Funding Higher Fees:

Some Implications of a Rise in the Fee Cap

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Introduction

1. This report considers some of the implications of any rise in the maximum fee payable by full-time UK and EU undergraduates at English institutions without a commensurate increase in commitment of public expenditure by the Westminster Government.[1] It does not discuss whether such a scenario would be the 'right' one in future, but it acknowledges the arguments that are likely to be made in favour of an increased fee cap and the cost to the Exchequer of maintaining current arrangements for student support.

2. The appropriate balance of funding in higher education between the taxpayer, universities, students, and graduates has become a particularly prominent policy concern since tuition fees were first introduced at English higher education institutions in 1998.[2] One of the primary intentions of the higher education reforms introduced in 2006 was that a greater share of the cost of full-time undergraduate teaching be borne by its significant beneficiaries – graduates themselves. This was achieved through the introduction of income-contingent loans for fees up to a maximum of £3,300,[3] which ensured that graduates would pay this private contribution once they were earning, rather than students or their families having to meet this cost upfront. However the reforms also implied an additional commitment of public expenditure, because of the enhancement of maintenance grants for lower-income students and because of the subsidy required to provide additional income-contingent loans for fees at no real rate of interest.

3. A review of the current variable fee regime will take place in 2009. The impact of this review on the current tuition fee cap of £3,300 cannot be known. However, there are likely to be influential voices in both the higher education sector and the Government arguing for a rise in the maximum fee. Two arguments are likely to be run. First, that although the additional contributions from variable fees have already provided English higher education institutions with substantial additional income (equivalent to around £1,265 for each first-year student enrolling in 2006),[4] this has still

[1] Note that throughout this report references to the Government and its expenditure relate to the Westminster Government only and not to the devolved administrations. This expenditure therefore includes English-domiciled and EU-domiciled students only.

[2] 1998 saw the introduction of upfront fees of up to £1,315 (in 2010 terms) for full-time undergraduates from the United Kingdom and European Union. The Government covered the cost of all or part of these fees for students from lower-income households.

[3] To reflect the fact that this report discusses changes that could be introduced in 2010 at the very earliest (under the terms of the Higher Education Act 2004), all figures in this report have been uplifted from 2008 to 2010 prices using the latest annual inflationary increase applied to student loans and grants (2.5 per cent).

[4] The latest publication from the Office for Fair Access (OFFA) (2008/01) shows that the actual amount of additional fee income for English Higher education institutions was £448 million, compared with predicted additional income of £455 million (£495 million and £502 million in 2010 terms). This represents the equivalent of an additional £1,265 (in 2010 terms) for each UCAS applicant accepted for entry in 2006 (390,890), although additional fee income relates only to fee income from UK and EU full-time undergraduate students and from PGCE students.

left a number of institutions experiencing a deficit in teaching costs.[5] Secondly, the initial cap of £3,300 has not as yet created significant variability in fee levels and therefore the market in higher education, which the Government believes is necessary to improve quality and choice, is not currently operating in the way it anticipated.[6]

4. The Government is unlikely, however, to sanction the operation of an entirely unregulated market by declining to set a maximum fee cap. It is true that, despite the concerns that some expressed when fees were first introduced in 1998, and again at the time of the 2006 reforms, the existence of fees has not had any noticeable impact on enrolment to higher education – by any social group.[7] Nevertheless, that does not mean that fees, whatever their level, would have no such impact in future. The absence of any noticeable impact hitherto is likely to be due in part to the level at which the Government subsidises fees currently, and also the general repayment and grant and loan mechanisms.

5. Furthermore, to allow an unregulated market would run counter to the direction taken by governments in almost every other country with tuition fees.[8] The experience of the United States warns of the political costs of an unregulated market. The spiralling cost of tuition has been described by a Federal Government Commission as one aspect of 'an increasingly dysfunctional' higher education financing system. In the face of ever-increasing student borrowing, both state governments and members of congress continue to seek strategies to curb the freedom of institutions to increase their fees.[9] On the other hand, there seems little justification for

[5] See, for example, the University of Oxford's access agreement (2007), which estimates additional income from fees of £18.6 million per annum (in 2006 terms) but noted a deficit on publicly funded teaching for the University alone of around £27.8 million (available at www.offa.org.uk).

[6] See *Why not a fixed fee?* (http://www.dfes.gov.uk/hegateway/hereform/whitepaperconsultation/index.cfm). In fact, as the Director of OFFA has acknowledged, the 'market' currently operates largely through variable bursaries rather than variable fees (Sir Martin Harris, quoted in R. Garner, 'Universities opt for maximum tuition fees', *The Independent*, 17 March 2005: http://news.independent.co.uk/education/education_news/article6604.ece). This issue will be explored further in a forthcoming HEPI report.

[7] For the effect on participation of the introduction of fees in 1998 see HEFCE 2005/03. It will not be possible to produce a similar analysis of the impact of the 2006 reforms until 2009. However, UCAS applications from English students to full-time undergraduate courses at English universities increased by 10.1 per cent between 2007 and 2008. The proportion of such applicants (aged 18 and under) from lower socio-economic groups increased slightly from 28.2 per cent in 2007 to 29.6 per cent in 2008. (http://www.offa.org.uk/news/ucas-applications-for-england-up-101-for-2008/). See http://www.ucas.com/website/news/media_releases/2008/2008-02-14 for caveats in relation to these data.

[8] *Higher education funding – International comparisons* (http://www.dfes.gov.uk/hegateway/hereform/whitepaperconsultation/index.cfm).

[9] *A test of leadership – charting the future of U.S. higher education, a report of the Commission appointed by Secretary of State Margaret Spellings* (https://www.ed.gov/about/bdscomm/list/hiedfuture/index.html). For attempts by congressmen to curb tuition fee increases see, for example, http://www.reuters.com/article/politicsNews/idUSN2245020820071022?feedType=RSS&feedName=politicsNews&rpc=22&sp=true. For information on the extent of student borrowing see *2007*

government intervention beyond setting an overall fee cap (for example, by setting different caps for different groups of subjects, as is the case in the Australian system); at least in theory, variable fees should allow universities to factor the differential costs and perceived values of their courses into their pricing.

6. In considering the cap on fees for full-time UK and EU undergraduates, the Government is likely to take two points into account. Firstly, there may be a reluctance to commit additional Treasury funds to help subsidise higher fees, not least because of the significant expense already incurred in funding student loans and grants. A scenario in which the fee cap rises but taxpayer contributions do not would require higher contributions from graduates, households or institutions – all of which are politically sensitive constituencies. The second factor that the Government will need to consider is that the Charities Act 2006 may limit the level at which a maximum fee is set as it may require institutions to demonstrate that individuals do not meet the majority of teaching costs.

7. The purpose of this report is to explore the options that would be available to the Government if it wished to raise the fee cap while maintaining public contributions at around their current level. The report illustrates some of the ways in which this might be done by modifying the current system of fully taxpayer-subsidised fee loans. Four approaches are described in detail, three of which assume that the Government would continue to guarantee the availability of loans to full-time English and EU undergraduates up to the maximum fee.[10] The report also explores some of the implications for students and for higher education institutions of these measures. For the purposes of illustrating the implications, two possible fee caps are considered: £5,000 and £7,000.

