



# **Financial Sustainability and Efficiency in Full Economic Costing of Research in UK Higher Education Institutions**

Report of RCUK/UUK Task Group  
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## **FOREWORD**

Research in the UK's universities is undoubtedly a success story. In recent years there has been an increased focus on securing this success in the long term through moves to enhance the financial sustainability of the research base. The group which produced this report, under my chairmanship, had two tasks. One was to examine ways in which the financial sustainability sought after is already being secured and demonstrated, as well as to ensure that this success will continue to into the future. The other task relates to the need, at the same time, to seek measures that will improve the effectiveness of the research base and provide economies in the funding of research. We are currently in a period that will see significant restrictions in public expenditure. These circumstances present a very different environment to the one in which many in the higher education sector have been used to operating. Higher education will need to play its part in demonstrating greater efficiency and economies.

These have not been simple tasks. We did not want to jeopardise the autonomy of institutions, nor did we wish to create any significant additional burden. We also recognised that UK has a very diverse higher education system that is not built around a single model and there are a complex range of drivers and factors within institutions and more widely which need to be considered.

The moves to secure financial sustainability and simultaneously promote greater efficiency and economies have the potential to pull in different directions if not handled carefully and so the approach we have taken is what might be described as a 'pincer movement'. On the one hand we have aimed to reinforce measures that monitor and promote financial sustainability, building on current processes and enhancing transparency; on the other we have sought measures that will put an appropriate level of pressure on the costs of research across the system over time.

In the current climate I am certain that it is in the long term best interests of the sector that we engage constructively with these issues and do not seek to dodge or hide from them. The aim of this report is ultimately to help the sector in this task, but in a way that is appropriate and works with the grain of how research is funded, managed and ultimately performed.

I would like to take the opportunity to thank the members of the Task Group for the substantial efforts and time that they have dedicated to this work and all of the other individuals who have provided advice and input as part of the process.

**Sir William Wakeham**

## EXECUTIVE SUMMARY

This Task Group was created to consider the financial sustainability of research undertaken in universities and other institutions of higher education in the United Kingdom. The UK has a very successful Higher Education sector across all key areas of activity, but it is vital that the sector reinvests for the future and is transparent in the use of public funding so as to ensure the long-term financial sustainability of the sector. Our task has been to assess the state of research funding, to reflect on whether the sector is using the funding to ensure sustainability and whether higher education institutions are efficient and economical in their use of public funding. Where we felt it appropriate to do so, we have made proposals for changes that would lead to a more effective use of public funds.

The excellence of research in the HE sector in the UK is underpinned by a dual funding system operated by the Funding and Research Councils, although the overall level of investment as a percentage of GDP is modest and remains below that of many OECD competitor nations. At a time of constraints upon the level of government expenditure, the HE sector will need to play its part by ensuring the most effective use of the public funds it receives and by securing economies in the overall costs of research.

In undertaking our investigations, we have reviewed various data relating to the sector, using in particular the outputs from the TRAC (Transparent Approach to Costing) returns of Higher Education Institutions (HEIs) and have explored the consequences of the move to funding research projects based on full economic costs. The introduction of TRAC in the late 1990s has been a significant development for the sector, allowing all institutions to understand what their various activities cost and what income they receive for them. The role of the Financial Sustainability Strategy Group and the TRAC Development Group in overseeing and promoting the use of TRAC is praiseworthy. There have been many beneficial consequences of the introduction of TRAC and the improvements under consideration by TDG will add to the potential benefit. Nevertheless, we do not feel that universities are using TRAC as effectively as they could.

HEIs are complex organisations and we have concluded that the task of following and trying to control each 'pound sterling' that flows into an institution and how this is attributed to the costs of a particular research project is unrealistic, impractical and futile. But we find it troubling that evidence at a national level from annual TRAC returns over several years suggests that the income which HEIs receive to carry out research is not fully covering the costs of undertaking this research. It is, of course, a matter for each HEI as an autonomous organisation to determine the extent to which it is prepared to subsidise its research activities from other income sources. An institution should be able to make an informed judgement to subsidise one activity by another in the context of the full income flows into the HEI, which will reflect its strategy in terms of its goals and mission. In that context it is essential that the governing body of an HEI should assure itself that there is an institution-wide strategy for financial sustainability consistent with the chosen mission and that there are measures that assess the extent to which this is being achieved.

The data available to us at the individual institutional and national levels give a rich picture across the sector, but we consider that the use of metrics to analyse trends can and should be improved. We have examined the metrics currently used by the sector in terms of their validity and their usefulness to institutions and policy makers. It is not clear that institutions are actually using the metrics as effectively as they might to manage financial sustainability or that the metrics relate to national policies to promote financial sustainability. Furthermore, although the metrics provide a measure of assurance, it is not apparent that any action is taken by policy makers on the basis of the metrics. Although the volume of research is acknowledged as a policy concern, the data that we have examined indicate that there has been little growth in recent years in the time

academic staff spend on research despite the growing staff numbers associated with an expansion in undergraduate numbers.

When TRAC was extended so as to permit the full economic costing of individual research projects, there was no explicit consideration given to the need for incentives to drive efficiency of the use of funds for research within HEIs. Whilst an HEI may now be in a position to identify its costs of research better, it still may not be ensuring appropriate measures are in place to keep these costs in check.

We recognise that there are pressures on HEIs to constrain the costs of research and that there exists significant motivation for them to minimise their general operating costs and we support the principle that HEIs should be able to seek and recover the level of costs that their organisation requires in order to be financially sustainable. Nonetheless, funders remain concerned that HEIs are not taking sufficient steps to reduce indirect costs attributed to research and hence increase their cost effectiveness. The Task Group has considered and rejected the notion that publication of each institution's indirect cost and estate rates might be used to manage cost rates, this was thought as likely to drive the rates up as down.

Our preferred approach is to place efficiency targets on HEIs to reduce their costs. Well-managed HEIs are already conscious of the need to reduce costs substantially and are beginning to implement economies and efficiency improvements in this area. We wish to encourage all HEIs to follow this path. For the next three years we propose that an institution's indirect cost charge-out rate, after allowance for inflation, should be reduced by an annual 5% efficiency factor. This would reduce the cost of research as funded by the Research Councils by about £40 million by 2013-14. There are also likely to be reductions in the costs of other funders of research in HEIs which might amount to a further £40 million. Given that financial sustainability implies regular and proper investment in estates and infrastructure and that HEIs do appear to be doing this, we have not recommended any changes in estate charge-out rates.

We believe that, in the current financial climate, HEIs can and should be expected to make every effort to deliver these economies.

## **SUMMARY OF RECOMMENDATIONS**

The Task Group has reviewed the background to the financial status of the UK HE sector, the visibility provided by TRAC (Transparent Approach to Costing) and the role played by the move to funding research projects based on full economic costs. The Task Group confirms the importance of higher education being transparent and effective in the use of public funds and also recognises that the UK has a very successful HE sector across all key areas of activity. The Task Group fully endorse the work of the TRAC Development Group and stresses the need for those at a senior level in institutions to fully engage in this process.

The Task Group has considered the pressures on costs and financial sustainability and also the effectiveness and efficiency of UK HEIs. As a result of this review we propose the following recommendations which will provide a coherent approach going forwards to enhance and incentivise the optimal and effective use of resources provided through fEC within HEIs.

### ***Financial sustainability***

- Recommendation 1. We recommend that the volume of research being carried out by UK HEIs is monitored at a national level on an annual basis. (Paragraph 30)
- Recommendation 2. We recommend that HEI governing bodies take a more proactive role in assuring themselves that there is an institution-wide strategy for financial sustainability and that the HEI has developed measures that assess the extent to which this is being achieved. (Paragraph 47)
- Recommendation 3. We recommend that HEFCE should consider how a consistent set of metrics can be incorporated into its annual accountability review process of an institution; and that the Funding Councils in the devolved administrations should consider how such a set of metrics can be incorporated into their equivalent processes. The Funding Councils should each then produce an annual summary report for the Funders Forum outlining headline information on the overall financial sustainability of institutions and specific information on the sustainability of the research base. This process will require cooperation between the Funding Councils and Research Councils, as it will also need to draw on Research Council information, for example, through RCUK's Quality Assurance and Validation and continued assurance processes. Having analysed these reports the Funders Forum should ask that the relevant agencies take appropriate action and report back. (Paragraph 57)
- Recommendation 4. We stress the importance of ensuring that the new Research Excellence Framework, which will replace the RAE, gives appropriate consideration to the importance of financial sustainability when assessing the research environment. (Paragraph 58)

### ***Effectiveness and Efficiency***

- Recommendation 5. We recommend that the Funding Councils and Research Councils keep under review their policies with respect to research selectivity and concentration in the light of the gains in efficiency that might be made. (Paragraph 76)
- Recommendation 6. The Research Councils should develop processes for discussing the indirect costs and estate rates with institutions where there is cause for concern and work with them to remedy any problems. (Paragraph 78)
- Recommendation 7. We consider that the greater intensity of utilisation of assets by HEIs should be encouraged, particularly the sharing of research equipment and facilities. (Paragraph 81)
- Recommendation 8. We recommend that institutions should provide to their Finance or appropriate governance Board/Committee for their TRAC returns an analysis of the year-on-year changes in their annual TRAC returns (including the fEC rates) as part of their compliance. (Paragraph 91)

- Recommendation 9. We propose that for each of the next three years, i.e. from 2011-12 to 2013-14, that an institution's indirect cost rate (in real terms) should be reduced by an annual 5% efficiency factor. For an institution whose rate is below the median (which is £38.7k in 2010-11), we propose that its indirect cost rate in real terms should be reduced by an annual 2.5% efficiency factor. (Paragraph 97(a))
- Recommendation 10. We recommend that the indexation factor applied to indirect and estate costs to allow for inflation over the period between when they are calculated and when they apply for a research grant should be limited to the Treasury's GDP deflator (Paragraph 97(b))
- Recommendation 11. The provision for indirect costs (in real terms) on grants awarded by the Research Councils should be reduced by an annual 5% efficiency factor (2.5% efficiency factor for those institutions whose indirect costs are below the median indirect cost rate). (Paragraph 97(c))
- Recommendation 12. Institutions with 2010-11 indirect cost rates in excess of the upper quartile level (£42.4k/FTE) should be required to agree plans with the Research Councils to reduce their costs at a faster rate than set out in recommendation 9. (Paragraph 97(d))
- Recommendation 13. We observe that the current VAT regulations are a barrier to the development of shared services and encourage the Government to address this impediment as soon as possible. (Paragraph 104)
- Recommendation 14. We recommend that the assessment processes of the Research Councils should encourage more intensive use of existing assets across the research base. (Paragraph 107)

## INTRODUCTION

1. The importance to the United Kingdom of university-based research and the need for this to be funded and managed on a more sustainable basis was recognised in the Science and Innovation Investment Framework 2004-2014 published<sup>1</sup> alongside the 2004 Spending Review. The Government subsequently provided additional public funding to enable the support of Research Council grants on the basis of full economic costs from April 2006. The increase to the Research Councils alone amounts to over £500 million which, together with other increases to the Funding Councils and for capital infrastructure, means that the total annual funding for research and postgraduate training from the Science Budget and Funding Councils has increased by over £1 billion since 2005-06.

**Table 1: Research allocations in UK (including postgraduate training); Science Budget and Funding Councils 2004-05 to 2010-11 (£ millions)**

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
<b>Science budget</b>	<b>2734</b>	<b>3087</b>	<b>3235</b>	<b>3382</b>	<b>3554</b>	<b>3715</b>	<b>3970</b>
<i>of which: Research Councils</i>	2210	2433	2638	2834	3112	3239	3396
<b>Funding Councils</b>	<b>1394</b>	<b>1575</b>	<b>1698</b>	<b>1797</b>	<b>1863</b>	<b>1945</b>	<b>1979</b>
<i>of which: HEFCE</i>	1079	1249	1341	1413	1458	1571	1603
SFC	212	216	244	263	279	242	244
HEFCW	66	70	70	75	77	80	80
DELNI	37	40	44	47	49	52	52
<b>Total</b>	<b>4128</b>	<b>4662</b>	<b>4933</b>	<b>5180</b>	<b>5418</b>	<b>5660</b>	<b>5949</b>

Source, BIS, HEFCE, SFC, HEFCW and DELNI: capital allocations excluded for Funding Councils

Note: Research Councils fund research in their institutes, national and international facilities in addition to university research and postgraduate training.

