significant reduction in both APC expenditure and the number of articles made open access through this route. A report from Research Consulting supports the view that gold open access rates would drop if APC funding was withdrawn.<sup>47</sup>

Offset agreements may play a key role in maintaining the ability of UK researchers to publish in APC-funded open access journals. If UKRI withdraws funds but keeps an open access mandate, then HEIs would still be able to fulfil the mandate to some extent – but only if authors publish predominantly with publishers with which their institution has an offset agreement. In this instance, HEIs will have to advise researchers to publish with certain publishers, a position which is likely to provoke strong resistance from researchers. In last year's report, it was argued that a balance may be sought whereby funders will only continue to fund hybrid open access if an acceptable offset agreement is in place, which would reduce the funders' expenditure while also supporting the continuation of offsetting. Such an approach is consistent with the recently announced Plan S, which is a strategy for moving towards full open access that has been endorsed by a number of European research funders, including UKRI.<sup>48</sup> The initiative explicitly acknowledges that offset agreements may continue to play a role in the open access transition, if only in the short term:

We acknowledge that 'transformative' type of agreements, where subscription fees are offset against publication fees, may contribute to accelerate the transition to full Open Access. Therefore, it is acceptable that, during a transition period that should be as short as possible, individual funders may continue to tolerate publications in 'hybrid' journals that are covered by such a 'transformative' type of agreement. There should be complete transparency in such agreements and their terms and conditions should be fully and publicly disclosed.<sup>49</sup>

The fact that UKRI has signed up to Plan S, whereby hybrid APCs will only be funded if an appropriate and effective offset agreement is in place, is a welcome development. However, there is a risk that replacing dedicated open access block grants with a reliance on offset agreements would cause issues with smaller and specialist institutions that cannot afford to subscribe to the big deals that are required to access offsetting. Of course, APCs are not the

45 RCUK (2017, n.d.)

46 Sharp (2015) noted at least 18 institutions with an institutional fund. It is not clear whether this number has increased; a recent report from Research England (Fraser et al 2018: 47) noted that 15 institutions responding to a sector-wide survey mentioned an institutional open access fund. In this series of three reports, the proportion of APC funding that originated from institutional funds was 10% in 2015, 17% in 2016, and 15% in 2017. It thus forms a fairly consistent but small proportion of APC funding.

47 Research Consulting (2018)

48 European Commission (2018), Science Europe (2018b)

49 Science Europe (2018b)

only means of funding open access publication,<sup>50</sup> and alternative arrangements such as consortial funding for open access journals may appear much more attractive to institutions wishing to support open access publications if their ability to pay APCs is diminished. The recent trend towards the launching of research funder publishing platforms may also play an increasingly significant role here.<sup>51</sup>

## The future of offsetting

Some problems identified in previous years' reports have not been solved,<sup>52</sup> such as the fact that payment for page and colour charges are still distributed within institutions rather than centrally managed,<sup>53</sup> so it is difficult to know exactly how much is spent on them or how many page and colour charges are mistakenly included in APC expenditure data. Further, with the exception of the Wiley deal, the existing offset agreements only offset the cost of articles in hybrid journals rather than full open access journals as well. Since the efficacy of hybrid journals as a mechanism for transitioning towards full gold open access has been widely questioned, and is shortly to be disallowed by those funders who are sign up to Plan S, this limits the extent to which offsetting can achieve its aim.

One of the big unresolved issues for offsetting is that it continues to consolidate 'lock in' with particular publishers. In contravention of Jisc's principles for offset agreements,<sup>54</sup> all existing agreements require an institution to maintain a subscription to a big deal – over multiple years – in order to receive any benefit from offsetting.<sup>55</sup> The largest subscription publishers tend to be the largest recipients of APC funds<sup>56</sup> because 74–80% of APCs tracked in the UK are paid to hybrid journals,<sup>57</sup> which will only change if funders and institutions take action to stop it, as Plan S aims to do. Therefore tying offset agreements to big deals will continue to consolidate market concentration – potentially amplifying the dysfunctional nature of the subscription market. Indeed, Wiley's most recent annual report explicitly stated that offset agreements help them to secure revenues.<sup>58</sup> A commitment to transparency regarding all deals is necessary to ensure continued scrutiny from interested parties.<sup>59</sup>

50 See Eve (2014); Morrison et al. (2017).

51 See Jacobs (2018); Ross-Hellauer, Schmidt, & Kramer (2018).

52 See Earney (2017) for an extensive discussion of issues around offsetting.

53 See Gray (2015)

54 Jisc (2015). The only one of the five principles which is used by all participating publishers is that offset should occur at the local as well as global level. This is a given, since applying local offset is a condition of being included in the list of participating publishers. See also ESAC (2016).

55 A recent update to the Jisc Model License was intended to address this: 'We have undertaken a comprehensive review of the model licences we use for our online journal agreements, bringing in a new schedule of provisions designed to ensure publishers follow our best practice guidelines for OA offsetting or "read and publish" deals. This includes information feeds on acceptance and publication of articles to support Jisc Router, funder compliance, provision of metadata, and service levels' (Jisc 2018b).