Current arrangements

8. Public funding of undergraduate education in England consists of direct grants to institutions in the form of HEFCE teaching funds, and support for students themselves in the form of tuition fee loans, maintenance loans and maintenance grants. For fees, the current funding regime for full-time UK and EU undergraduates in English higher education institutions is based on the principle that graduates should pay a portion of their teaching costs, since it is they who reap the rewards of this tuition through increased earnings. Government loans are available to all these students, on a non-

Trends in Higher education Series: Student Loans, available at http://www.collegeboard.com/prod_downloads/about/news_info/trends/student_loans.pdf. This analysis shows that the total amount of student borrowing has increased from $38 billion in 1996-97 to $77 billion in 2006-7 ($42 billion and $85 billion in 2010 terms), with an increasing proportion coming from private loans.

[10] In its financial analysis, this report considers only the costs to the Westminster Exchequer of the provision of support for full-time undergraduates. This means that forecasts in relation to the funding system introduced in 2006 or under any revised fee cap in the future refer to expenditure in relation to English and European Union students.

means-tested basis, up to the maximum fee level (currently £3,300). No student or their family is, therefore, obliged to meet the minimum participation costs of higher education at the point of entry.[11] In addition, all full-time UK undergraduates have access to maintenance loans of up to £4,853 (£6,794 for those studying in London).[12] An important feature of government loans for both tuition and maintenance is that their repayment is income contingent – in other words, loan repayments are made as a proportion of earnings over a certain level. Furthermore, they accrue interest only at the rate of inflation and include the provision that any remaining debt is written off after 25 years. Further support towards living costs is available in the form of maintenance grants of up to £2,890, which will be available to English students with assessed household income of up to around £63,000 per year from 2008.

9. In contrast to the United States, where detailed assessments of parental ability to pay are the bedrock of student finance, the English system is designed to keep assessed household contributions to a minimum. Household contributions are only assessed if students choose to apply for means-tested support (part of the maintenance loans and other supplementary benefits). The maximum assessed contribution from a family living in England with two children and income of £75,000 would be around £3,800 per year. The same family living in the US might be expected to pay around £14,000 per year towards the cost of their child's education.[13]

10. The English system, taken as a whole, is possibly the most progressive in the world. It recognises that graduates have benefited from their higher education, so should pay; it involves no fee payment upfront so none are excluded because of parental means; it ensures that no one is required to repay loans if they are not earning sufficient to be able to do so; it protects the position of women and others taking a career break by writing off loans not repaid after a period; it provides maintenance loans for all and it provides generous cash grants for poor – and indeed now not so poor – students. All this is admirable. However, it is expensive to the Government to provide, and if the fee cap rises, with a concomitant increase in prices, it will become more expensive.

[11] Minimum participation costs here refer to the tuition fee charged for the course, although it is recognised that students may incur other expenses directly related to their course (e.g. the purchase of necessary materials).

[12] The maximum amount of maintenance loan varies depending on the student's domicile, year of study and whether or not they are living at home. Up to 75 per cent of the maximum maintenance loan is available for all students in England, Wales and Northern Ireland on a non-means-tested basis (the amount available may be reduced if the student is in receipt of a government grant). The remainder is means-tested based on assessment of residual household income. The non-means-tested portion of the maintenance loan is currently significantly lower for students living in Scotland (19.8 per cent of the full loan value for students living outside London – see http://www.student-support-saas.gov.uk/student_support/scottish_outside/student_loan.htm).

[13] These figures assume that one child is under 16 and one child is studying at university. Further assumptions are made about assets and allowances, and these are described in Annex A.

11. The most recent published estimates by the Government suggest that its Resource Accounting and Budgeting (RAB) charge on tuition and maintenance loans for English and EU students – in other words, the cost of providing these loans at no real rate of interest, requiring repayments only at rates graduates can afford when working and writing off unpaid debts after 25 years – is likely to exceed £1.4 billion per annum in steady state. This is equivalent to at least 33 pence for every £1 of tuition fee loan – a 33 per cent subsidy – and 21 pence for every £1 of maintenance loan.[14] When the cost of maintenance grants is added to this, estimated taxpayer expenditure on student support for full-time English and EU undergraduates amounts to £2.5 billion per annum in steady state. By way of comparison, in 2003-04 total public spending by the then Department for Education and Skills on student support and on tuition fees for low-income students was £1.3 billion.[15]

12. Even under the current fee regime these costs would increase if, for example, the Government were to reform the current system of funding for part-time students and instead offer them access to the same loans and grants on a pro-rata basis as full-time students.[16] The development of a system of funding appropriate to a changing landscape of higher education participation is a serious policy consideration. This report focuses, however, on a more specific issue: the implications for the current system of funding of raising the fee cap for full-time undergraduate students.

Future options

13. The discussion above has shown how expensive the present arrangements are for the taxpayer. This report explores possible ways in which the Government could raise the fee cap without any increase in public expenditure beyond current commitments. Of course, it would be perfectly

[14] The latest published RAB figures from the DIUS are available at http://www.publications.parliament.uk/pa/ld200506/ldhansrd/vo051110/text/51110-25.htm - 'Education Finance'. The RAB charge also includes deaths and defaults. The DIUS has not yet published figures which reflect the estimated additional cost of the graduate repayment 'holidays' announced in 2007. The cost of these is difficult to predict since it will depend on how many students take up the option of a repayment 'holiday' and when they choose to do so but may lead to RAB charges on fee and maintenance loans of 36 per cent and 26 per cent respectively. Given the purpose of this report, which is to illustrate the issue rather than to provide firm figures, and the uncertainty of these estimates, this report uses the latest published figures on RAB percentages.

[15] 2003-4 was the last year prior to the introduction of any of the reforms first set out in the Department for Education and Skills' White Paper in January 2003. The figure of £1.3 billion is the combined amount, in 2010 terms, of student support and public funding of tuition fees. The cost of student support in this case is taken from the figure in the DfES (now DIUS) *Departmental Expenditure Report 2007* (CM 7092), which includes postgraduate awards and grants for part-time students. The 2003-4 cost of the public contribution to the fee is taken from the HEFCE grant letter issued in January 2003 (http://www.hefce.ac.uk/News/HEFCE/2003/grant03.htm).

[16] The Secretary of State for Innovation, Universities and Skills recently announced an overarching review of the English higher education sector, with a view to developing a 10-15 year framework for its expansion and development. Some consideration of the appropriate resources to support an increase in the proportion of part-time students is likely to feature in this review (see http://www.dius.gov.uk/speeches/denham_hespeech_290208.html).

possible for government to continue to provide fully subsidised loans (although there are strong arguments against even the present level of subsidy).[17] If the Government were willing to continue to subsidise fee loans in full, however, then the costs could be significant. The RAB charge increases as the total debt rises, which means that the estimated 33 per cent RAB charge on current student tuition fee loans would increase with a higher fee cap. Based on the assumptions in this report, the RAB charge might increase by around £200 million per year with a fee cap of £5,000 and by £320 million with a cap of £7,000.[18] That is effectively the base option, but we do not consider it further here.