2. It was recognised that the move to funding research projects based on full economic costs ran alongside the continued obligation for Higher Education Institutions (HEIs)<sup>2</sup> to maintain cost-effectiveness and that Research Council assessment processes needed to be sufficiently robust to guard against unwarranted price inflation from the higher education sector. There was a commitment that the Government and the Research Councils would actively monitor and manage this risk as the proportion of costs paid increases while keeping the burden on HEIs to a minimum.
3. Recognising the importance of this agenda, Research Councils UK (RCUK) and Universities UK (UUK) jointly commissioned a review of progress towards meeting the objective of creating a more sustainable research base in HEIs. The review<sup>3</sup>, which was chaired by Professor Alan Alexander and published in April 2009, concluded that good progress was being made, both through the efforts of research funders and institutions, but that there remain a number of important issues which need to be resolved.
4. In particular, the review emphasised the continued deficit on research undertaken by UK HEIs

<sup>1</sup> [http://www.hm-treasury.gov.uk/spending\\_sr04\\_science.htm](http://www.hm-treasury.gov.uk/spending_sr04_science.htm)

<sup>2</sup> A glossary of terms and acronyms can be found at Annex D

<sup>3</sup> <http://www.rcuk.ac.uk/cmsweb/downloads/rcuk/reviews/fec/fecreport.pdf>

(approximately £2 billion) revealed by the national level TRAC (Transparent Approach to Costing) data. This was considered sufficiently important to warrant further investigation and possible action. An appropriate level of understanding and assurance was required that the additional funding by the Government to support financial sustainability is indeed being used for that purpose and that the funding is not being used to support an unsustainable growth in research volume. The RCUK/UUK review also raised questions about whether there were appropriate mechanisms that could be developed which could help ensure a downward pressure on the costs of research undertaken in HEIs.

5. The work of this Task Group arose from these two key elements of the Alexander Review. Specifically, we were asked to examine ways in which a clearer picture can be developed of how HEIs are using additional funding provided to support the financial sustainability of research. We were also asked to make proposals on how HEIs could be encouraged to make the most effective use of this funding. The Terms of Reference for the Task Group and the membership can be found at Annex A. We do not intend to revisit the arguments made in the RCUK/UUK review, but will inevitably touch on a number of the key relevant areas and refer to evidence presented in the review's report.
6. In the current financial climate it is vitally important that higher education is transparent and effective in the use of public funds. The Task Group therefore fully recognises and accepts the importance of this agenda and has sought to engage in the issues and challenges in a constructive manner and to make practical recommendations where possible.
7. In undertaking our review we recognise the strengths of UK HEIs. We have a very successful HE sector in the UK, across all key areas of activity (including research, teaching and knowledge exchange activities), which has sustained its quality and remained competitive even though investment levels remain below those of many other OECD nations. Evidence produced by UUK shows that the direct economic contribution of HEIs is £59 billion, putting the higher education sector ahead of the aircraft and spacecraft, agricultural, and pharmaceutical industries<sup>4</sup>. The UK HE sector continues to punch well above its weight in research internationally and productivity data collected on behalf of BIS in 2009 show that the public receives significant value for money from the investment in the research base that the government makes<sup>5</sup>. We have therefore attempted to identify, build upon and support good management within HEIs in taking this work forward.
8. The two key principles underpinning our work have been first to ensure that the development of any new requirements are commensurate with the benefits and secondly to respect the autonomy of institutions. The Group regards the autonomy of UK HEIs as a significant factor in maintaining their continued high international standing performance. Other countries are redesigning their systems and building in greater autonomy in order to compete more effectively with the UK.

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<sup>4</sup> <http://www.universitiesuk.ac.uk/Publications/Documents/EconomicImpact4Full.pdf>

<sup>5</sup> [http://www.bis.gov.uk/assets/biscore/corporate/migratedD/publications/IIICPRUK09v1\\_4](http://www.bis.gov.uk/assets/biscore/corporate/migratedD/publications/IIICPRUK09v1_4)

## THE WIDER CONTEXT: PRESSURES ON COSTS AND FINANCIAL SUSTAINABILITY

9. Before moving on to examine the two key areas in the terms of reference, we felt it important to place our discussion in the wider context of the pressures on costs and financial sustainability on the UK higher education system as a whole.
10. Within UK higher education there are a number of systemic incentives, external to institutions, which drive short to medium term (3 to 5 year) targets for both individuals and institutions. The incentives inevitably motivate a desire for an increase in the volume of all activities at constant or improving quality. These expansions are potentially at odds with the desirable target for long-term financial sustainability unless they are combined with increased efficiency.
11. In its 2009 report<sup>6</sup> *“The sustainability of learning and teaching in English Higher Education”*, the Financial Sustainability Strategy Group (FSSG) outlined a number of factors that are driving costs in the HEI system on the teaching side and potential tensions and threats to sustainability. The wider pressures on financial sustainability which the report noted include the challenges of a more diverse and consumer minded student population; raised employer expectations; new government social and economic agendas; and international competition against the context of tight public funding. Pressures on costs include pensions deficits and operating costs rising much faster than funding. Indeed the latter pressures on costs are recognised in the most recent Higher Education Pay and Price Index (HEPPI) undertaken by LSE on behalf of UUK<sup>7</sup>.
12. The FSSG report recognises that some of the pressures have already been absorbed through improvements in efficiency and productivity (including new methods of teaching and learning), but that further work to develop sharing of services and more efficient utilisation of infrastructure would be beneficial. These developments notwithstanding, the issues and pressures identified by the FSSG on the teaching side have a strong relationship with sustainability and costs in the HE system as a whole, including in research.
13. As an example of this, during the period of rapid student number expansion over the last ten years, the number of staff has also increased in order to maintain or enhance the quality of the learning experience. The quality of teaching is enhanced if staff operate at the frontiers of their subject through research. It is also, of course, in the interests of the careers of individual staff, both intellectually and financially, to undertake research. There is furthermore a strong institutional incentive, largely due to the Quality-Related (QR) funding stream from the Funding Councils, to maximise the volume of excellent research. Thus this combination of drivers, stimulated by a laudable government objective, encourages an increase in research volume, but not one for which there is automatic research funding. Indeed, we have seen reductions in success rates for research council funding, which are in part attributable to this factor. It is important therefore to understand that research is not an activity which exists in isolation inside institutions; it is intimately coupled to other activities, upon which it may depend for cross-funding and which may act as a driver, while it also creates other demands that are not necessarily funded. Indeed, we consider that some of the additional staff activity, currently returned in TRAC as research, should

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<sup>6</sup> <http://www.hefce.ac.uk/finance/fundinghe/trac/fssg/FSSGreport.pdf>

<sup>7</sup> <http://www.universitiesuk.ac.uk/PolicyAndResearch/Statistics/Higher-Education-Pay-and-Prices-Index/Pages/default.aspx>

properly be identified as scholarship in support of teaching and its costs treated accordingly. We note that the TRAC Development Group (TDG)<sup>8</sup> has recently issued guidance (TRAC Guidance Update 4) which provides advice to HEIs on addressing this within their time allocation methods for TRAC.

14. It is clear, therefore, that it is not practicable to speak of promoting the sustainability or effectiveness of research in isolation from other activities. The challenge for the Task Group is rather how can we use overall financial sustainability and effectiveness of an HEI as the objective function while proposing measures related only to the funding of research activities?
  
15. It is around this argument that the Group feels its work has the potential to overlap with or be complementary to Lord Browne's independent review of funding and student finance in England<sup>9</sup>. The wider issues are likely to be considered by Lord Browne and it will be crucial that any reforms arising from that work ensure that the drivers and incentives, and funding mechanisms in the system, are aligned to support long term sustainability, rather than work against it and are consistent with our own work. Within the scope of the Task Group's Terms of Reference we are mindful of these wider issues as we seek to identify the issues and those measures that might need to be taken on the research side.

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<sup>8</sup> <http://www.hefce.ac.uk/finance/fundinghe/trac/tdg/>

<sup>9</sup> <http://hereview.independent.gov.uk/hereview/>

## FINANCIAL SUSTAINABILITY OF RESEARCH IN HIGHER EDUCATION

16. The Task Group felt it important to gain a better understanding of the income and expenditure by HEIs on research and the extent to which there has or has not been an increase in volume of research (and if there has, identify how it is being funded). It seemed to us that this was important in order to ensure that any proposals we might make are commensurate with the scale of any difficulty.

### *Income and expenditure on research in HEIs*

17. It is possible to analyse the income flows and expenditure across the HEI sector by sponsor type using the TRAC returns from HEIs. Table 2 draws on the latest returns to HEFCE reporting the data for the period 2008 to 2009.

**Table 2: 2008-09 TRAC research income and expenditure (£million)**

	Institution own-funded	Post-graduate Research Students	Research Councils	Other Gov't Depts	European Union*	UK Charities	Industry**	Total
Income	2,031	639	1,592	755	339	949	729	<b>7,034</b>
Costs	1,860	1,161	2,139	1,004	559	1,534	964	<b>9,221</b>
Surplus/ deficit	171	-522	-547	-249	-220	-586	-235	<b>-2,187</b>
Surplus/deficit as % costs	9%	-45%	-26%	-25%	-39%	-38%	-24%	<b>-24%</b>

\* European Union includes EU government bodies including the European Commission. This is the same as that defined in Table 6b of the HESA Finance Statistics return.

\*\* Industry includes all other organisations such as UK industry, commerce and public corporations, EU non-government organisations (i.e. EU-based charities, EU industry and EU other), Overseas charities and Other sources.

18. Overall there is £2 billion deficit on research<sup>10</sup>. The deficit has shown little change in the last few years. However, there are a number of factors which suggest that the deficit may not be as high as shown (and consequently the deficit on teaching higher), although it would still be significant. At the level of the individual institution there is wide variability in the reported deficits and we return to this in paragraph 70. The range of these individual deficits (both in value and percentage terms) is shown in Figures 3 and 4.

19. It is vital that Government has confidence in the good use of public funding in research and there is agreement across the sector that the quality of the TRAC data needs to be improved. The TRAC Development Group (TDG) is taking the lead on this and organised a major national conference in November 2009. Arising from that a coherent programme of work is now being implemented. This has been outlined by the chair of the TDG, Professor Stuart Palmer, Deputy

<sup>10</sup> The current TRAC guidance for income allocation requires institutions to report all block grant research incomes from funding councils under the 'institution-own-funded' sponsor type. This is not intended to represent the way that institutions allocate their block grant funding internally to support 'public good' research, nor does it imply that the first call on these funds is to support institution own-funded research activity, or any other individual sponsor. Institutions have discretion in the way they choose to allocate/ use funding council block grant. The TDG has issued TRAC Guidance Update 5 (April 2010) which requires institutions to report funding councils block grant for research against a new, separate sponsor-type category from 2009-10 onwards.

Vice-Chancellor, University of Warwick in a letter<sup>11</sup> to the sector in March 2010. Key elements include:

- Better accounting for academic staff time spent on scholarly activity
- Requiring all institutions to calculate research surplus/deficits disaggregated by sponsor type robustly
- Review the way in which the Return for Financing and Investment (RFI)<sup>12</sup> adjustment is included in the TRAC calculations to ensure that TRAC adjusted costs are not overstated.

20. In the course of this work members of the Task Group held a number of meetings with TDG and are grateful for the constructive input and advice of that group. We fully endorse the TDG work on TRAC and stress the need for this to be taken forward as a priority for the sector. We particularly wish to stress the need for those at a senior level in institutions to fully engage in this process. We are fully supportive of the recent 'Key messages on TRAC' [see Annex B] issued by TDG on 27 April 2010 and urge the TDG to continue to publicise and communicate this work more widely within and outside of the sector with key funders and government.

21. Notwithstanding these developments we note with concern the significant deficit on post-graduate research students. Professor Adrian Smith in his recent review<sup>13</sup> for the government, "*One step beyond: making the most of post graduate education*", considered funding in this area. We would broadly support the measures proposed by Professor Smith to maximise the effectiveness of investment in this area. It will be important that the government and key funders, in responding to the report, consider what measures can be put in place to ensure the system of postgraduate training is sustainable in the longer term. We hope that the broader measures to strengthen financial sustainability proposed in this report will make a contribution in this area.

### ***Understanding volume growth***

22. An underpinning principle behind the introduction of fEC-based funding was that, although more should be paid for research in order to ensure it was funded sustainably, there should be no growth in research volume unless this was sustainably funded. Although a range of metrics were put in place following this introduction to measure overall sustainability, there is no single measure to monitor possible growth in the volume of research. The Group therefore felt it important to address this question and interrogate available data. Recognising the limitations of some of the data sources, we have examined the problem in a number of ways in order to seek a robust conclusion.

23. Notwithstanding the discussion on TRAC above, the most useful source of data are the annual TRAC reports, since they provide information on several aspects that relate to research volumes and costs (i.e. academic staff effort; research assistants, PGR students, total costs, costs of estates, indirect costs). These TRAC data are publicly available at the level of the UK higher

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<sup>11</sup> [http://www.hefce.ac.uk/finance/fundinghe/trac/tdg/TDG\\_letter.pdf](http://www.hefce.ac.uk/finance/fundinghe/trac/tdg/TDG_letter.pdf)

<sup>12</sup> The return for financing and investment is intended to ensure that institutions take account of the economic cost of capital. This covers the financing costs of institutions, including the existing costs of borrowing and the opportunity cost of institutional cash used for financing; it also provides funds for the rationalisation and development of institutions' business capability and capacity. It does not however, specifically adjust for inadequate spend in areas such as student support and facilities, staffing levels etc.

<sup>13</sup> <http://www.bis.gov.uk/assets/biscore/corporate/docs/p/10-704-one-step-beyond-postgraduate-education.pdf>

education sector; and confidentially at the level of the TRAC Peer Groups (the main institutional groupings<sup>14</sup>), and for individual institutions. The Task Group looked at data from the three most recent TRAC returns in 2006-07, 2007-08, and 2008-09; less information was collected prior to this.