56 Shamash (2016, 2017)

57 Shamash (2016); Wellcome Trust (2016)

58 'A number of European administrations are showing interest in a business model which combines the purchasing of subscription content with the purchase of open access publishing for authors in their country. This development removes an element of risk by fixing revenues from that market, provided that the terms, price, and rate of transition negotiated are acceptable' (Wiley 2017: 7).

59 Science Europe (2018a: 10)

The offsetting landscape continues to evolve, with new offset agreements introduced by Cambridge University Press and Oxford University Press in 2018, too late to be included in this report.<sup>60</sup> In addition, American Chemical Society have an ‘author choice’ scheme and Royal Society of Chemistry have replaced their previous offsetting voucher scheme with a ‘read and publish’ agreement.<sup>61</sup>

A number of other European nations now have open access policies prioritising gold open access<sup>62</sup> and there is a strong trend of rhetoric aspiring to full open access in the near term.<sup>63</sup> It is too early to predict with any confidence whether these aspirations will be ultimately successful, and it is still unclear what effect the UK’s imminent exit from the European Union will have given the country’s leading role in promoting gold open access. Offset agreements such as the Springer Compact are also spreading among those nations with gold-centric policies – it has been enacted in the Netherlands, Austria, Sweden, and the Max Planck Institutes in Germany.<sup>64</sup> Therefore perhaps big deals will retain their dominant market share by pursuing innovative offsetting arrangements. However, it is important for funders in wealthy nations to consider the effect their policies have on the global situation. As Siler et al. (2018) have argued, ‘Institutions and research funders with OA mandates may be well-meaning, but can also cause inelastic demand for gold APC and hybrid publishing, which for-profit publishers can exploit with higher APCs. This diminishes the resources of institutions and scholars who can afford such fees, while excluding authors without the financial wherewithal to pay high APCs.’ The fact that Plan S calls for an end to hybrid and an (unspecified) cap on APC costs only partially addresses these issues.

60 Jisc (2017)

61 [how exactly are we defining offsetting vs. read and publish?] [‘In previous years, RSC’s ‘Gold for Gold’ scheme was been the most successful agreement for reducing the TCP, but it has now been discontinued and replaced by an alternative mechanism whereby institutions pay a flat fee each year – calculated based on the prior number of articles they have published with RSC – in order to make all of their articles open access. So although offsetting is continuing, it appears that RSC deals are now of less value to the sector.’ [is this true?] ‘The fact that RSC have withdrawn their voucher scheme for 2017 means that this year’s APC data can reveal whether a large drop occurred in the number of open access articles published in its journals, particularly for institutions that choose not to join RSC’s new 2017-18 offset agreement.’]

62 For example in Norway (CRISTin 2016; Norwegian Ministry of Education and Research 2017), the Netherlands (NWO 2016), and Sweden (Lundén, Smith, & Wideberg 2018).

63 See Bauer et al. (2015); EU2016 (2016); Science Europe (2018b)

64 Springer (2018)

## Conclusion

The combined value of offset agreements to the higher education sector in 2017 has been estimated at £9m. Some agreements reduce the total cost of publication (TCP) more than others, with the Springer agreement providing by far the largest cash savings (£5.8m) and also proportionally reducing the TCP the most (43%). Administration costs are harder to calculate but appear to make up a small proportion – less than 1% – of the TCP.

Offsetting has produced real benefits for higher education institutions by increasing the value of journal license agreements and raising the number of journal articles that are published open access. However, it also has significant drawbacks, with the risk of entrenching the existing structure of the journals market and locking up even more money in big deals. The value generated through cost avoidance with hybrid journals at large publishers should not be sought at the expense of excluding smaller society and pure open access publishers.

In the UK, the possibility of UKRI discontinuing support for hybrid APC payments is the biggest risk to the viability of offset agreements, though this may in fact encourage progress on the transition to full open access. In the short term, offset agreements could continue to play a role in the transition, though at present it appears likely that UKRI's future policy will require alternative approaches instead.

This report is the final instalment of three annual reports to evaluate the offset agreements that have been negotiated by Jisc Collections on behalf of UK academic libraries. An additional concluding report will be released later this year that summarises what has been learned.

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## **Appendix: List of the 53 higher education institutions used in the sample**

Aberystwyth University  
Aston University  
Brunel University  
Cardiff University  
Cranfield University  
Edinburgh Napier University  
Glasgow Caledonian University  
Goldsmiths, University of London  
Heriot-Watt University  
Imperial College London  
King's College London  
Lancaster University  
Leeds Beckett University  
Liverpool John Moores University  
Liverpool School of Tropical Medicine  
London School of Economics  
Loughborough University  
Manchester Metropolitan University  
Newcastle University  
Northumbria University  
Open University  
Plymouth University  
Queen Mary, University of London  
Queen's University Belfast  
Royal Holloway, University of London  
Swansea University  
University College London (UCL)  
University of Bath  
University of Birmingham  
University of Cambridge  
University of Derby  
University of Dundee  
University of East Anglia  
University of Edinburgh  
University of Exeter  
University of Glasgow  
University of Huddersfield  
University of Hull  
University of Kent

University of Leeds  
University of Liverpool  
University of Manchester  
University of Oxford  
University of Reading  
University of Sheffield  
University of Southampton  
University of St Andrews  
University of Strathclyde  
University of Surrey  
University of Sussex  
University of the West of England  
University of Ulster  
University of York