14. This report explores what the implications would be if the Government were not willing to absorb the financial consequences of an increase in fees. There are a number of possibilities, four of which are described here. The first three options assume that the Government would continue to make loans available to full-time English and EU students up to the maximum tuition fee charged by any English higher education institution, though they vary in the way and the extent to which the loans would be subsidised:

    Option A: Fully subsidised loans. Under this model, all students would be subsidised in the same way as at present but a portion of the additional costs that students would pay would be used to defray the additional taxpayer costs resulting from a bigger loan programme.

    Option B: Mixed loans. Here, there would be a subsidy for fees of £3,300 or less but no subsidy for fees above that. This would mean that institutions would get all the extra income from higher fees and that all the extra costs (the higher rate of interest) would fall on graduates of courses charging higher fees.

    Option C: Partial Subsidy. Option C envisages a uniform subsidy spread across all students, which would remove the artificial break at £3,300. This would mean that institutions would receive all the extra income from higher fees and the extra costs would be borne by all students.

15. A fourth approach (**Option D**) would be for the Government to continue to make fully subsidised loans available up to the current maximum level

[17] For a full explanation of these arguments see N. Barr, 'Higher education funding', *Oxford Review of Economic Policy*, 20:2 (2004), 264-283. It is recognised, of course, that this argument is likely to be restated in the run-up to the 2009 review and that there are a number of issues that are likely to be subject to further scrutiny (for example, where any money saved from removing the interest subsidy should be most appropriately targeted). A detailed review of these issues is, however, beyond the scope of this report.

[18] These figures are based on the RAB charges shown in paragraph 25 and the average fee levels shown in paragraph 17 below, and assume a take-up rate on fee loans of 80 per cent (rounded to the nearest £10 million). The figures relate to expenditure by the Westminster Government and therefore exclude the cost of loans for students from Scotland, Northern Ireland and Wales.

(£3,300) and to provide no further loans to meet any additional fee the student might face. Given the credit constraints facing prospective students, this system would effectively assume that some courses would require part of the fee to be paid upfront.

16. The logic of each of these options is described below. We consider in general terms any additional costs they imply for taxpayers, institutions or graduates and what if anything might be done to mitigate these costs. We also consider the feasibility of their implementation. We illustrate in detail some of the financial implications of these options, based on a set of working assumptions about the level of a raised fee cap and the average fees for full-time UK and EU undergraduates that might result.

17. For the purposes of illustration, calculations have been done for a fee cap at two levels – £5,000 and £7,000 and, for sector-wide fee income and loans, we have illustrated the figures with assumed average fees across the sector as follows:[19]

    £3,300 fee cap: Average fee of £3,220[20]

    £5,000 fee cap: Average fee of £3,900[21]

    £7,000 fee cap: Average fee of £4,300[22]

18. Where the effect of higher fees on a single institution is considered, for simplicity in the calculations, the illustration is based on the institution charging the maximum fee across all its courses – if in reality fees are charged at different levels within the same institution that will affect the details of the calculation but not the principle.

Option A: full subsidy

19. The first option would be for the Government to continue to make fully subsidised loans available up to the maximum fee charged but with some of the additional funds from students being used to cover the cost of the additional subsidy. The mechanics of how this might be done are discussed in paragraphs 22-23 below, but the net effect would be that some of the additional income from students would be channelled to Government, either by institutions passing some back to government or by the

[19] Estimates of fee income are derived from HESA figures for full-time UK and EU undergraduates at English higher education institutions in 2006-7. The estimated RAB charge on loans for these fees relates only to expenditure by the Westminster Government and therefore excludes the cost of loans for students from Scotland, Northern Ireland and Wales.

[20] Based on 9 per cent of full-time UK and EU undergraduates at English higher education institutions paying £2,400 and 91 per cent paying £3,300.

[21] Based on 9 per cent of students paying £2,400; 51 per cent paying £3,300; and 40 per cent paying £5,000. The figure of 40 per cent represents the approximate proportion of current full-time UK and EU undergraduates at pre-1992 universities.

[22] Based on 9 per cent of students paying £2,400; 51 per cent paying £3,300; 20 per cent paying £5,000; and 20 per cent paying £7,000.

Government requiring an equivalent reduction in HEFCE grants. As far as institutions are concerned, the funds involved would be the same, with the amount of funds being equivalent to the estimated RAB charge on total anticipated borrowing above an average of £3,300 per full-time English or EU undergraduate across the whole institution. Institutions might charge different fees for different courses, but the amount to be passed back to Government would be based on the average for the institution as a whole. Institutions currently charging the maximum fee on all of their courses would therefore face an amount commensurate with the anticipated additional taxpayer costs of loans beyond current levels. Institutions charging fees below the current maximum, however, would be able to charge higher fees on some of their courses without contributing to the full anticipated cost of borrowing beyond current levels.[23]

20. Such an arrangement would carry the risk to the Exchequer that higher than anticipated borrowing, a downturn in the graduate labour market or a rise in the discount rate on loans could all lead to a higher than expected RAB charge over the course of the life of a loan, and that the amount passed back to Government would prove to be too low.[24] The existing uncertainty surrounding anticipated taxpayer contributions to student support would therefore be compounded if this option were taken.

21. Conversely, there is a possibility that the amount passed back to Government would exceed that required to cover additional taxpayer costs. This might stimulate resistance in the higher education sector to the implementation of this model, even if institutions supported the general principle of fully subsidised loans. Although institutions would be getting the majority of the additional income from students,[25] there are some who might think that they should receive the full 100 per cent, with the only explicit condition for the higher fee being the provision of appropriate bursaries to poorer students.

22. The method by which funds were passed back to Government would need to be considered. Institutions could be required to pass on to Government a proportion of the additional student fees so that this could be used to

[23] Although this model would not imply any additional commitment of public expenditure beyond the maximum possible under the current system, therefore, it might imply a slight increase in taxpayer expenditure above the levels actually forecast at present. If this were thought by policy makers to present a significant problem then an alternative might be to take into account the value of the average fee charged by an institution under the current fee regime. Under a higher fee cap, each institution could be required to pass funds to the government equivalent to any borrowing above this average fee. This would ensure Exchequer expenditure was kept as close as possible to its current level.

[24] Some universities seeking to charge higher fees might also argue that the cost of subsidising graduates from their institutions is significantly below average, since these individuals are more likely to go on to high-earning careers. It might be possible to set institution-specific subsidy amounts, derived from earnings profiles based on Student Loans Company data, although these data would also be based on past or current labour market trends, and given the other uncertainties would probably represent an unnecessary complication.

[25] See Tables 1 and 2 below.

defray the additional taxpayer costs of maintaining the current fully subsidised system. Alternatively, the Government could reduce its direct grant to institutions in the form of HEFCE teaching funds. This would represent a distribution of some of the additional student income to help support students in the light of the higher fees that they would now have to pay.