24. There are inevitably variations over the three years at the level of individual institution as changes in their institutional research strategies emerge. The focus of the analysis has therefore been at sector level and the two TRAC groups (A and B) which include institutions with the highest levels of research activity

25. High level findings on the volume data are:

**a) The academic staff effort devoted to research (the TRAC direct research FTE) has fallen by approximately 5% from 23,480 in 2006-07 to 22,350 in 2008-09.**

The total number of academic staff increased by approximately 5%, associated with an increase in undergraduate student numbers (also of 5%, from HESA data), but academic staff refocused their time away from research in favour of teaching – possibly as an indirect result of the introduction of variable student fees and the associated market pressures.

The reductions in direct research FTE are slightly lower in Groups A and B (3% and 2% respectively) than at sector level, possibly reflecting the enhanced research focus of these two groups of institutions compared with the sector as a whole.

**b) The numbers of dedicated research staff (Research Assistants and fellows) and of Post-Graduate Research students (PGRs) have both increased by approximately 5%. The number of RAs and fellows increased from 33,200 in 2006-07 to 34,900 in 2008-09 and the number of PGRs increased from 72,400 in 2006-07 to 76,000 in 2008-09.**

In TRAC, these groups are assumed to be 100% devoted to research. Research Assistants and fellows are typically funded by the Research Councils and other external funders of research. PGRs may or may not be supported by public funding.

There are some variations between the different TRAC Groups, but it is not especially significant.

**c) The expenditure on estates allocated to research increased by approximately 17% over this period.**

Total estates expenditure in higher education increased by approximately 20% between 2006-7 and 2008-9. Expenditure on estates for research (which includes buildings

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<sup>14</sup> TRAC Peer Groups comprise:

Group A: Russell Group (all have medical schools) excluding LSE, plus specialist medical schools

Group B: All other institutions with Research income of 22% or more of total income

Group C: Institutions with a Research income of 8%-21% of total income

Group D: Institutions with a Research income of between 5% and 8% of total income and those with a total income > £120m

Group E: Teaching institutions with a turnover of between £40m and £119m

Group F: Smaller teaching institutions

Group G: Specialist music/arts teaching institutions

Full details of the TRAC Groups can be found at: [www.jcpsg.ac.uk/guidance/revisions/PeerGroups09.pdf](http://www.jcpsg.ac.uk/guidance/revisions/PeerGroups09.pdf)

depreciation, maintenance, equipment, energy and utilities costs, security, cleaning etc) increased by slightly less than the total, at 17% over the period.

Estates expenditure in Group A increased in line with the sector average, while expenditure in Group B increased significantly more at approximately 30%.

**d) Indirect expenditure allocated to research increased by approximately 12% over this period.**

Indirect expenditure includes some research support and infrastructure costs (e.g. allocated indirect time of academic staff, allocated time of support staff, libraries, IT costs allocated to research) plus central administration costs allocated to research.

Approximately 55% of indirect expenditure is staff-related and staff costs have risen by approximately 8% per annum over this period.

The total indirect expenditure increased by 21% indicating a greater increase in respect of teaching than research.

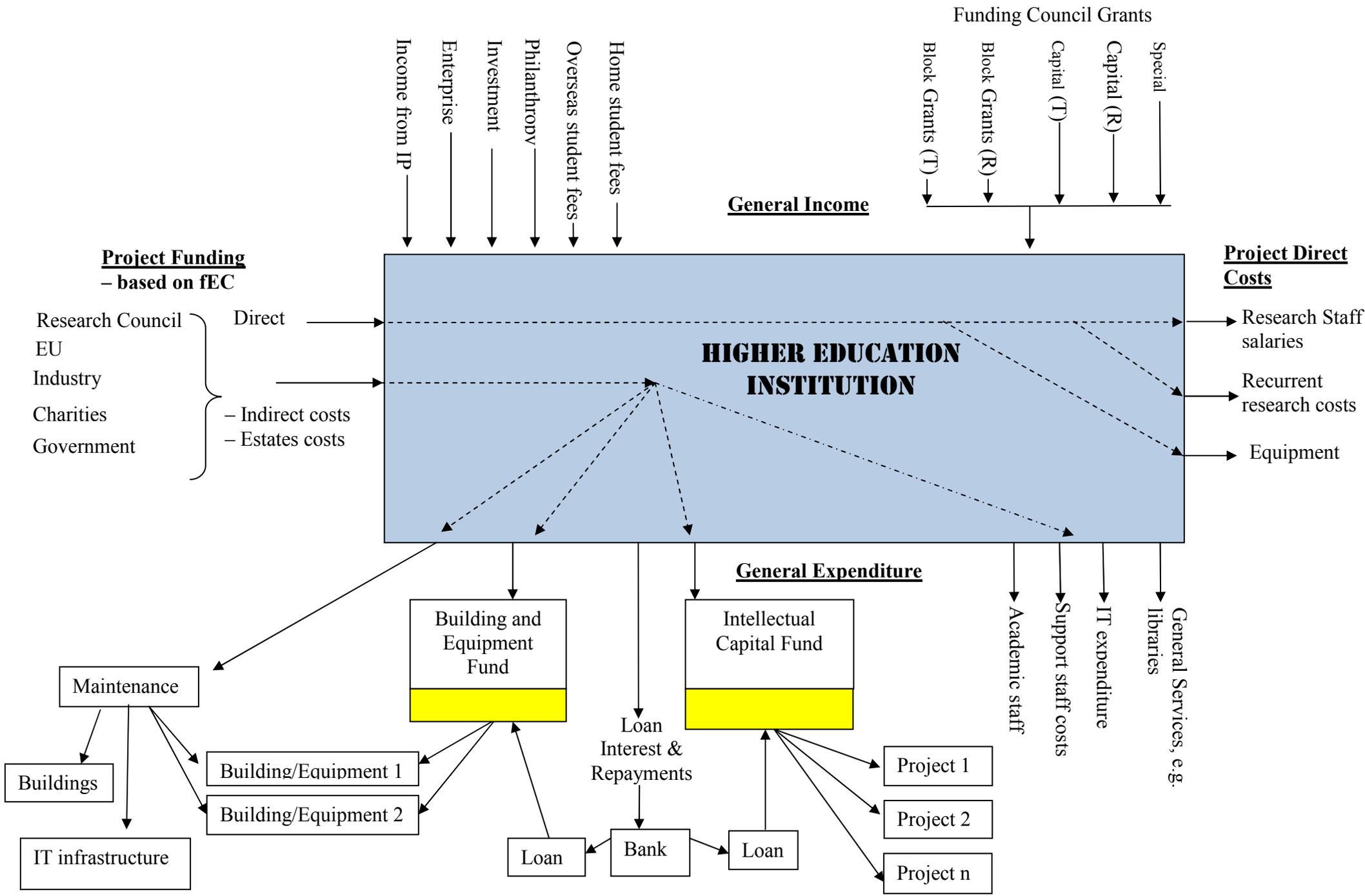
Indirect expenditure in Groups A and B increased broadly in line with the sector average.

26. The Group used two other sources to corroborate and confirm the conclusions from TRAC and to help in interpreting the TRAC results. These other sources were the HESA data (on staff and student numbers), and RAE census data (on research active staff). The group takes confidence that these three ways of looking at the same issue produce broadly the same conclusions.
27. These conclusions are robust at sector level as an indicator of the way volumes and costs have evolved over this period. At a finer level of detail there may be some points which the Funding Councils and RCUK might wish to follow up with individual institutions.
28. Whilst the various measures we have investigated are only indicators of research activity, we would conclude that volume growth is not at present a significant cause for concern. Such volume growth of staff as there has been would seem reasonably to be consistent with the growth in taught student numbers and not with increased funding for research.
29. Indeed the enhanced income from the Research Councils and other sponsors of research does seem to have been spent on enhancing and maintaining the infrastructure as evidenced by the increased estates costs attributable to research, just as was intended.
30. Recognising the wider pressures on the system it will, nonetheless, be important to ensure the avoidance of over-trading in the future. **We recommend that the volume of research being carried out by UK HEIs is monitored at a national level on an annual basis.** The analysis undertaken for this report should be repeated annually. This role could be taken on by the Funders Forum. If concerns are identified by the Funders Forum, then it should advise on action to be taken by funders.
31. To ensure that there are 'no surprises' arising from these data, and provide concrete reassurance that institutions have effective financial sustainability strategies in place, we would propose that this process will need to go hand in hand with the strengthening of the reporting and monitoring processes that encourage financial sustainability in institutions. We will examine options for doing this below.

32. These data also allow us to make a judgment on elements of efficiency and we will come on to those later in the report.
33. The findings above are encouraging and would indicate that measures taken by funders and institutions to improve the promotion and management of financial sustainability have, to date, largely worked. We would now like to turn to exploring current approaches and how these can be strengthened as part of wider moves to promote sustainability in institutions.

### ***Managing financial sustainability in HEIs***

34. HEIs in the UK undertake a diverse range of activities that are supported by multiple income streams, both from public and private sources. HEIs are also diverse and autonomous institutions that can set their own strategic priorities and manage their affairs as they see fit subject to overall public accountability.
35. The way in which funding is used within HEIs is not always fully understood by those outside of the sector, so as part of our work we felt it important to try to explain, through the diagram in Figure 1, how funding streams are used and interact when they reach HEIs. As well as helping to understand how the promotion of research sustainability can be strengthened this will also be useful for a discussion of efficiency later in this report.
36. Figure 1 provides a schematic diagram of the income and expenditure flows into and out of a typical HEI. It is important to recognise that the diagram is not, and is not intended to be, a resource allocation model. It seeks to describe in a single picture the overall flows of resources in and out of the system. The magnitudes of the various flows will be very different in different institutions across the sector, but they are all present in all institutions in principle. The flows of income that are received as part of fEC-funded research are highlighted in the dashed lines to emphasise this flow which is directly relevant to this work.
37. At the top of the diagram, outside of the central box, are general income streams from external sources that are available to the institution for use in pursuit of its mission. Block grants from Funding Councils fall into this category where the overall purpose is defined as Teaching, Research and 'third stream', but the deployment of these funds is a matter for the HEI to determine. Income from IP exploitation and some philanthropy will usually fall into this same category too. At the right of the diagram is the restricted expenditure; i.e. that which is incurred in pursuit of specific purposes defined by a funder and agreed with the HEI for example Research Council or other sponsor funded research projects. On the left of the box are restricted income sources which fund the expenditure on project work.



38. At the bottom of the diagram, outside of the central box are types of general expenditure, the magnitude and the distribution of which will be driven by the specific mission of the institution as well as its financial sustainability. Significantly, expenditure relating to estate and IT infrastructure, investment in new academic endeavours and staff development is unlikely to be incurred evenly and on a recurrent basis, so many institutions set aside resources annually in funds to meet those costs when they are incurred.
39. The diagram is not intended to capture all incomes and expenditures; in particular it deliberately neglects flows associated with residences.
40. Two of the income streams shown in Figure 1 merit further discussion. Firstly, tuition fees from Home/EU undergraduate students in England are not strictly hypothecated, but each institution will have made an agreement with OFFA to commit a sum equal to a proportion of additional fees to bursaries to support economically disadvantaged students. Similar arrangements apply in Wales. Furthermore, there is the entirely reasonable expectation that as a consequence of the flow of additional fees, there would be an enhancement of educational activity and the student experience over and above what would otherwise have been possible. There is, therefore, in practice some degree of hypothecation of this income, albeit indirect. It is this income source and the others associated with the general support of the educational mission of institutions that are the remit of Lord Browne's committee. (In Scotland fees are paid on behalf of students by the Scottish Awards Agency Scotland.)
41. Secondly, there is funding from Research Councils which is provided on a fEC funding basis for specific projects. The income from these sponsors contributes to the direct costs of the project e.g. staff, consumables, travel etc (which are recorded against a specific project) along with support for estate costs and indirect costs (which are not recorded against each project). The expenditure on estates and indirect costs will be committed at institutional level, but are nevertheless a cost of undertaking research and must be funded. In particular the estates costs contain elements relating to depreciation which spread the cost of capital investment of facilities and infrastructure which are institution wide over many years. Through part of the fEC funding each project therefore makes a contribution to those costs. Sustainability of the estate and facilities for research is at least ensured if, over the long term, there are sufficient contributions from all research projects to cover the required investment.
42. A key point that emerges from this diagram therefore is that the task of **following and trying to control each 'pound sterling' that flows into an institution through a particular research grant and how this is attributed to the indirect costs or estates costs of that particular project is unrealistic, impractical and futile.** It will also lead to inefficiencies since at present research benefits from economies of scope and cross subsidy from other activities.
43. As can be seen in Figure 1, within the discretionary funding it is possible for a HEI to expand or contract its research active staff numbers (and thus the volume of research) using any combination of its income sources without explicit recourse to any source of income from the Research Councils. For example, as noted in paragraph 13, an increase in undergraduate student

numbers will often lead to an increase in staffing in order to maintain the student experience<sup>15</sup>. The staff cost may be covered by the teaching income, but, in this case, there is no concomitant identified funding stream to meet the costs of the research performed by the member of staff. Thus, we see that action on the teaching side of the institution has the potential to generate costs on the research side. This is just one of a myriad of interactions between the funding streams and this has a profound effect on how we understand and promote financial sustainability and reinforces the need for a holistic approach. We note above that TDG is already examining the interaction between teaching and research costing.

44. It follows that there are a number of things that HEIs should be doing to ensure that they are financially sustainable. The definition used in the TRAC guidance, and adopted in the RCUK/UUK review of fEC which led to this work, is:

*An institution is being managed on a sustainable basis if, taking one year with another, it is recovering its full economic costs across its activities as a whole, and is investing in its infrastructure (physical, human and intellectual) at a rate adequate to maintain its future productive capacity appropriate to the needs of its strategic plan and students, sponsors and other customers' requirements.*

45. In their guidance on the monitoring of institutional performance<sup>16</sup>, the Committee of University Chairs (CUC) suggests that this could also be considered as:

*operating today without damaging ability to do so tomorrow,*

or

*maintaining at least the current capacity to respond to changing demands*

46. These definitions are helpful, but the question of how we can ensure that this is happening remains. As noted, it is difficult to develop a single measure for financial sustainability at institutional level given the diversity of different missions and the complexity of the funding environment highlighted in Figure 1. The CUC has, however, developed guidance on the use of KPIs which show sustainability performance indicators<sup>17</sup>. These are helpful, and include:

- Return on assets
- Annual spend on infrastructure
- Income growth, diversity and security
- Student demand, achievement and satisfaction
- Strategic relationship and reputation
- Leadership and adaptive capacity
- Balance of development opportunities and strategic risks

47. At present the great majority of institutions agree to conform to the CUC code which requires the governing body to develop an appropriate set of KPIs consistent with the institution's strategy, but as noted in the RCUK/UUK fEC review, their use is variable among institutions, as is the engagement of governing bodies in the process and outcome. **We recommend that HEI**

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<sup>15</sup>Variable tuition fees in England: assessing their impact on students and higher education institutions (UUK). Available on [http://www.universitiesuk.ac.uk/Publications/Documents/VariableTuitionFees\\_FourthReport.pdf](http://www.universitiesuk.ac.uk/Publications/Documents/VariableTuitionFees_FourthReport.pdf)

<sup>16</sup> [http://www2.bcu.ac.uk/docs/cuc/pubs/KPI\\_Booklet.pdf](http://www2.bcu.ac.uk/docs/cuc/pubs/KPI_Booklet.pdf)

<sup>17</sup> Ibid

**governing bodies take a more proactive role in assuring themselves that there is an institution-wide strategy for financial sustainability and that the HEI has developed measures that assess the extent to which this is being achieved.**

48. The Financial Memoranda<sup>18</sup> between the Funding Councils and HEIs in the UK outline an expectation that institutions should be financially sustainable. For example, the HEFCE Financial Memorandum for HEIs in England includes the need for a financial strategy that reflects an HEI's overall strategic plan, sets appropriate targets and performance indicators and shows how resources are to be used. The guidance that supports the development of these strategies will be updated later in the year. This will consider whether enhancements are required to help HEIs better monitor and improve their asset utilisation performance.
49. Reflecting the requirements in the Financial Memorandum, an HEI will also have to comply with a number of conditions as part of the annual accountability return process with HEFCE<sup>19</sup>. As part of this HEFCE will monitor the risk levels of the HEIs they fund and formally share this risk assessment with an individual HEI on an annual basis. The assessment is based on current information across a number of areas, including student recruitment and retention, financial performance and sustainability and audit findings. Monitoring an HEI's financial sustainability is also integrated with the Funding Council's review of financial returns which includes consideration of key financial metrics.
50. Linked to this process, the capital investment in HEIs is now provided through the Capital Investment Framework (CIF)<sup>20</sup>, which was developed in England to encourage HEIs to manage sustainably their physical infrastructure as an integral part of their strategic and operational planning. Again, a requirement for financial sustainability is a key element within this process and receipt of funding rests on meeting the CIF requirements. The assessment process includes a series of metrics, drawn from estates management data. The next round of this process, which is being undertaken during 2010, requires an HEI to explain what it is doing to improve its use of space. This, alongside a requirement to reduce carbon emission, has the objective of encouraging improvements in efficiency and reducing costs. HEFCE has recently consulted HEIs on proposed sanctions to be applied to those institutions that are not able to meet the new, higher standards by 31 March 2011 which will include the withholding of 40% of the capital funding allocations with release of these funds being conditional on providing an action plan. For HEIs that did not meet the requirements of first CIF and do not meet the second CIF requirement payment will be conditional on meeting the agreed milestones. We thoroughly endorse this approach.

### ***Monitoring the sustainability of research***

51. The Government's intention, as set out in the Science and Innovation Investment Framework 2004-2014, was to reach a situation where HEIs secure sufficient income from all sources to ensure that they can cover the full economic costs of all the research that they undertake, taking

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<sup>18</sup> Note that these will differ across UK, but all have provision for sustainability

<sup>19</sup> [http://www.hefce.ac.uk/pubs/circlets/2008/cl15\\_08/](http://www.hefce.ac.uk/pubs/circlets/2008/cl15_08/)

<sup>20</sup> <http://www.hefce.ac.uk/finance/fundinghe/capital/cif/>

one year with another, without detriment to their other activities or to their long term financial sustainability.

52. From July 2005 all HEIs have used TRAC to calculate the full economic costs of projects to set the cost for grants made by Government (the Research Councils and other government departments) and to inform the price on projects for other sponsors. The core principle underpinning the additional public investment was to increase investment in research, but without building volume, so as to secure financial sustainability.
53. As set out in the TDG's *Policy overview of the financial management information needs of higher education*<sup>21</sup>, "to achieve a sustainable research base, institutions need a research strategy that (for example) considers asset utilisation, the return on different types of research, and the interactions between research and teaching. They also need more sophisticated management information which attributes costs differently between scholarship which is a support for teaching and that which is a support to research and between research funded by different types of sponsor."
54. To assure the Government and funders that HEIs are achieving financial sustainability in research, a range of metrics have been developed for the Funders Forum<sup>22</sup>. The Funding Councils publish an annual report to the Funders Forum on the assessment of HEIs' financial sustainability. The method for doing this was approved by the Funders Forum and HM Treasury in 2005. The agreed arrangements contain two elements: forward looking institutional frameworks towards achieving long-term sustainability; and a related set of historical trigger metrics.
55. Funding Councils collect the sustainability information from institutions through annual financial returns such as audited financial statements, financial forecasts and annual TRAC return. A full list of the metrics is included in Annex C.
56. We have examined these metrics both in terms of their validity and their usefulness to institutions and policy makers. It is our view that they have played an important role in the early stages following the introduction of fEC in developing a mechanism for understanding whether the sector as a whole is sustainable and providing funders with some level of reassurance. We have identified a number of improvements that could be made to the current process. The key issues include:
  - It is not clear that institutions are using the data collected as effectively as they might. Neither is it clear that they are informing the institution's approach to managing financial sustainability or indeed whether this is being checked. These concerns were raised in the RCUK/UUK review of fEC
  - It is not clear how these metrics relate to the Funding Council processes outlined above, and whether they are integrated with processes to promote whole institution financial sustainability
  - Although the information is collected by the Funding Councils and presented to the Funders Forum on an annual basis, providing a measure of assurance, it is not apparent

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<sup>21</sup> <http://www.hefce.ac.uk/finance/fundinghe/trac/tdg/FSSGJuly2009.pdf>

<sup>22</sup> The Research Base Funders Forum brings together governmental and non-governmental funders of public good research to consider the collective impact of their strategies on the sustainability, health and outputs on the Research Base. <http://www.bis.gov.uk/policies/science/science-funding/funders-forum>

that any action is taken by policy makers on the basis of the meeting. We accept the importance of the Funders Forum being able to take a 'birds' eye' view on this, but it seems that more often than not the outcomes of the metrics are simply noted

- We have some concern over the relevance of the metrics. There is a risk that the data are collected because they are available rather than because they are relevant.
- As an example, the current metrics do not address the question as to whether there has been a change in volume of research

57. We would recommend that **HEFCE should consider how a consistent set of metrics can be incorporated into its annual accountability review process of an institution; and that the Funding Councils in the devolved administrations should consider how such a set of metrics can be incorporated into their equivalent processes. The Funding Councils should each then produce an annual summary report for the Funders Forum outlining headline information on the overall financial sustainability of institutions and specific information on the sustainability of the research base. This process will require cooperation between the Funding Councils and Research Councils, as it will also need to draw on Research Council information, for example, through RCUK's Quality Assurance and Validation and continued assurance processes. Having analysed these reports, the Funders Forum should ask that the relevant agencies take appropriate action and report back.**

58. We noted in paragraph 13 that there are a number of drivers of increased research volume. One of these is funding derived from the RAE. **We stress the importance of ensuring that the new Research Excellence Framework, which will replace the RAE, gives appropriate consideration to the importance of financial sustainability when assessing the research environment.**

## EFFECTIVENESS AND EFFICIENCY

59. Measured by the quantity and quality of research outputs, UK HEIs are amongst the most productive in the world. In its report<sup>23</sup> to BIS in September 2009, Evidence Ltd reported that:

- The UK has 2.26 papers per researcher in the Thomson database, double the rate for the USA and well ahead of France and Germany
- The UK produces 7.9% of world research papers, but has 11.8% of all citations and 14.4% of the most highly cited papers (top 1%)
- The UK produces 9.3% of comparator group PhDs (comparator group is the main competitor countries) compared with only 6.6% of comparator group HE R&D activity
- Citations to papers relative to the volume of HE R&D activity for the UK are 1.3 times the rate for the comparator group and the highest of any G8 country.

Other measures, such as the relative level of spin outs, are also very positive for the UK<sup>24</sup>.

60. The HEI sector in the UK has been able to achieve these results through a historic commitment to excellence in research underpinned by a dual funding system of support from the Funding Councils complemented by specific funding by the Research Councils and others for individual projects. As has been noted above (paragraph 7), the investment in HEI research in the UK as a percentage of GDP is modest and remains below that of many OECD nations.

61. This does not, however, mean that the question of efficiency and cost effectiveness is one that should be ignored. At a time of constraints in the level of government expenditure, the HE sector will need to play its part in the effective use of public funds and achieve economies in how research is funded. The sector also needs to be as competitive as possible so as to attract potential investors in research in a global context where private investors in R&D are highly mobile. If the UK is to sustain its position it will therefore be crucially important that it can maximise the efficient use of current resources and assets.

### ***Cost effectiveness and efficiency in HEIs***

62. We recognise that UK HEIs have a strong track record in increasing cost-effectiveness. Cost savings worth millions of pounds were delivered during the 1990s through increased sharing of resources and equipment, better use of staff and space and new economies of scale achieved through growth and mergers<sup>25</sup>. It is clear that further progress in making efficiency savings will be an important part of strategies in HEIs to cope with the financial climate in coming years.

63. In formulating our observations and making our recommendations we have been mindful that research in a HEI environment is different to production in industry or even in other research-focused organisations. The mission to develop new knowledge is critical to the country's future, but is less predictable (by definition) than research designed solely to generate new discoveries for immediate exploitation. The public value of this research is well recognised which is why

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<sup>23</sup> [http://www.dius.gov.uk/assets/biscore/corporate/migratedd/publications/i/icpruk09v1\\_4.pdf](http://www.dius.gov.uk/assets/biscore/corporate/migratedd/publications/i/icpruk09v1_4.pdf)

<sup>24</sup> HEFCE - Business and Community Interaction Survey. See [http://www.hefce.ac.uk/pubs/hefce/2009/09\\_23/09\\_23.pdf](http://www.hefce.ac.uk/pubs/hefce/2009/09_23/09_23.pdf)

<sup>25</sup> See for example <http://www.russellgroup.ac.uk/uploads/Staying-on-Top-The-challenge-of-sustaining-world-class-higher-education-in-the-UK.pdf>

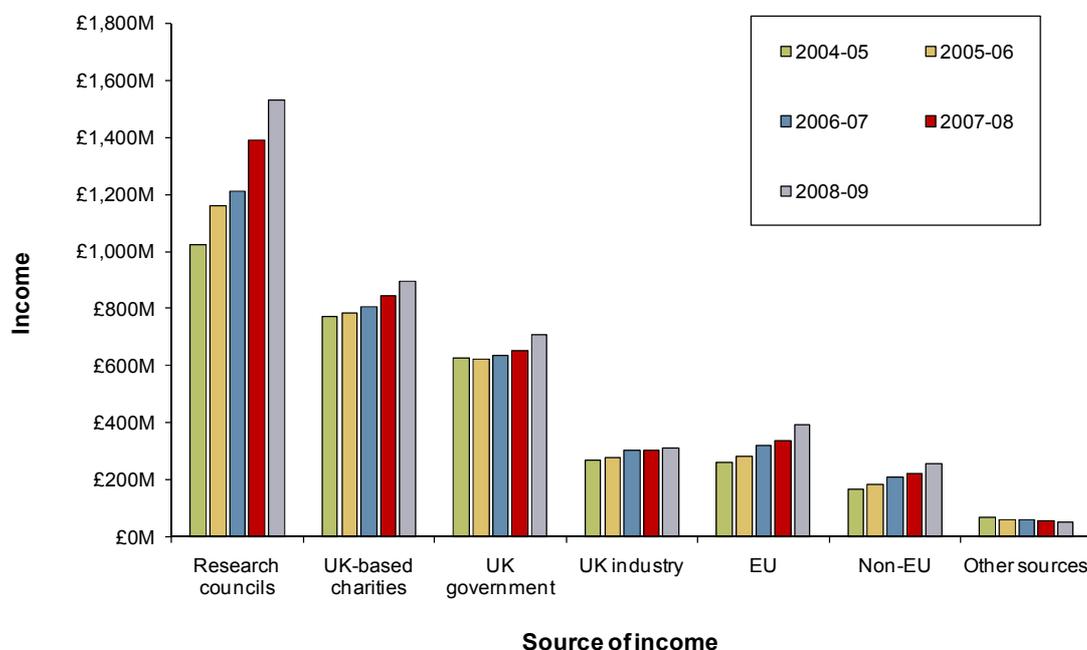
countries around the world invest heavily in their HEIs.