23. The financial implications of each of these methods would be the same, but the latter would have distinct presentational implications: if the grant for a particular institution were significantly lower than the value of fees, institutions might find it difficult to demonstrate that public funding covered the majority of their teaching costs. This could present a problem in the light of the Charities Act 2006, which requires institutions to show that they operate for the public benefit. HEFCE has already noted that this provision may have an impact on higher education institutions were a competitive market in fees to come about.[26] A distinct possibility is that the public benefit test may include the criterion that any private benefit should be incidental. Based on the pilot review of Scottish HEIs, it is possible that significant levels of private contributions towards fees will not meet this criterion, particularly if this contribution covers the majority of the cost of a specific 'benefit' (i.e. the cost of teaching the course).[27]

24. These possible disadvantages would need to be balanced against the advantage to potential students of continuing with the present system of fully subsidised loans at a zero real terms rate of interest. The continuation of full subsidies and time-bound income-contingent repayments would mean that graduates with larger loan debts as a result of higher fees would receive higher taxpayer subsidies than graduates with lower debt but equivalent lifetime earnings.[28] This model might, therefore, be attractive to the Government in its drive to widen participation and if it wanted to embed the principle that was central to the public justification of variable tuition fees – 'a new partnership between the Government and the student who benefits directly'.[29]

25. Table 1 illustrates the cost to the sector overall of implementing Option A under the assumptions described in paragraph 17 above. It is assumed

[26] HEFCE Circular Letter, 10/2007, Annex A (http://www.hefce.ac.uk/pubs/CircLets/2007). HEFCE will act as principal regulator in relation to English universities on behalf of the Charity Commission.

[27] The Office of the Scottish Charity Regulator's pilot review of Scottish HEIs found that the charging of fees was not unduly restrictive, in part because the majority of individual beneficiaries (students) did not pay a fee which reflected the full cost of the benefit (course). The full report can be found at: http://www.oscr.org.uk/NewsItem.aspx?ID=fee95863-2f2b-4e3e-bc41-19879bb56c48. As HEFCE notes, however, there is no statutory definition of 'public benefit' in England as there is in Scotland (HEFCE 10/2007, Annex A).

[28] For a discussion of average taxpayer subsidies on the total average debt for a student paying £3,300 in fees and the additional taxpayer subsidy for a student paying £5,000 in fees see L. Dearden et al., *Higher education funding reforms in England: The distributional effects and the shifting balance of costs,* (Institute for Fiscal Studies WP18/07), pp.15, 27-28.

[29] T. Blair, *A future fair for all: Labour's university reforms*, speech delivered at Church House (14 January 2004).

here that the RAB charge, which would need to be reflected in the amount passed back to the Government in some way or other, would be higher than the 33 per cent charge on the current fee loans. For the illustrations below we assume an RAB charge of 41 per cent on the additional borrowing (in comparison with current levels) under a £5,000 fee cap and an RAB charge of 42.5 per cent on the additional borrowing under a £7,000 fee cap.[30] For the purposes of this financial analysis the amount passed back by institutions charging the higher fee is treated as a net loss of new fee income. The illustration below therefore shows the net increase in income, and the proportion of new income retained by the sector, once the amount passed back to the Government has been taken into account.

Table 1: Fee income retained by sector if RAB charge is covered

Current fee cap[1]		
Total fee income (£m)[2]	2,930	2,930
Revised fee cap[1]		
	£5,000 cap	**£7,000 cap**
Total fee income (£m)[2]	3,550	3,910
New fee income (£m)[3]	620	980
Gross increase in fee income	21.2%	33.6%
Estimated additional borrowing (£m)[4]	480	760
Amount passed to Government (£m)[5]	200	320
Net increase in fee income	14.4%	22.5%
Proportion of new fee income retained by sector	68.3%	67.2%

Notes:

[1] Figures are rounded to the nearest £10 million and given in 2010 steady state terms.

[2] Total fee income is all fee income from full-time UK and EU undergraduates. The number of these undergraduates is derived from HESA data for 2006-7 and therefore does not take account of any rise in student numbers.

[3] New fee income is anything above the total fee assumed to be received in steady state under the £3,300 fee cap and with an average fee of £3,220 across the sector.

[4] Additional borrowing is 80 per cent of the value of the new fee paid by full-time English and EU undergraduates (numbers derived from 2006-7 HESA data). The assumed take-up rate of fee loans is consistent with the latest published Government figures in relation to current borrowing (http://www.publications.parliament.uk/pa/ld200506/ldhansrd/vo051110/text/51110-25.htm – 'Education Finance').

[5] The amount passed to government is equivalent to 41 per cent of the estimated additional borrowing (compared with current levels) with a £5,000 cap and 42.5 per cent of additional borrowing with a £7,000 cap.

26. Under the working assumptions employed here, the sector would therefore retain around 68 per cent of new fee income with a £5,000 cap and around 67 per cent of new fee income with a £7,000 cap, once the amount passed to the Government is taken into account. Its percentage increase in fee

[30] These estimates are consistent with estimates provided to the authors by the DIUS, given the average fees assumed in this report under a £5,000 and £7,000 fee cap.

income would fall from 21.2 per cent to 14.4 per cent, and from 33.6 per cent to 22.5 per cent with a £5,000 and £7,000 cap respectively. Because the RAB charge is sensitive to the amount of borrowing, the amount passed to Government would, all else being equal,[31] increase in line with any increases in the total amount of anticipated borrowing above current levels across the sector.

27. Table 2 illustrates what would happen under Option A to an institution of average size,[32] charging the maximum permitted fee on all its courses.

Table 2: Fee income retained by average institution if RAB charge is covered

Current fee cap[1]		
Total fee income (£m)[2]	23.5	23.5
Revised fee cap[1]		
	£5,000 fees	**£7,000 fees**
Total fee income (£m)[2]	35.6	49.8
New fee income (£m)[3]	12.1	26.3
Gross increase in fee income	51.5%	112.1%
Estimated additional borrowing (£m)[4]	9.3	20.3
Amount passed to Government (£m)[5]	3.8	8.6
Net increase in fee income	35.2%	75.3%
Proportion of new fee income retained by institution	68.3%	67.2%

Notes:

[1] Figures are rounded to the nearest £100,000 and given in 2010 steady state terms.

[2] Total fee income is all fee income from full-time UK and EU undergraduates.

[3] New fee income is anything above the total fee assumed to be received in steady state with the institution charging £3,300 on all its courses.

[4] Additional borrowing is 80 per cent of the value of the new fee paid by full-time English and EU undergraduates. The proportion of English and EU undergraduates within the average institution is assumed to be consistent with the proportion across the sector (97 per cent of full-time UK and EU students).

[5] The amount passed to government is equivalent to 41 per cent of the estimated additional borrowing with a £5,000 cap and 42.5 per cent of the estimated additional borrowing with a £7,000 cap.

28. The amount of additional fee income retained by such an institution would reflect the amounts shown for the sector as a whole (68 per cent and 67 per cent with £5,000 and £7,000 fees respectively). Such an institution would see its percentage increase in fee income fall from 51.5 per cent to 35.2 per cent, and from 112.1 per cent to 75.3 per cent with a £5,000 and £7,000 cap respectively.

[31] In other words, assuming there is no change to the discount rate on loans or to graduate earnings.

[32] In other words, with the median number of full-time UK and EU undergraduates for English higher education institutions in 2006-7.