64. In most instances research, teaching, outreach and enterprise in HEIs involve just the same highly gifted people using their skills in a different way. People at the frontier of their subject can educate and enthuse students, passing on their knowledge and passion for the subject and building the country's knowledge economy workforce. Students paying high fees and overseas students attracted by the research reputation of the HEI expect to be taught by academics at the forefront of their subject. At the same time they can be at the forefront of discovery. This is seldom true in other kinds of organisations where different people are usually associated with different products or activities. Most of the staff of a HEI therefore have a multiplicity of roles. The assets owned by a HEI may also be addressing multiple demands. The basic HEI infrastructure is used for both teaching and research, securing economies of scale and economies of scope. The interaction of the funding streams we described earlier [see Figure 1] therefore to a large extent reflects the reality of operation. An appreciation of these benefits is lost if a narrow, research-only view of the HEI is adopted. The concept of efficiency within the HEI system must therefore be approached carefully. A drive for efficiency in one area could easily lead to growing inefficiency in another or a lack of financial sustainability.

**Trends in research income and competitive advantage**

65. Total HEI income has grown on average by 6.9% pa in real terms to £25.4 billion over the period 2004-05 to 2008-09. Over the same period HEI income for research grants and contracts has increased by 7.5% in real terms to £4.1 billion. Figure 2 shows the trend by source.

**Figure 2: Income for research grants and contracts by source for UK HEIs (real terms) 2004-05 to 2008-09**



Source HESA Finance returns

66. Income from Research Councils, reflecting the increased provision to fund fEC-based grants, has risen by 12.4% pa over the period. Income from other sources including charities, government

and the EU has grown by around 5.3% pa, but income from industry has grown more slowly at 4% pa. This is at a time when UK industry has continued to increase its investment in research, both in the UK and overseas. According to the R&D Scoreboard<sup>26</sup>, the 1,000 UK companies that invested the most in R&D spent £26.6 billion in 2008, a 9.2% rise over the previous year and up by over 30% over the last four years.

67. One reason for the limited growth in funding of research in HEIs by industry may be that research undertaken in UK HEIs is becoming less price-competitive compared to competitors elsewhere in the world. Evidence is limited, but it has been observed by the CBI<sup>27</sup> that the cost of sponsoring research in UK HEIs is amongst the most expensive in the world. There are many reasons for this, not least that the UK has sought in recent years to clarify the funding and remove distortions in the support of research in HEIs. There is much to be gained by an HEI having an accurate understanding of the true costs of research which is then funded on a basis that ensures its long-term financial sustainability.
68. Keeping in mind the arguments of paragraph 64, cross subsidies between activities are possible, wittingly or unwittingly, but need to be linked to the benefits that accrue to the HEI from subsidising some research activities. The Government has made it clear that QR-income may be used to contribute towards the full economic costs of commercially-funded research provided that there is an expectation of public good that justifies such use of public funds. Indeed there is an element in QR funding that relates to income from UK industry, commerce and public corporations; there is also an element related to income from eligible UK and overseas charities. The challenge for a HEI is to recover its full economic costs across its activities as a whole, thus pricing its research to maximise its income when there is the opportunity to do so, against the substantial non-financial benefits that accrue from engagement with research in collaboration with industry. It is also important to consider the non-financial elements that industry may bring to a collaboration which are not often even recognised by UK institutions; for example access to proprietary materials or new technologies that can help to drive the academic science.
69. The recognition of the true costs of research should enable an institution to make an informed judgement about a decision to subsidise one activity by another in the context of the full income flows into the HEI, and strategically in terms of its goals and mission.

### ***Research income and expenditure***

70. In order to understand the reasons for the large research deficit and examine its relationship with efficiency, we have looked at the 2009 and 2010 TRAC returns for individual institutions, excluding those institutions applying for and claiming dispensation<sup>28</sup>.
71. HEIs differ very substantially in the income they receive and the distribution of income between teaching, research and other as shown in Table 3.

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<sup>26</sup> [http://www.innovation.gov.uk/rd\\_scoreboard/](http://www.innovation.gov.uk/rd_scoreboard/)

<sup>27</sup> <http://www.cbi.org.uk/pdf/20090401-cbi-FEC-submission-RCUK-UUK-review-panel.pdf>

<sup>28</sup> Institutions with a Research income of less than £500k have dispensation on the testing and validation requirements. This means that although they should report costs, and meet TRAC requirements, they do not need to introduce a robust method of time allocation, nor a fully robust set of cost drivers

**Table 3: Research income by TRAC group<sup>29</sup> 2008-09**

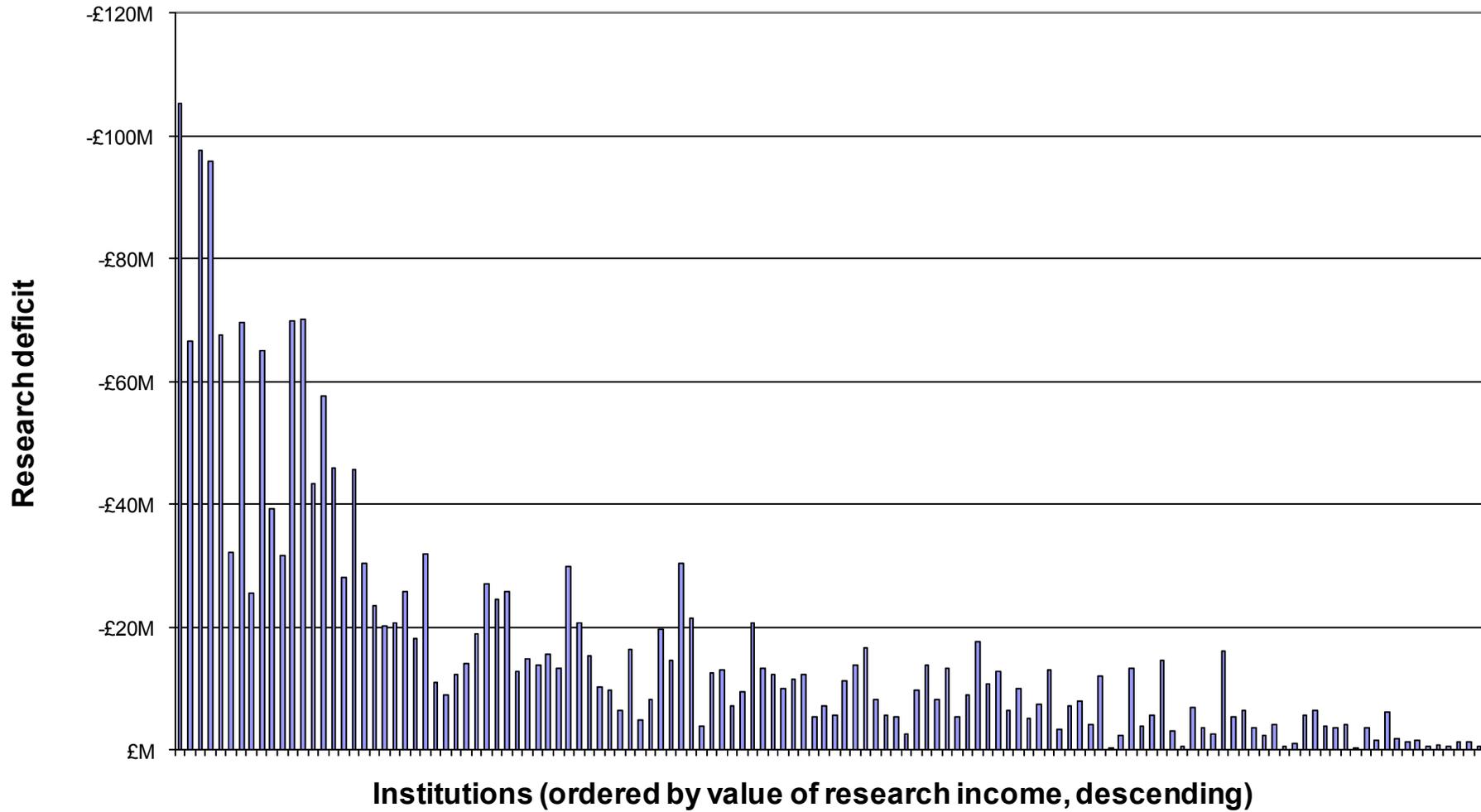
TRAC Group	Number of HEIs	Research income £M	Total income £M	Research/ Total income %	Average research income £M	Average Total income £M
A	24	4,927	10,786	46%	205	449
B	26	1,363	4,169	33%	52	160
C	20	388	2,423	16%	19	121
D	22	220	3,928	6%	10	179
E	22	67	2,259	3%	3	103
F	7	11	371	3%	2	53
G	7	29	375	8%	4	54
Dispensation institutions	32	29	701	4%	1	22
<b>UK total</b>	<b>160</b>	<b>7,034</b>	<b>25,011</b>	<b>28%</b>	<b>44</b>	<b>156</b>

Source: 2008-09 Annual TRAC return.

72. The published accounts of most institutions, in comparing their total income with their expenditure, show a small surplus, but after correction for Infrastructure and RFI costs, the majority record a deficit. However, as remarked in paragraph 18, the difference for the sector as a whole between income and expenditure on research is approximately £2 billion. The magnitude of the deficit varies widely across the sector. The absolute values of the reported deficits in research are shown in Figure 3 and the percentage deficit in Figure 4. In each case the horizontal axis shows institutions in descending order of research income.
73. There are significant variations within the groups. The total income of the largest institutions is approaching £1 billion with research income exceeding £500 million. In contrast, the total research income of the 36 institutions in Groups E, F and G amounts to 1.5% of the sector total.
74. While Figure 4 suggests that the percentage deficits are generally higher for the less research intensive institutions, the absolute value of the deficits in these institutions is very low. The most research-intensive institutions, Group A, accounts for more than 50% of the total reported deficit, although the highest percentage deficit for an individual Group A institution in 2008-09 was about 30% (as a percentage of cost). Group B accounts for 18% of the total deficit, with the highest percentage deficit in any individual institution of just over 40%, whilst Groups E, F and G account for just less than 7% of the total deficit on research by value, with some institutions having percentage deficits in excess of 75%. These deficits are, however, to some extent offset by surpluses in teaching and other income sources, with the UK HE sector reporting a deficit (as a percentage of costs) across all TRAC activities of 5.8%. Given the uncertainty in TRAC data referred to in paragraph 13, it could be argued that the sector as a whole is controlling its costs, and utilising its surpluses to good effect by choosing to contribute to the excellent research reputation of the UK.

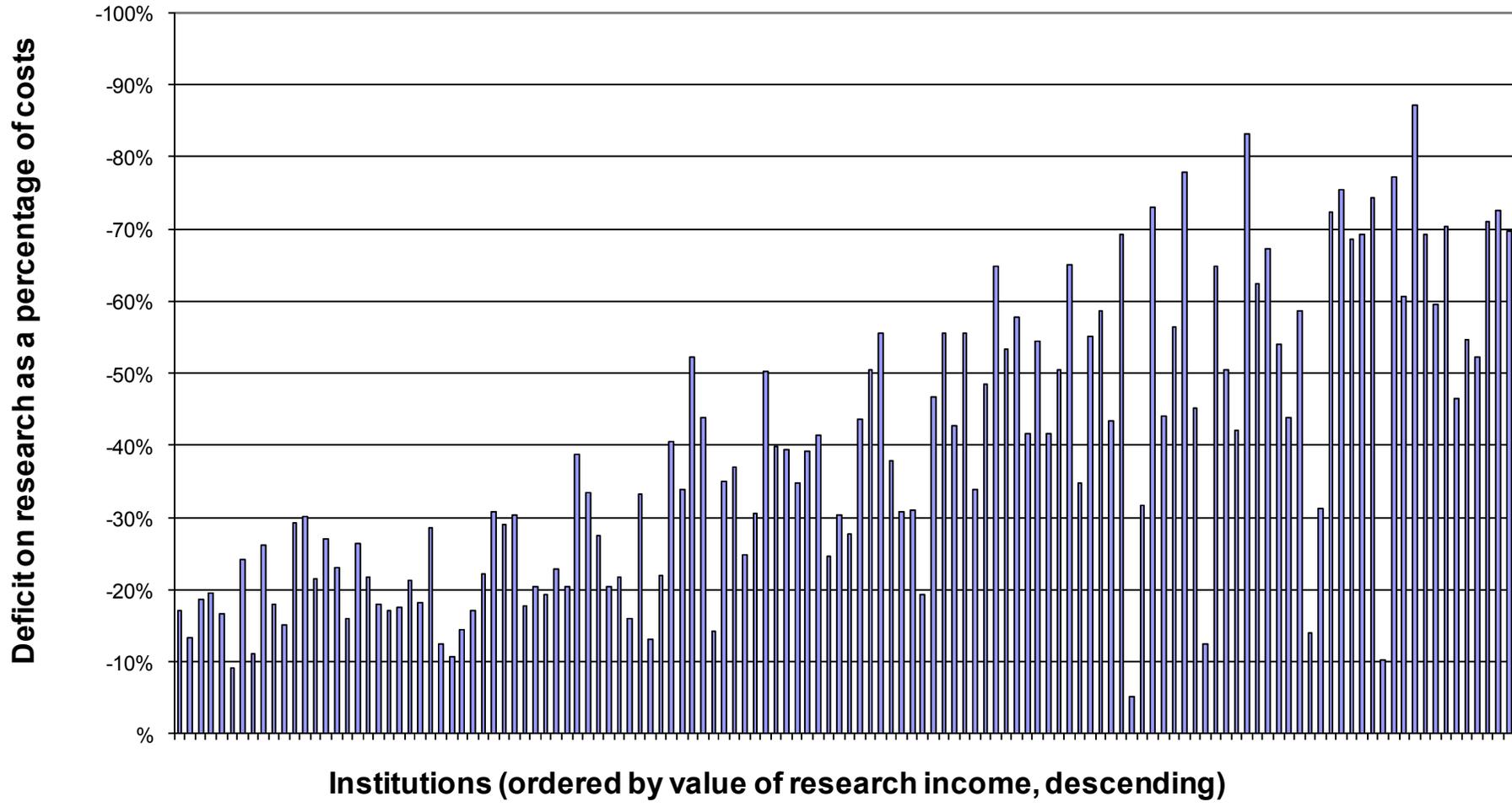
<sup>29</sup> For definitions of TRAC groups see page 12

**Figure 3: Deficit on research (£M), 2008-09 data**



Source of data: 2008-09 Annual TRAC return table C

**Figure 4: Deficit on research as a percentage of total research costs, 2008-09 data**



Source of data: 2008-09 Annual TRAC return table C

75. If efficiency can be connected to the degree of percentage deficit on research activity, this analysis suggests that greater efficiency could be achieved by concentrating the funding of research into those institutions with a lower fractional deficit and thus a more effective research base. In other words by concentrating research in fewer institutions. However, when considering the distribution of research funding in the system, questions about efficiency are not the only factor. Supporting excellence should of course continue to be a key driver for the allocation of research funding. Furthermore, it is also a perfectly legitimate policy objective to support diversity across the system, which might be driven by motivations such as geographical distribution and intellectual and/or economic renewal.
76. It is a matter of judgement to determine whether gains could be made by increasing or decreasing the levels of selectivity and concentration. **We recommend that the Funding Councils and Research Councils keep under review their policies with respect to research selectivity and concentration in the light of the gains in efficiency that might be made.**

### ***Efficiency in research funding***

77. When TRAC was extended to cover the full economic costing of research projects, there was no explicit consideration given to the need for incentives to drive efficiency. However, the question of efficiency and cost effectiveness is now more salient within the context of constrained public funding. This issue was raised in the RCUK/UUK review of fEC through concern over the variance in indirect cost rates across institutions. Implicit in the concerns over efficiency is a perception that whilst an HEI may now be in a position to identify the costs of research better, it may not be ensuring appropriate measures are in place to keep these costs in check.
78. We recognise that the process of seeking publicly-funded research grants is highly competitive and that the Research Councils are empowered to take into account value-for-money alongside research excellence. Research proposals that are over-priced will be at a competitive disadvantage in the peer review process. However, in order to protect HEIs from under-costing their research and failing to make adequate provision for financial sustainability, the Research Councils are not permitted (except for extreme outliers) to review the indirect or estate costs that HEIs determine and submit as a part of their grant proposal. We recognise the merits of this policy in the early days of fEC, but the consequence is that there is little effective challenge to these costs and the philosophy that underpins them. **The Research Councils should develop processes for discussing the indirect costs and estate rates with institutions where there is cause for concern and work with them to remedy any problems.** We make more specific proposals in our recommendations in paragraph 97.
79. The information from the 2006-07, 2007-08 and 2008-09 TRAC returns shows that the level of indirect costs allocated to research has increased by 6% per annum on average with increases above 10% per annum in some of the research intensive HEIs. The increase in indirect costs is not surprising, given that about 55% of indirect costs are staff related and recent increases in salaries and associated pension costs have been significant in the HEI sector.
80. Estate costs devoted to research have increased on average by 9% per annum with a number of

institutions recording increases in excess of 20% per annum. These cost increases need to be set in the context of overall cost increases of nearly 10% per annum in average estate cost and 10% per annum in average indirect costs and so the costs attributed to research have not increased disproportionately at sector level but there are clearly variations across individual HEIs. The increase in estate expenditure reflects decisions by HEIs to invest more in their estate and its maintenance. As such this is evidence that HEIs are responding to the need to achieve organisational sustainability. We consider that this trend is consistent with the Government's policy.

81. Although the estates management statistics now capture the amount of space devoted to research, there is variable coverage of the returns and estimates of data making it difficult to draw firm conclusions. However, **we consider that the greater intensity of utilisation of assets by HEIs should be encouraged, particularly the sharing of research equipment and facilities.**
82. Nonetheless, the increase in indirect costs has a substantial impact on the overall cost of research funded by the Research Councils and other bodies. If the trends showing a decline in the number of academic FTEs devoted to research continue (see paragraph 25(a)), then the level of indirect costs per FTE could actually increase without steps being taken to reduce the overall level of such costs, merely because of the methodology of TRAC, for the HEI as a whole and in terms of the proportion attributed to research. In practice the linkage between the number of FTEs and the indirect cost rate is complex and we would expect any rise to be small. However, if there were reductions in institutional spend at a greater rate than the decline in staff time allocated to research, then there is likely to lead to an improvement in research financial sustainability measures. It is therefore important that methods are sought by which reductions in the charge-out rates for indirect costs can be achieved.

#### ***Determination of indirect cost and estate rates***

83. The indirect cost rates and estates rates per researcher FTE are derived from TRAC data at the institution level. HEIs then apply these rates to academic and research staff FTEs on a research grant to derive the full economic cost for each research project. Should the project be funded, indirect and estate costs are included in the funds awarded by research funders. The Research Councils and some other funders currently fund 80% of the total project costs leaving the remainder to be provided by the institution.
84. Additional research capital streams from BIS provide the sector with further support, corresponding to the equivalent of around 10% of the full economic costs of projects being supported by the Research Councils (meaning that the Science Budget is funding around 90% in total). For the Research Councils' portfolio, the indirect and estates costs represent approximately 30% and 9% of total project costs respectively. Research funds provided by other funders are expected to be sufficient to cover at least 100% of the indirect and estate costs, although it is for the HEI to agree the terms of funding with individual sponsors. Special arrangements apply to research funded by charities and the European Union<sup>30</sup> and neither source is expected to meet the whole of the full economic cost of research.

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<sup>30</sup> <http://www.jcpsg.ac.uk/guidance/ecfp7/>

85. At the same time as they make their annual TRAC returns based on the accounts for the most recently completed financial year, HEIs calculate their fEC charge-out rates. They then apply an indexation factor to allow for inflation over the period to when they apply for a research grant. Thus the 2010-11 rates are based on the 2008-09 TRAC returns with indexation applied for two years inflation (to take them from mid 2008-09 to mid 2010-11). These indexation factors are based on the individual HEI's estimate of the likely inflation rate over the period and average about 3% per annum, but can range as high as 5% per annum. The impact of this is shown in Table 4.

**Table 4: Impact of inflation on fEC rates (£/FTE researcher)**

<b>Example 1:</b>	<b>Indirect</b>	<b>Estates laboratory</b>	<b>Estates non-laboratory</b>
2008-09 un-indexed charge-out rate	£37,000	£12,000	£6,500
Indexation adjustment over two years (%)	6.4%	6.0%	6.0%
Indexed charge-out rate 2010-11	£39,368	£12,720	£6,890

<b>Example 2:</b>	<b>Indirect</b>	<b>Estates laboratory</b>	<b>Estates non-laboratory</b>
2008-09 un-indexed charge-out rate	£37,000	£12,000	£6,500
Indexation adjustment over two years (%)	10.5%	10.2%	10.2%
Indexed charge-out rate 2010-11	£40,885	£13,224	£7,163

86. When a research grant is awarded, the Research Councils use the rate quoted in the application and apply a cash indexation to this for each year of the grant (currently 1.75% per annum). An HEI may well therefore receive different rates for grants announced in different years – there is no revision applied to the fEC rates for announced grants.

#### **Analysis of indirect cost rates**

87. An analysis of the indirect costs by TRAC group is presented in Table 5. These data have previously only been available to UK HEIs (at Group level only) via the HEFCE secure extranet facility, but they are not publicly available at the institutional level as it is considered to be commercially sensitive information.

**Table 5: 2008-09 Indirect cost rates (indexed to 2010-11 prices) (£/FTE researcher) by Group**

<b>TRAC Group</b>	<b>Lower Quartile £</b>	<b>Upper Quartile £</b>	<b>Mean £</b>	<b>Inter-quartile range £</b>	<b>Standard Deviation £</b>	<b>Number of institutions</b>	<b>Average research FTEs</b>
A	38,069	41,224	39,825	3,155	3,348	24	1,849
B	34,415	41,090	37,609	6,675	4,826	26	587
C	34,081	44,429	40,927	10,348	13,440	19	266
D	34,892	42,987	39,352	8,095	5,694	21	217
E	34,082	43,856	39,772	9,774	9,702	22	91
F and G	37,331	46,152	40,943	8,821	7,344	14	50

Source: HEFCE. HEIs eligible for and claiming dispensation are excluded from this analysis.

88. Indirect cost rates vary between institutions for a range of reasons – e.g. the nature of service provision by support departments such as research administration and the staff costs associated with delivering the support services. The Research FTE staff numbers provide the denominator in the indirect cost and estates rates calculations. See footnote for more detailed explanation<sup>31</sup>.
89. The decline in the number of academic FTEs devoted to research, described in paragraph 25(a), is contributing to lower overall research costs and hence is reducing the deficit. However, there is a risk that this same FTE reduction could simultaneously result in increases in the calculated (per-FTE researcher) charge rate for indirect costs. That could consequently add to the costs of funded grants and contracts. Whether this happens depends on the details of each institution's TRAC cost allocation model, particularly the extent to which these same FTE values drive associated indirect costs. Our estimates suggest that staffing changes of this type might actually have a neutral impact on indirect cost rates, but were they not to, it would be necessary to ensure that measures aimed at encouraging institutions to reduce their indirect cost rates lead to real cost reductions - the only scenario that is consistent with improving financial sustainability.
90. The RCUK Assurance Unit undertook a quality evaluation of the implementation of TRAC in 2008 including a validation of the rates used by HEIs, based on a self-assessment and data return from institutions, followed up by audit visits to a sample of 50 institutions. The report<sup>32</sup> on the outcomes (published in 2009) from the process identified that although only four institutions were placed into 'sanctions' as a result of the process, there were some instances in most institutions where the TRAC guidance has not been fully corrected or applied. This was not unexpected given the complexity of the guidance. Although these issues were largely cost neutral, the QAV highlighted some concerns on the overall implementation of TRAC, particularly, but not exclusively, at the less research intensive institutions. As a result, RCUK gained only limited assurance from the QAV process and is undertaking further follow up work with the sector in 2010 using a risk-based approach. Nevertheless, the report provided useful feedback on common areas of non-compliance and the TRAC Development Group has responded by issuing revised guidance to institutions and the RCUK and Funding Councils will require a key risks sign-off by all institutions based on the main issues identified from QAV in the next annual TRAC return from institutions.
91. The Task Group has reviewed the rates calculated by HEIs since the introduction of full economic costs. The overall increase in rates has been relatively modest with average increases in indirect rates of 6% for Group A and 10% for Group B over the period 2008-09 to 2010-11 while there have been steeper increases in estates (laboratory) rates of 14% for Group A and 24% for Group B over the same period. We also noted that, in a small number of instances when increases in

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<sup>31</sup> Levels of indirect cost and estates rates depend on (a) relevant costs allocated to Research and (b) academic and research staff working on Research (FTEs). Indirect costs include central service departments, administrative support, the administrative time of academic staff, the Return for Financing and Investment (RFI) adjustment. The indirect cost rates do not include the cost of time academics spend on research nor that of research associates/assistants or PGR students – these are all charged directly. Estates costs include the cost of the estate including the infrastructure adjustment (note the infrastructure adjustment is a technical adjustment to correct for the differences in asset valuation bases used in the financial statements – this adjustment simply achieves consistency across the sector). Costs are affected by overall institutional levels of these resources, as well as the methods used to allocate a share to Research (TRAC requires a wide range of allocation methods to be used including surveys of the estate, student numbers, managerial review, etc). FTEs are affected by the time allocation methods. If academic time on Research is overstated in any institution, this would lead to a higher FTE number but not necessarily an equivalent increase in costs (as academic staff time is only one of a number of the methods used to allocate costs to Research) and vice versa.