29. If this institutional contribution were made through a reduction in the HEFCE grant, this would have an impact on the ratio between direct government funding of institutions and private contributions. The effect of this is illustrated in Table 3 below, using the grant and student number figures for an institution with the median allocated core teaching funding from HEFCE for the 2008-9 academic year.[33]

Table 3: Illustrative impact of reducing HEFCE grant on value of grant as proportion of fee income

Fees	Total HEFCE teaching grant (£m)[1]	Total Fee Income (£m)[1]	Grant as proportion of fee income		
			Gross	Net (with reduction)	Repayment to Government as percentage of original grant
£3,300	29.1	23.4	124.5%	124.5%	0%
£5,000	29.1	35.5	82.2%	71.5%	13.0%
£7,000	29.1	49.6	58.7%	41.5%	29.3%

Notes:

[1] Figures are rounded to the nearest £100,000 and refer to the total teaching grant and full-time Home and EU undergraduate tuition fee at the sample institution. The level of the HEFCE teaching grant and fee income are given in steady state 2010 terms.

30. Table 3 illustrates that passing the government funds back by means of a reduction of the HEFCE grant could have a significant impact on the ratio of grant to fee, beyond that already resulting from a higher fee cap. This effect is of course greater with a higher fee: in this example, an average fee of £5,000 would require the repayment to Government to be equivalent to around 13 per cent of the grant; with an average fee of £7,000, the amount is equivalent to 29.3 per cent of the grant. The impact of this model on any given institution would also depend on the current level of teaching grant per full-time equivalent student and the proportion of fee income recycled into bursaries or scholarships.

Option B: mixed loans

31. A second option, which would allow institutions to retain all of any new income from fees, would be to offer students unsubsidised loans to cover the cost of fees above £3,300 per year while continuing to provide fully subsidised loans up to £3,300. A student on a 3-year course might therefore, when they graduate, have up to three loans to repay at two different rates of interest: the first two would be the loan for the first £9,900 of the total fee and the total loan for maintenance, both of which

[33] The total teaching grant (in estimated 2010 terms) and full-time undergraduate student numbers from this institution are used for illustrative purposes only rather than to imply that this institution specifically would set its fees at the maximum level. These figures are provisional for 2008-9 and the grant for one institution had yet to be determined so this was estimated using 2007-8 data.

would accrue interest only at the rate of inflation. The third would be a loan for the additional fee (hereafter called the top-up loan), which would accrue a real rate of interest. It is likely that this rate of interest would take into consideration both the Government's cost of borrowing and the additional taxpayer subsidy incurred by these students taking longer to pay off their subsidised loans.[34]

32. This would mean that graduates of courses charging the highest fees would face both larger loan debts and additional interest payments. Under the income-contingent repayment system, the actual amount of real terms interest payable on the top-up loan by an individual graduate would depend both on the amount borrowed and on the individual's earnings. Because students from lower income households would be more likely to meet the cost of this higher fee through the top-up loan rather than parental contributions, this model might be more equitable if some way were found to reduce the interest payments on additional loans.[35]

33. The simplest way to do this would be to require all graduates to contribute a higher proportion of their income towards loan repayments. This would reduce interest payments for those with top-up loans and would also reduce the overall taxpayer subsidy on loans.[36] Recent research showing the extent of the total burden of loan repayments, indirect taxation, and other contributions on young graduates cautions against increasing the rate of repayment in the earliest stages of a graduate's career.[37] A variation on this option would be to increase the rate of repayment once graduates passed a second earnings threshold, so that the rate of repayments accelerated for the average graduate in mid-career. A higher rate of repayment is unlikely, however, to appear equitable to any students paying less than the maximum annual fee, since their rate of repayment would increase in order to decrease the interest rate for those paying more.

[34] It is assumed that, in the interests of equity, the graduate would pay off any unsubsidised loan first, to minimise interest payments. This would mean that it would take longer to pay off any subsidised loan. The longer the graduate takes to pay off their loan, the higher the taxpayer subsidy they receive on this loan. A longer repayment period would also mean a higher proportion of students having some debt written off after 25 years.

[35] The possibilities outlined below relate to student repayments and could of course be applied to any of the options under discussion. We discuss them with particular reference to this model, however, since it requires the highest interest payments and its mixture of subsidised and unsubsidised loans means that the interest rate would be inflated by the need to account for a higher subsidy on other loans.

[36] Because part of the cost to the Government, and therefore the level of subsidy, arises from the length of time the subsidy is needed. Increasing the rate of repayment for all students would mean that the 'savings' on the subsidised loan could be used to offset the interest rate on the unsubsidised loan.

[37] Bosanquet et al., *The Class of 2007: Inaction sinks the Ipod generation* (Reform: October 2007). The report suggests only half of the average salary for graduates aged 21-35 will remain after these payments by 2012. The Government's recent announcement of the optional repayment holidays on student loans could also be interpreted as an acknowledgement of the level of obligations faced by young taxpayers.

34. A second option would be to attempt to limit the take-up of top-up loans by students with higher household incomes, who are more likely to be in receipt of parental or household contributions. This would reduce the number of students taking longer to pay off the subsidised part of their loan, would therefore reduce the level of subsidy required, and hence the amount of interest charged.[38] Institutions charging the higher fee could follow the Australian model by offering a discount on the additional fee to those who pay it upfront. The presentational costs of such a measure, however, are likely to outweigh any potential economic savings. In other words, a discount on upfront payments is likely to be perceived as running counter to the policy of widening participation – it would be seen as a discount for the rich.

35. Neither of these options to reduce the interest rate to help students paying the higher fee is, therefore, without its problems. An alternative approach would be to provide fee waivers to reduce the loan liability of students from lower-income households. For example, institutions might provide full or partial fee waivers to students in receipt of substantial government grants. It is likely, under this scenario, that there would be an enhanced role for the Office for Fair Access (OFFA) in determining whether these fee waivers were sufficient to ensure fair access for under-represented groups. The question of fee waivers is discussed further below.

36. So whatever the approach adopted, the introduction of differential terms for student borrowing would remain potentially problematic. Furthermore, the taxpayer could end up paying more if financially literate students with a substantial institutional bursary or parental contribution towards maintenance costs nevertheless take out additional maintenance loans, which would be available on more favourable terms, in order to cover the cost of additional fees.

Option C: partial subsidy

37. The third option, therefore, considers whether a means might be found which avoids some students paying real rates of interest on part of their loans, whilst allowing institutions to retain the income from student fees. It involves a partially subsidised loan for the entire fee for all students, whatever the level of the fee, and a loan on the same terms for maintenance – i.e. all loans would attract a small real terms rate of interest.

38. The advantage of this option over charging real rates of interest only on the top-up loan is that students would continue to be eligible for a single loan for the whole of their tuition fee. There would therefore be no advantage in paying fees through maintenance loans, as all loans would be subject to the same rate of interest. This option also has the advantage of simplicity from

[38] Because it is assumed that the Government would set the rate of interest at a level to cover the costs of any additional subsidy.

the point of view of the student, and it avoids some graduates paying significantly higher rates of interest on fee loans for some courses than others, which runs the consequential risk that this might become a factor in the choices of poor students in particular.