<sup>32</sup> <http://www.rcuk.ac.uk/cmsweb/downloads/rcuk/documents/qavreport.pdf>

indirect and estate rates have varied from one year to another in excess of 50% (and in some cases decreased by similar amounts), the reasons for this are not always well documented and there is insufficient evidence of constructive challenge by the senior staff in the institution. **We recommend that institutions should provide to their Finance or appropriate governance Board/Committee for their TRAC returns an analysis of the year-on-year changes in their annual TRAC returns (including the fEC rates) as part of their compliance.**

### ***Improving the efficiency and making economies in research funding***

92. We recognise that there are pressures on HEIs to constrain the costs of research, particularly when accepting grants from funders that are not covering 100% of fEC. As individual institutions have to find any shortfall from their own funds, there exists significant motivation for them to minimise their general operating costs. Nonetheless, funders remain concerned that HEIs are not taking sufficient steps to reduce indirect costs and hence increase their cost effectiveness.
93. The Task Group considered whether requiring the publication of each institution's indirect cost and estate rates would help improve efficiency. This was an option raised by the RCUK/UUK review. The Task Group considered that the impact would not be significant. It is as likely (if not more likely) to inflate the costs of the currently lower cost HEIs as it is to reduce those of the higher cost HEIs.
94. We have therefore sought other proposals that could act so as to encourage HEIs to take steps to constrain or reduce the level of indirect costs. We are anxious that HEIs do not depart from the principle that they should understand, calculate and charge costs that their organisation requires in order to be financially sustainable. The current financial environment is such, however, that the proportion of research grant income being used to support indirect costs needs to be reduced.
95. We are conscious from our discussions that there are some people who would argue to reduce the percentage of full economic costs that the Research Councils pay. A change from 80% to 75% would mean a reduction in the cost of research to the Research Councils by some £90 million per annum. However, where real reductions in costs are not being achieved, this shortfall would have to be found elsewhere – with the risk that this would undermine the policy for research to be funded sustainably. Such an across-the-board reduction would fail to target inefficient areas or institutions where significant savings could be achievable and would result in a double hit on those where indirect costs rates are being successfully managed downwards. Moreover, there would be pressure to increase the costs for other funders of research, but the high relative price of research in the UK means that it is rather improbable that this would result in significant additional income.
96. Our preferred approach is to place efficiency targets on HEIs to reduce their costs. We recognise that the investment in improving and maintaining the estate (including facilities and research equipment) has meant that estate costs have increased significantly. This is a practical consequence of the move to financial sustainability and we are reluctant to place significant constraints on an HEI's ability to invest in its estate, to maintain it and to recover these costs. We also note that there is already considerable pressure to control direct costs through the peer review processes of the research sponsors. However, we believe that reductions in indirect costs

are possible. Indeed, well-managed HEIs are already conscious of the need to reduce costs substantially and are beginning to implement economies and efficiency improvements in this area. We wish to encourage all HEIs to follow this path.

97. We therefore recommend that the Government, through the Research and Funding Councils, should put in place processes that will encourage and if necessary require HEIs to control and reduce costs. We suggest that four measures should be introduced:

- a) The increase from one year to another in an institution's indirect cost rate is at present not subject to any constraints. We consider that, recognising the financial climate, efficiency savings should be achievable. **We therefore propose that for each of the next three years, i.e. from 2011-12 to 2013-14, an institution's indirect cost rate in real terms<sup>33</sup> should be reduced by an annual 5% efficiency factor** (at the current GDP deflator of 1.75% this would mean a reduction of 3.25% in the rate between 2010-11 and 2011-12). **For an institution whose rate is below the median (which is £38.7k in 2010-11), we propose that its indirect cost rate in real terms should be reduced by an annual 2.5% efficiency factor**, (i.e. a reduction of 0.75% in the rate between 2010-11 and 2011-12). The Funding Councils and RCUK should review the impact of these reductions after a period of three years.
- b) As indicated in paragraph 85, HEIs index their TRAC costs by a factor to allow for inflation over the period between when the costs are measured and when the rates are applied. **We recommend that the indexation factor applied to indirect and estate costs to allow for inflation over the period between when they are calculated and when they apply for a research grant should be limited to the Treasury's GDP deflator.** This is the Government prediction of inflation in the UK over the near future. HEIs should be required to limit the indexation in costs to no more than this measure.
- c) At present when a research grant is awarded by the Research Councils, the provision for indirect costs is currently indexed by the Treasury GDP deflator to determine the grant to be paid in the second and subsequent years of a project. We suggest that the same efficiency factors be applied as in paragraph (a), i.e. **the provision for indirect costs (in real terms) on grants awarded by the Research Councils should be reduced by an annual 5% efficiency factor (2.5% efficiency factor for those institutions whose indirect costs are below the median indirect cost rate)**. Again this policy should be reviewed after three years. We recommend that this policy should not be applied to existing grants as institutions have already made their plans on the basis of the funds awarded.
- d) A number of HEIs have indirect costs that are significantly above the rates charged by their peers, with the highest indirect costs rates in 2010-11 for an HEI being £88k/FTE. We consider that **institutions with 2010-11 indirect cost rates in excess of the upper quartile level (£42.4k/FTE) should be required to agree plans with the Research Councils to reduce their costs at a faster rate than set out in 97(a)**.

98. HEIs will have discretion over the management of their cost base in order to secure the delivery of efficiencies set out at in paragraph 97. However, an HEI that is not able to deliver the required

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<sup>33</sup> By real terms we mean after allowance for an increase in line with the Treasury GDP deflator.

efficiency reductions in a year will be funded at a capped indirect cost rate. This will be set at the HEI's indirect cost rate in 2010-11 in real terms less the relevant efficiency factor (as specified in 97(a)). The capped indirect cost rate will be applied by all UK government funders where fEC charge-out rates are applied and will apply for each of the next three years, 2011-12, 2012-13 and 2013-14.

99. The impact of this is set out in Table 6 (assuming that the Treasury GDP deflator is 1.75%) for two examples:
- Example 1: An institution whose 2010-11 indirect cost rate is above the median, but below the upper quartile (5% efficiency factor)
  - Example 2: An institution whose 2010-11 indirect cost rate is below the median (2.5% efficiency factor)

**Table 6: Constraints on indirect costs rate (£/FTE researcher)**

	<b>Example 1: Above the median</b>	<b>Example 2: Below the median</b>
2010-11 rate	£42,000	£35,500
The 2011-12 rate will be capped at:	£40,598	£35,218
The 2012-13 rate will be capped at:	£39,243	£34,939
The 2013-14 rate will be capped at:	£37,934	£34,661

100. The operational details of implementing these proposals will be for the Funding Councils and Research Councils to determine. We would urge that the mechanisms are as simple and un-bureaucratic as possible and proportionate to the benefits. Where the cost of implementing the savings is not commensurate with the benefits then we would accept that the particular recommendation should be reconsidered by the Councils.
101. Although our remit applies only to HEIs, we consider that the Research Councils should implement similar measures for other research organisations that they fund.
102. We recognise that these are tough measures. We have sought mechanisms that would incentivise cost savings, but have been unable to find alternatives which would deliver the economies that we believe are required. The steps we are recommending essentially set a price that the Research Councils and other sponsors should contribute to indirect costs in HEIs. It would, of course, be possible for an HEI to accept this capped rate, even though it was less than its costs, and subsidise its research from other funding streams. However, this would in the medium term impact on the HEI's ability to be financially sustainable. Governing bodies will need to address this in their financial sustainability policies and the Funding Councils will monitor the outcome through the annual accountability review process for every HEI. We would therefore urge all institutions to take steps to control costs so that their indirect cost rates are in line with our recommendations.
103. We estimate that the measures set out above will reduce the cost of research as funded by the Research Councils by about £5 million a year in 2011-12 growing to some £40 million by 2013-14. There are also likely to be reductions in the costs of other funders of research in HEIs which might amount to a further £40 million. We believe that, in the current financial climate, HEIs can

and should be expected to make every effort to deliver these economies.

104. We note that these measures are consistent with the support announced in the 2010 Budget to make available £20 million to enable HEIs in England to reduce their costs by a move to shared services. HEFCE has recently written to HEIs concerning the allocation of these funds through the University Modernisation Fund. The Funding Councils in Wales and Scotland are also encouraging institutions to implement shared services. **We observe that the current VAT regulations are a barrier to the development of shared services and encourage the Government to address this impediment as soon as possible.**
105. We are not recommending that any action should be taken to constrain estate rates at present because it is desirable that more is spent on the upkeep of the estate. However, we suggest that estates rates should be reviewed from time to time.
106. Incentives currently exist for HEIs to improve asset utilisation since they will benefit from improved cost effectiveness, saving money and being more price competitive. We expect the greater scrutiny of governing bodies of financial strategies (paragraph 47) and greater questioning of costs by Research Councils (paragraph 78) will lead to improving efficiency that will be captured by reducing direct and indirect costs. The actions recommended on indirect costs rates in paragraph 97 will act as a further spur to these developments.
107. We understand that the Research Councils are considering a more strategic view of the equipment needs of the research base. This would place a greater level of responsibility on HEIs to fund essential general laboratory facilities and to recover such costs through the estates costs. Where there is a requirement for substantial capital investment for research facilities, the Research Councils would require evidence as to why the investment is required, whether appropriate facilities already exist within the research base and how the research community as a whole would benefit from the new facilities. Such an approach is consistent with our views and **we recommend that the assessment processes of the Research Councils should encourage more intensive use of existing assets across the research base.**

## **Annex A: Terms of reference for Task Group**

This Task Group has been set up by Universities UK (UUK) and Research Councils UK (RCUK) to provide advice and make practical proposals to funders and HEIs on the implementation of specific recommendations within the RCUK/UUK fEC Review report.

The Group is tasked with:

1. Developing proposals that will enhance and incentivise the optimal and effective use of resources provided through fEC within HEIs, paying particular attention to the role that greater transparency in charge-out rates could play.
2. Advising on the practical provision of information and metrics to demonstrate how fEC funding is being used and how it contributes to the financial sustainability of the whole sector in order to provide reassurance to government and research funders.

In undertaking its review, the Task Group should be mindful that any additional activities it recommends are commensurate with the benefits.

The Task Group is asked to report to UUK and RCUK by 30 April 2010 with proposals and advice including expected delivery timeline and identifying specific actions for funders, HEIs and other relevant groupings or stakeholders.

The Task Group will liaise with the Financial Sustainability Strategy Group and the TRAC Development Group.

### Membership

Sir William Wakeham – Chair

Gill Ball, Director of Finance, University of Birmingham

Simon Denegri, Chief Executive, Association of Medical Research Charities

Steve Egan, Director (Finance and Corporate Resources) and Deputy Chief Executive, HEFCE

Peter Hazell, Chairman, Argent Group and member of NERC Council

Roger Louth, Head of Policy and Resources, Science and Research Group, Department of Business, Innovation and Skills

Malcolm Skingle, Director, Academic Liaison, Worldwide Business Development, GlaxoSmithKline

Andy Walker, Vice-Principal, Heriot-Watt University

Stuart Ward, Director Corporate Services, EPSRC



## **Annex B: Key messages on TRAC**

These notes are intended to help those who are knowledgeable about TRAC when speaking at conferences, visits, events, committee meetings etc. Four key messages are covered.

### **1. The sector needs to support TRAC**

It would be very dangerous to undermine the credibility of TRAC because this is important to funders of higher education and may influence future funding and accountability requirements. There is no likely replacement to TRAC, other than full timesheets for all academic staff.

### **2. TRAC raises serious questions about sustainability**

TRAC data raise serious questions over the deficits on research, the use made of overseas student fees, and the financial strategies of institutions. Senior managers and governors need to understand their own institution's position – and what TRAC is suggesting about this, whether or not they currently use TRAC data to inform their strategy. And the sector bodies and professional groups need to understand what the TRAC data are indicating if they wish to influence future funding policy.

### **3. Institutions should test and use their TRAC data**

All institutions need to benchmark and test their own data and to gain confidence in its reasonableness before the head of institution signs off their TRAC return. It is much more cost effective to do this if the data are used internally, and it also provides better assurance to the main funders who now expect institutions to use TRAC internally. The TRAC Development Group (TDG) is running a number of projects to help institutions to share experience in using TRAC to support internal financial management and in assessing their sustainability.

### **4. TRAC works, and there are effective routes to raise issues**

TDG exists to ensure TRAC works and is used by the sector to good effect. Some institutions have concerns about the quality of their TRAC data, and academic time allocation is often the issue. This is made to work by many institutions and the TDG has recently made changes to help others to address their outstanding issues. Some of the complaints are a reflection of unsustainable HR cultures rather than anything specific to TRAC. It is likely that heads of institution will now be asked to be more specific about their confidence in their own data – so institutions with outstanding issues will need to address these themselves, or to understand and engage with the TDG agenda.

## 1. The sector needs to support TRAC

- 1.1. TRAC was chosen by the sector as the method to express its accountability for public funding, and to improve its internal financial management. This was part of a deal with the government in 1999 and has delivered substantial financial benefits for the sector.
- 1.2. TRAC is used by all the main public funders (Funding Councils, research councils, BIS) as part of their justification to government for the public funding they deliver for teaching and research
- 1.3. This public funding, and these funders, are under great pressure to demonstrate accountability and value for money, and there are calls for HEIs to be subject to greater regulatory and accountability requirements.
- 1.4. There is no practical possibility of an alternative activity based costing system for higher education being developed. The only alternative that is being discussed is the implementation of full time sheets for all academic staff.