39. Because there is less risk than under Option B of increasing the take-up of maintenance loans, Option C represents perhaps the more efficient way of maintaining public expenditure at around its current levels. It would be relatively straightforward, moreover, to reduce the overall subsidy further by raising the interest rate, were it deemed strategically desirable to allocate part of projected taxpayer expenditure on student loans to other areas of student support or to institutions.[39]

40. This approach might well encounter some resistance from students, since it would result in increased costs for all students, including those opting for cheaper courses, in order to help pay for those on courses charging the highest fees. The additional borrowing associated with each above-inflation rise in the average fee charged across the sector would reduce the subsidy and increase standard interest rates for all students. This option might therefore suggest the need to enhance the mandatory bursary provision for students from lower-income households, regardless of the fee paid.[40]

41. Table 4 below illustrates the effect of this policy – reducing the subsidy so that the forecast cost of the RAB charge is held at around its current level – under the scenarios of a £5,000 and £7,000 fee cap. It shows first the cost of continuing to provide fully subsidised loans – in other words, the RAB charge is the rate required to provide loans at zero real rate of interest. It then shows the cost of the reduced subsidy – in other words, the RAB charge is the rate required to keep taxpayer costs at around their current estimated level.

[39] For example, to enhance financial support for part-time students.

[40] Some of the issues relating to bursaries, widening participation and fair access will be explored in a forthcoming HEPI report.

Table 4: Impact of Option C on student borrowing

	Fee cap		
	£3,300	**£5,000**	**£7,000**
FULL SUBSIDY[1]			
Total fee loan (£m)[2]	2,260	2,740	3,020
Total maintenance loan (£m)[3]	2,900	2,900	2,900
Total combined fee & maintenance loan (£m)	5,160	5,640	5,920
RAB charge on total fee loan[4]	33.0%	34.4%	35.4%
RAB charge on total maintenance loan	21.0%	21.0%	21.0%
Combined RAB charge on total fee & maintenance loan	26.3%	27.5%	28.3%
Cost of combined RAB charge on total fee & maintenance loan (£m)	1,360	1,550	1,680
REDUCED SUBSIDY[1]			
Total combined fee & maintenance loan (£m)	5,160	5,640	5,920
Cost of combined RAB charge on total fee & maintenance loan (£m)	1,360	1,360	1,360
Combined RAB charge on total fee & maintenance loan	26.3%	24.1%	23.0%
Reduction in subsidy	0.0%	12.6%	19.2%
Estimated real rate of interest on any student loan	0.0%	0.3	0.5

Notes:

[1] Figures are rounded to the nearest £10 million and given in steady state 2010 terms.

[2] Figures relate to EU and English students only. Take-up of fee loans is assumed to be 80 per cent.

[3] This figure is derived from the latest DIUS internal estimates of total maintenance loans in 2010 steady state terms and assumes an 82 per cent take-up of these loans.

[4] Under a £5,000 fee cap, the higher RAB charge of 41 per cent applies only to anticipated additional borrowing above the total loan under a £3,300 fee cap. Therefore the overall RAB charge is 34.4 per cent. Under a £7,000 fee cap, the RAB charge of 42.5 per cent applies only to borrowing above the total loan under a £3,300 fee cap. Therefore the overall RAB charge is 35.4 per cent.

42. Because the RAB charge increases with borrowing, the reduction in the subsidy is more substantial with a £7,000 fee cap than with a £5,000 fee cap. Under the assumptions in Table 4, maintaining the current level of taxpayer subsidy on fee and maintenance loans (approximately £1.4 billion) with a fee cap of £5,000 would require the overall subsidy to reduce from 27.5 per cent to 24.1 per cent of the value of the total loan. This is equivalent to a 12.6 per cent reduction in the total subsidy. With a £7,000 fee cap the subsidy would reduce from 28.3 per cent to 23.0 per cent of the total loan, which is equivalent to a 19.2 per cent reduction in the subsidy.

43. If we assume that a 100 per cent reduction in the original subsidy would require a real interest rate of around 2.5 per cent[41] then a proportional real

[41] The discount rate on student loans is currently 2.2 per cent but the rate of interest would need to take into account the longer period it would take graduates to pay off loans of equivalent value compared with current arrangements and the additional unpaid debt with an increased loan programme (assuming repayment rates remained at their current level). Note that the use of a real terms interest rate of 2.5 per cent above inflation to eliminate the taxpayer subsidy has been used in recent modelling by the Institute for Fiscal Studies (Dearden et al., *Higher education funding reforms in England*, pp.23-24).

terms interest rate with fee caps of £5,000 and £7,000 and a reduced subsidy would need to be around 0.3 per cent and 0.5 per cent respectively.

Option D: Upfront payment beyond the current maximum

44. A final scenario is one in which the Government would allow the maximum fee level to rise but with no government loan beyond the current fully subsidised maximum. This model would mean that, in contrast to the previous three options, some students might not be able to defer all of their fee payments unless they were able to gain access to a commercial loan; if they could not obtain a commercial loan, they would have to pay part of the fee upfront. Under this option, it would no longer be possible to claim that every potential student would be able to meet the cost of a course no matter what the means of their household. The option of partial upfront payments might be attractive, however, if it was felt that additional household contributions and institutional financial assistance were more politically feasible than increases in student borrowing.

45. This model would not entail any changes to the current borrowing arrangements, but would increase expectations of institutional financial aid. In other words, it would be expected that institutions charging higher fees would provide fee waivers (or equivalent upfront payments) to students from low- and middle-income families, with the aim of ensuring that these students were not deterred from applying to the most expensive courses by the additional costs incurred. The considerable difficulty with this would be in determining reasonable household contributions towards what might be a substantial upfront fee payment. If these assumptions were misjudged it could have a significant impact on students' ability to choose freely between courses. The fee waivers and enhanced role for OFFA mentioned in relation to Model B (paragraph 35), and described below, would be even more critical if this option were taken, to ensure that arrangements were in place to mitigate the risk that students from families who may not be able to afford to pay might be unable to select courses charging the highest fees.

Fee Waivers

46. It has been suggested in paragraphs 35 and 45 above that institutions might provide full or partial fee waivers to students from lower-income households on any fee above the current maximum. This would be particularly important under Option D, but would also need to be considered for each of the other three options too. In Option D upfront fees are required, whereas in none of the alternatives – Options A, B and C – is that the case and therefore the means of the student's family need not, in theory, be a constraining factor in their ability to enter higher education. From a strictly logical perspective therefore, there would be no need for students from lower-income households to receive fee waivers as part of a

package of financial support, since the higher fee could be covered by higher borrowing.

47. However, students from lower- and middle-income households would be taking a greater risk than their peers from better off-families: if their earnings after graduation were lower than anticipated they would have no family cushion, and even while they were at university they would have less prospect of family support. Government and universities are likely to be concerned that such students might be deterred from applying to the more expensive courses by the additional cost incurred, even if this cost were deferred until after graduation. In both Options B and C, moreover, the terms of borrowing would be less favourable than at present for students charged fees above the current maximum – indeed, for all students under Option C. Some consideration of what upfront support toward the cost of fees might be appropriate would therefore be germane in relation to any of the options described above.

48. Table 5 illustrates one method of calculating eligibility for waivers on any fee between the current maximum and a revised maximum of either £5,000 or £7,000, and show the fee waiver a student would receive if he or she were paying the maximum fee. In this case, the fee waivers are awarded in proportion to the amount of government maintenance grant received, up to assessed Residual Household Income of £41,800.[42]

Table 5: Fee waivers for illustrative levels of income

Residual Household Income (£)	Fee waiver (£5,000 fee)	Fee waiver (£7,000 fee)
26,270	1,700	3,700
27,500	1,581	3,441
30,000	1,340	2,916
32,500	1,098	2,390
35,000	856	1,863
37,500	703	1,530
40,000	635	1,381
41,800	585	1,272

49. The cost of these fee waivers to an institution charging higher fees would naturally depend on the number of courses charging higher fees and on the distribution of incomes among the student body. Tables 6, 7 and 8 illustrate the effect on fee income of providing fee waivers as described here for an institution of average size, charging fees of £5,000 and £7,000 on all courses. The calculations in Table 6 assume that the institution has a

[42] This income level is the current government threshold (in 2010 terms) below which no household contributions are assessed for any of the means-tested benefits available to full-time English undergraduates starting courses in 2008-9. Depending on the level of fee charged, it is likely that universities would offer considerably higher partial fee waivers than illustrated here and/or fee waivers beyond this level of household income, particularly if part of the fee were payable upfront. See Annex B for further explanation of the calculation of fee waivers.

'standard' distribution of student incomes (an average proportion from low income households). In Table 7, it is assumed that the institution has a significant number of students concentrated at the 'high end' of the income distribution (and thus a small proportion of students from low-income households). Table 8 assumes that the institution has a significant number of students concentrated at the 'low end' of the income distribution (and thus a large proportion of students from low-income households). Further explanation of these assumptions is provided in Annex C.

Table 6: Cost of fee waivers to average institution: 'standard' income distribution

	£5,000 fees[1]	**£7,000 fees[1]**
Total fee income (£m)[2]	35.6	49.8
New fee income (£m)[3]	12.1	26.3
Gross increase in fee income	51.5%	112.1%
Estimated cost of fee waivers (£m)[4]	5.0	11.0
Net increase in fee income	30.0%	65.4%
Proportion of new fee income retained by institution	58.3%	58.3%

Table 7: Cost of fee waivers to average institution: 'high-end' concentration

	£5,000 fees[1]	**£7,000 fees[1]**
Total fee income (£m)[2]	35.6	49.8
New fee income (£m)[3]	12.1	26.3
Gross increase in fee income	51.5%	112.1%
Estimated cost of fee waivers (£m)[4]	2.4	5.1
Net increase in fee income	41.5%	90.2%
Proportion of new fee income retained by institution	80.5%	80.5%

Table 8: Cost of fee waivers to average institution: 'low-end' concentration

	£5,000 fees[1]	**£7,000 fees[1]**
Total fee income (£m)[2]	35.6	49.8
New fee income (£m)[3]	12.1	26.3
Gross increase in fee income	51.5%	112.1%
Estimated cost of fee waivers (£m)[4]	6.4	14.0
Net increase in fee income	24.1%	52.5%
Proportion of new fee income retained by institution	46.8%	46.8%

Notes

[1] Figures are rounded to the nearest £100,000 and given in 2010 steady state terms.

[2] Total fee income is all fee income from full-time UK and EU undergraduates.

[3] New fee income is anything above the total fee assumed to be received in steady state with a £3,300 average fee.

[4] Fee waivers are calculated based on receipt of the Government grant so are received by English students only. It is assumed that the proportion of English students at the

average institution is the same as that for the sector as a whole (91 per cent of all full-time UK and EU students).

50. It can be seen that the benefit from the same level of fee would be much greater for those institutions with the smallest number of poor students, if they were to provide fee waivers on this basis. Under the simple illustrative example, an institution with a high proportion of students from low-income backgrounds would commit the equivalent of around 53 per cent of new fee income to these fee waivers, whilst an institution with a small proportion of such students would commit 20 per cent of new income.[43]

Conclusion

51. The system of higher education finance introduced in England in 2006 is among the most progressive in the world. However, some of the features that make it so progressive – the universal subsidised loan, repayments that are deferred and income contingent, for example – also make it extremely expensive for the taxpayer. The Government has estimated that it subsidises something like 33 per cent of the cost of the loans that it gives for fees. So the greater the total amount of fee raised by universities, at present, the greater the Government's financial commitment. It cannot be taken for granted that the Government will be willing to increase this commitment, even if it permits a higher fee to be charged in the light of the 2009 review.

52. This report has therefore examined how the system might be modified in ways that would allow for a higher fee cap but without increasing the public spending commitment to student support. One option would involve a portion of the income from institutions charging higher fees being used to help pay for continued fully subsidised loans. The remaining three options considered involve some move away from the principle of a fully subsidised loan for students up to the maximum fee. One of these options would require students to pay part of the fee upfront. This would represent a major break with the principles of the 2006 reforms, which established that no student would have to rely on their family for any part of the cost of tuition.

53. Under the present system, full loans are available to all students who pay fees, but no support for fees is provided beyond that: government grants and most institutional bursaries are intended to help with maintenance costs. Most of the models explored for fees in the future continue to have loans for the full fee, even at a higher level of fee – though on some models, not all of the loan is fully subsidised. The logic of the reforms introduced in 2006 was that parental means would be irrelevant when considering a student's ability to pay fees, because no fees are payable

[43] Of course it is likely that the majority of the courses on which the highest fees are charged will be within institutions with relatively few poorer students.

until the student has graduated and is earning. However, this view would need to be reassessed if higher fees were charged and particularly if part of the fee were payable upfront or if loans were available on less favourable terms.

54. Without quantifying the risk, this report explains that students from poor families are taking a greater risk than students from better-off families when they take on the commitments implied by going on to higher education. For example, if future income is not realized at the hoped-for level, then that will hit students from poor families harder than others. They are taking a greater risk in a very real sense and it is not simply a question of attitudes to debt; it is real and differential risk. That, of course, is the case under the present fee regime, but would become more of an issue if fees rise. The report has therefore briefly explored the financial implications of providing fee waivers in proportion to the government grant[44] on any fee above the current maximum to students from lower-income households.

55. One implication is that such fee waivers could eat significantly into universities' income from fees. That is true in general, but it is more so for institutions with large numbers of students from poor backgrounds than for those with fewer such students. The benefit from charging higher fees would therefore be greatest for those universities with the fewest poor students. The impact on institutions and on students themselves of the expected levels of institutional financial aid under a variable fee regime deserves detailed consideration. This is something that will be explored further in a forthcoming HEPI report.

[44] There are broader issues here relating to the most effective and appropriate forms of institutional support for poorer students: these will be addressed in more detail in a forthcoming HEPI report.