### Key Message:

- **It would be very dangerous to undermine the credibility of TRAC:**
    - **TRAC is important to the funders of higher education**
    - **Any loss of credibility of TRAC could adversely influence future funding and accountability requirements**
    - **There is no attractive alternative to TRAC**
- ## 2. TRAC raises serious questions about sustainability
- 2.1. As well as assurance on accountability and value for money, TRAC provides an indicator of financing requirements through TRAC-adjusted surpluses and deficits at sector and institutional level, for the main streams of teaching and research activity (i.e. distinguishing public and non-public funded teaching, and different research sponsor types).
  - 2.2. The government and funders look carefully at these TRAC results and they influence policy and hence future funding (e.g. currently the Browne and Wakeham reviews). Some of the conclusions that can be drawn from the TRAC data are uncomfortable for the sector. These include that institutional surpluses are too low for sustainability; that research is being subsidised to a possibly unsupportable extent; and that overseas student fees are not being spent on teaching.
  - 2.3. It is dangerous to draw simplistic conclusions from these data (and the TDG is doing a lot of work to improve the understanding of them, and the indicators of sustainability), but there are issues here which the sector bodies and individual institutions need to understand and explain if they wish to influence future funding and policy.

**Key Messages:**

- **Institutional Senior Management Teams and finance committees need to understand what TRAC suggests about their own institution and should have a well-evidenced view of their institution's sustainability and the financial viability of its main strategies. (Whether or not they have confidence in the utility of their TRAC data in other areas, they cannot just ignore these messages – sustainability is a primary responsibility of governing bodies and of heads of institution)**
- **Sector bodies and other professional groups need at least a basic awareness of TRAC and of the issues it raises if they wish to have any influence over funding and policy.**

**3. Institutions should test and use their TRAC data**

- 3.1. There is a cost of implementing TRAC, and part of the deal was that TRAC was not just an added regulatory burden, but that institutions would improve their understanding and management of their costs and hence the sustainable financial management of their activity. Two major funders of HE (HEFCE and RCUK) have stated that the quality of the assurance they take from TRAC is reduced if institutions are not using the data themselves.
- 3.2. Heads of institutions sign off annually that their TRAC data are fit for purpose, but the QAV process showed that implementation of TRAC is poor in a significant number of institutions. Obvious reasonableness checks are not always done, and a lack of senior management engagement, and relative isolation of the TRAC processes from the strategic management of the institutions are common. These lead in turn to poorly-judged decisions about how to implement TRAC which reduce the credibility of the data produced.
- 3.3. It also appears that many finance committees and governing bodies do not discuss TRAC data despite their clear responsibility for long-term financial sustainability.
- 3.4. It is hard to avoid the conclusion that some institutions are not treating this seriously and that some heads of institution are "signing off" that their TRAC data are fit for purpose, without any real evidence that this is the case.
- 3.5. A range of institutions of all types do use TRAC in some areas of internal planning and management. This is the best form of QA of TRAC because they would not do so if they did not have confidence in their TRAC data, or if these did not have credibility within the institution.
- 3.6. TDG is working to address all the serious issues about the utility of TRAC that have been raised by institutions and to provide opportunities for institutions to participate in projects to improve the usefulness of TRAC.

**Key Message:**

- **Institutions need to use TRAC data, and to benchmark and challenge their own data if they do not currently have confidence in them. Visible leadership from senior management is necessary for this to be effective.**

**4. TRAC works, and there are effective routes to raise issues**

- 4.1. Institutions are expected to make intelligent decisions about how to implement TRAC in their own circumstances. These are not just financial or costing matters, but must be informed by institutional academic and other priorities. Hence there is a TRAC requirement to involve senior management and this is usually done through a TRAC steering group. TRAC Managers can also draw upon various sources of advice including benchmarking with peer groups and self-help groups (both formal and informal).

- 4.2. Finance Directors have an obvious role to provide the professional leadership within institutions to take an overview of the strategic financial context, and of the processes required for credible activity-based costing. Without their active engagement, it is much less likely that TRAC data will be credible or useful within institutions. Issues about implementing TRAC are in general for institutions to manage as best suits their environment and needs.
- 4.3. Academic staff time (AST) is often cited as the most difficult area, and even after ten years of TRAC implementation, some institutions have not found an effective way to do this. However, many others have done so. The failure in some institutions appears to be linked to an HR culture which is itself unsustainable (e.g. an attitude that it is inappropriate for senior management to know how staff effort is spent). This is a management issue for the institutions concerned, it is not a failure of TRAC. However, it is damaging when institutional managers can state that they have no confidence in their own institution's AST data, yet apparently are doing nothing to address this.
- 4.4. TDG has recently introduced changes specifically to help institutions who need to improve their TRAC academic staff time allocation (AST). The sole aim of these changes was to address concerns in some institutions that TRAC AST data were not robust. Institutions which had such concerns need to ensure that they can now have confidence in their TRAC data.
- 4.5. These failures of implementation are leading to pressure from funders to introduce a standardised timesheet system for all academic staff.

**Key Messages:**

- **Institutions need to sort out their TRAC data, not accepting “garbage” – (as claimed by one academic in a recent letter to THE) or claiming that they are powerless to influence their own internal management processes. Finance Directors have a key leadership role in this**
- **It is likely that heads of institution will be asked to be more specific about their confidence in their own data – and institutions which do not have this confidence will therefore come under greater scrutiny**
- **There are many sources of advice and support for institutions which have problems with implementing TRAC. The TDG maintains an oversight of all this support, and of the development of TRAC itself, and has an active programme of enhancements to TRAC and of support activities for institutions**
- **If institutions have genuine difficulties in implementing TRAC, they need to act on these - it is dangerous to continue to ignore these management problems.**

Useful Reference: Policy Overview: July 2009 (Available for download from [www.hefce.ac.uk/finance/fundinghe/trac/tdg/](http://www.hefce.ac.uk/finance/fundinghe/trac/tdg/))

**Annex C: Trigger Metrics<sup>1</sup>**

	<b>Trigger Metrics</b>	
1	Operating surplus/(deficit) adjusted by fEC net adjustment from TRAC data	£'000
2	Operating surplus/(deficit)	£'000
3	Gearing ratio – total long-term borrowings/total general funds	%
4	Liquidity ratio - days ratio of cash (plus short-term investments) to expenditure (less depreciation)	Days
5	Total income per academic FTE	£/FTE
6	Total research income per academic FTE	£/FTE
7	Percentage of permanent academic staff aged 55 or over	%
8a	Total value of externally sponsored research	£'000
8b	Externally sponsored research as a % of total income	%
9a	Total capitalised expenditure on equipment	£'000
9b	Capitalised expenditure on equipment as a % of the balance sheet value of equipment	%
10	Total expenditure on major and minor works (capital)	£'000
11	Total expenditure on repairs and maintenance (recurrent)	£'000
12a	Proportion of building condition (% GIA) in condition C and D	%
12b	Cost to upgrade buildings in condition C & D to condition B <sup>2</sup>	£'000
13	Proportion of buildings space (GIA) with poor functional suitability (Grade 4) <sup>3</sup>	%
14a	Total GIA	Sq metres
14b	Total income per square metre	£/Sq mtr

<sup>1</sup> Taken from <http://www.bis.gov.uk/assets/biscore/corporate/migratedd/publications/m/monitoring-financial-sustainability-in-uk-he-institutions.doc/> Report to Funders Forum, September 2009.

<sup>2</sup> Building condition B is defined as "sound, operationally safe and exhibiting only minor deterioration"

<sup>3</sup> Grade 4 building is defined as one that "fails to support current functions and/or are unsuitable for current use. The operational problems associated with such space are major, and are constraining current functions in the space"

## Analysis of trigger metrics for the period up to 2007-08

The analysis is based on data for the period 2001-02 to 2007-08. Special attention is paid to TRAC Group A and B, as the combined income of these two groups represented 61% of total income going into the sector.

### Money and people

1. TRAC adjusted operating surplus/deficit (metric 1) shows that at a sector level, the deficit as a % of total income has declined by 2% from -7.4% of total income in 2004-05 to -5.5% in 2007-08, thanks to the significant improvement in the underlying operating surplus. The reduction between 2006-07 and 2007-08 was the most significant: from -6.7% of total income (-1.42bn) to -5.5% (-£1.28bn). On average, the deficit decreased by 11% from -£8.9m per institution in 2006-07 to -£7.9m in 2007-08.
2. At a sector level, the underlying operating surplus/(deficit) before exceptional items (metric 2) shows an upward trend between 2005-06 and 2007-08. The surplus improved significantly from 1% of total income in 2006-07 to 2.1% in 2007-08, proportionately the largest surplus in the last ten years. The improvement was attributable to the strong growth in all income streams, which was unprecedented and was ahead of recent trends. The number of institutions reporting surplus increased from 119 in 2006-07 to 133 in 2007-08.
3. The gearing ratio – long-term borrowing/total general funds (metric 3) was 0.6 on average, slightly higher than in 2006-07, reflecting additional borrowings having been taken to partly finance capital expenditure. Overall, the gearing ratio has been relatively stable in the past seven years, at a level of around 0.5% to 0.6% of total general funds.
4. Net liquidity days (metric 4) shows continuous improvement in the past four years. At 31 July 2008, the sector average cash balance was 85 days' of expenditure, which was very healthy and will provide some cushion for the likely risks the sector faces. However, there were 13 institutions reporting weak net liquidity of less than 10 days' of expenditure. These institutions need to improve financial performance to ensure there is sufficient cash to meet the needs of operation and investment.
5. Total income per academic FTE (metric 5) rose by 6.9% to £178k. Group E shows the highest average income per academic FTE (£191k), but it is Group B that achieved the largest increase (9%).
6. Research income per academic FTE (metric 6) continued to rise. The sector average rose by 5.6% to £42k. The average level for Group A increased by 5.2% to £67k, remaining significantly higher than other groups.
7. Percentage of permanent academic staff aged 55 (metric 7) was broadly static in the past three years.
8. At a sector level, the value of externally sponsored research (metric 8a) shows a trend of growth with an increase of 54% from £2.4bn in 2001-02 to £3.7bn in 2007-08. The increase between

2006-07 and 2007-08 was satisfactory at 10%. In particular, in 2007-08, Group A institutions achieved a very healthy growth with average income per institution increasing from £100m to £111m. Group A institutions' total income accounted for 72% of the total value, indicating that externally sponsored research was highly concentrated.

9. Externally sponsored research as a percentage of total income (metric 8b) remained consistent with the past four years as a result of strong income growth in other areas in 2007-08.

### **Equipment and buildings**

10. Total capitalised expenditure on equipment (metric 9a) shows a steady growth trajectory from £385m in 2001-02 to £623m in 2007-08 (62%). For Group A, the average level increased from £8.1m per HEI in 2001-02 to £13.1m in 2007-08.

11. At a sector level, the value of capital expenditure on major and minor works (metric 10) increased year on year from £1.2bn in 2001-02 to £2.3bn in 2007-08 (92%), reflecting ongoing investment by institutions. The sector average level of investment per institution was £14m. Group A's average level was £44m, which was significantly higher than the sector average and other groups.

12. At a sector level, recurrent expenditure on repairs and maintenance (metric 11) shows a rising trend, but the level of expenditure (the sector average was £3.5m in 2007-08) is not significant compared with capital expenditure on major and minor works.

13. The sector average level of proportion of buildings in condition C and D (metric 12a) declined (from 32% in 2006-07 to 29% in 2007-08), so did cost to upgrade poor condition (metric 12b). But in six institutions more than 60% of the estate is in poor condition. On average, Group B had a relatively higher proportion (33%) of building in condition C and D than Group A (26%).

14. The average proportion of building space with poor functional suitability (metric 13) remained at 4%, a level well below the proportion of building in poor condition. On average, it is 3% for Group A and B, slightly lower than the sector average.

15. Total GIA (metric 14a) shows that at a sector level, the size of estates increased by 4% in 2007-08.

16. Total income per square metre (metric 14b) continues to show a positive trend.

**Annex D: Glossary**

AST	Academic Staff Time
BIS	Department for Business, Innovation and Skills
CBI	Confederation of British Industry
CIF	Capital Investment Framework
CUC	Committee of University Chairs
DELNI	Department for Education, Northern Ireland
EU	European Union
fEC	full Economic Costs
FSSG	Financial Sustainability Strategy Group
FTE	Full Time Equivalency
GDP	Gross Domestic Product
GIA	Gross Internal Area
HEFCE	Higher Education Funding Council for England
HEFCW	Higher Education Funding Council for Wales
HEI	Higher Education Institution; universities and other institutions of higher education
HEPPI	Higher Education Pay and Price Index
HESA	Higher Education Statistics Agency
IT	Information Technology
KPI	Key Performance Indicator
OECD	Organisation for Economic Co-operation and Development
OFFA	Office for Fair Access
PGR	Post-Graduate Research (students)
QAV	Quality Assurance and Validation
QR	Quality Related funding
RAE	Research Assessment Exercise
RCUK	Research Councils UK
REF	Research Excellence Framework
RFI	Return for Financing and Investment
SFC	Scottish Funding Council
TDG	TRAC Development Group
TRAC	Transparent Approach to Costing
UUK	Universities UK
VAT	Value Added Tax