Annex A: Comparison of English and US household contributions

1. Table 1 below shows illustrative sources and levels of annual income and assets (in 2010 prices) for a household with the following characteristics:
   -Two parents (married)
   -Two children, including the prospective student.[1]

Table 1: Income & assets

Income / Asset Source	**Amount (£)**
Earnings	72,846
Unearned taxed income (e.g. Interest from regular savings)	525
Unearned untaxed income (e.g. Interest from tax-free savings)	525
Benefits (e.g. Child support)	1,051
Student income (e.g. Interest from savings)	53
TOTAL INCOME	**75,000**
Parents' savings	10,506
Student's savings	1,051
Savings in sibling's name	1,051
Home Equity	105,063
TOTAL INCOME & ASSETS	**192,670**

2. In order to work out the residual household income for the English assessment, the following deductions from gross income (in 2008 prices) were made:
   -£1,100 deducted for the dependent child
   -Employee pension contributions equal to 3.6 per cent of combined income[2]

3. In order to make work out available income for the US assessment, the following calculations were made on 2008 levels of income:
   -US income tax: 2008 rate for a married couple filing jointly
   -Medical costs: average monthly amount paid by US employees[3]

4. Residual household income was then linked to the government's published methodology for calculating means-tested payments (2008 levels). The amount of Estimated Family Contribution (EFC) was calculated using the CollegeBoard EFC Calculator.[4] The resulting assessed contributions were then uplifted to 2010 prices.

[1] The student's sibling is under 16 and therefore wholly dependent on the family. Note the US contribution would decrease significantly under either methodology used below if more than one child were in higher education.

[2] This is the average employee contribution to occupational pension schemes according to research by Mercer Consultancy in September 2007.

[3] See J. Gruber and E. Washington, 'Subsidies to employee health insurance premiums and the health insurance market', *Journal of Health Economics* 24:2 (March 2005). This figure was uplifted to 2008 levels for the purposes of the calculation.

[4] http://www.collegeboard.com/student/pay/add-it-up/401.html. The state of residence was given as California. For a detailed description of methodologies to calculate the EFC and the tax policies designed to encourage family savings see J. Russo, *Student Financial Aid: Lessons for the UK from the US* (The Oxford Centre for Higher Education Policy Studies, 2007).

Table 2: Assessed contributions

Assessment System	Assessed Contribution (£)
English system (Maximum means-tested assessment)	3,814
EFC (Federal Methodology)	
Parents	*13,987*
Student	*210*
Total EFC (FM) – £	14,197
EFC (Institutional Methodology)	
Parents	*13,202*
Student	*1,093*
Total EFC (IM) – £	14,295

Annex B: Value of fee waivers

Table 1: Value of fee waivers proportionate to grant

Lower limit of household income (£)	Grant received	Fee waiver (£5,000 fee) (£)	Fee waiver (£7,000 fee) (£)
0	2,980	1,700	3,700
26,270	2,980	1,700	3,700
27,500	2,775	1,581	3,441
28,750	2,567	1,460	3,179
30,000	2,359	1,340	2,916
31,250	2,150	1,219	2,652
32,500	1,942	1,098	2,390
33,750	1,734	977	2,127
35,000	1,525	856	1,863
36,250	1,320	737	1,604
37,500	1,261	703	1,530
38,750	1,202	669	1,456
40,000	1,143	635	1,381
41,250	1,083	600	1,305
41,800	1,057	585	1,272

1. The amount for which each student is eligible was calculated by assuming that a *notional* fee waiver would decrease proportionally for each £1 by which the government grant (following the July 2007 reforms) decreased. Thus a student receiving the full grant would receive the maximum fee waiver (equivalent to any fee over £3,300) and a student receiving the minimum grant of £50 would receive a fee waiver of £1. This meant that the fee waiver needed to reduce by 58 pence for every £1 reduction in the government grant under a £5,000 fee cap; and by £1.26 for every £1 reduction in the government grant under a £7,000 fee cap.

2. The *actual* fee waiver in this illustration is, however, only awarded to those with household income of £41,800 or less. Thus the minimum fee waiver, as shown here, is £585 under a £5,000 fee cap and £1,272 under a £7,000 fee cap. Students with residual household income up to £26,270 would receive the maximum fee waiver.

Annex C: Student income distribution intervals

Estimated distribution of students by income bands

Table 1: 'Standard' distribution

Income band	Lower limit of household income (£)	Upper limit of household Income (£)	% of student population
1	0	26,269	28.9
2	26,270	39,269	21.3
3	39,270	47,069	11.4
4	47,070	52,269	6.3
5	52,270	63,189	9.5
6	>=63,190	--	22.6

1. This distribution of students by household is based on that of all 16-18 year olds in full-time education, estimated by the Institute for Fiscal Studies from data in the Family Resources Survey (2005-06). For the sake of simplicity – and to aid the analysis in the report – the lower limit for band 2 was uplifted from £25,000 (the upper limit for receipt of the full grant in 2008 terms) to £26,270 (the upper limit in 2010 terms). The remaining lower limits were uplifted at the same rate and rounded to fit with the intervals for analysis of the whole population from the Family Resources Survey 2004-05 (see below).

Table 2: 'High-end' concentration

Income band	Lower limit of household income (£)	Upper limit of household Income (£)	% of student population
1	0	26,269	16.0
2	26,270	39,269	6.0
3	39,270	47,069	7.5
4	47,070	52,269	4.2
5	52,270	63,189	6.3
6	>=63,190	--	60.0

2. These figures are based on estimates published by the University of Cambridge in relation to their proposed new bursary scheme,[1] which suggest that around a third of students are anticipated to fall within the revised thresholds for government support (around £63,000 in 2010 terms). This has been revised upwards to 40 per cent on the basis that the available data on student incomes at this level is likely to underestimate the actual numbers with income under this threshold. The estimate of 22 per cent with household incomes between £0 and £39,269 is based on Cambridge's figures for the number of students in receipt of some form of government maintenance grant in 2006/7, for which the threshold was around £41,000. Within this group, Cambridge estimates that 16 per cent of its students have incomes of £26,270 or less. It is assumed that the remaining 18 per cent of students with incomes between £39,270 and £63,189 are distributed between these three bands in the same proportions as the equivalent population in the 'standard' distribution.

[1] http://www.admin.cam.ac.uk/news/press/dpp/2007091101

Table 3: 'Low-end' concentration

Income band	Lower limit of household income (£)	Upper limit of household Income (£)	% of student population
1	0	26,269	47.0
2	26,270	39,269	13.0
3	39,270	47,069	12.6
4	47,070	52,269	6.9
5	52,270	63,189	10.5
6	>=63,190	--	10.0

3. These figures are based on OFFA access agreements from the University of Huddersfield (proportion with incomes of £26,270 or less); the Universities of Edge Hill and Northampton (proportion with incomes of £39,270 or less, based on proportion in receipt of state maintenance grant (2006 arrangements)); and the University of Central Lancashire (estimated proportion with income under £63,190), all available at www.offa.org.uk. It is assumed that the 30 per cent of students with incomes between £39,409 and £63,189 are distributed between the three bands in the same proportions as the equivalent population in the 'standard' distribution.

Distribution of students *within* income bands

4. In order to estimate the cost of fee waivers, it was necessary to estimate the distribution of incomes of English students within these bands more precisely.

5. Summary results from Family Resources Survey (FRS) data, showing the proportion of the population falling between the income bands in the tables above, were available in relation to families with university-age children (see Table 1 above). In order to estimate the distribution of students *within* these income bands, we used analysis of FRS data for the whole population (2004-05) obtained from the DIUS. This analysis shows the proportion of the population with weekly income between £10 and £1,000, in £10 increments. For the sake of simplicity, the bands shown in the tables above were mapped straight onto this data, without allowing for any inflationary changes. This allowed for the estimate of the number of English students across the sector with income within £520 annual income bands up to £52,000.