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Behind the headlines

# Higher education funding in England: do the alternatives add up?

million+ is a university think-tank, working to solve complex problems in higher education through research and evidence-based policy.

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## Foreword

In the first of our *Behind the Headlines* series, *What's the Value of a UK Degree?*, we concluded that studying for a degree and funding higher education remain exceptionally good investments for the individual, the Treasury and the taxpayer.

The Coalition Government's higher education reforms radically altered the basis of university funding in 2012. Two alternatives have been proposed in England by different political parties – one in which the fee cap for full-time students is lowered to £6,000, the other based on a graduate tax. Questions remain about the sustainability of the 2012 system and its impact on participation, but few concrete details have emerged as to how these alternative proposals might work.

In this pamphlet, the third of the series, we have modelled the alternative proposals, using the 2012/13 system of higher education funding as a baseline and adopting two key assumptions: first that no greater costs should be incurred by the Treasury; second that investment in universities is maintained at 2012 levels.

The UK currently invests less in higher education than many competitor countries so the assumption about the unit of resource for teaching is regarded as a minimum.

The conclusions confirm that these alternative proposals are financially viable; lowering fees is likely to increase participation, lower inflation and bring wider economic benefits to taxpayers. Graduates would leave university with lower debts but they would not necessarily contribute less overall to the costs of their higher education. However, adjustments to the way in which the student loan book is accounted for by government would be necessary under a graduate tax option. This would also provide a more transparent basis on which to compare the economic costs and benefits of different funding systems.

It appears that the future of higher education funding is not yet settled. This research provides a robust evidence base to lead the debate and inform any alternative funding systems that might be proposed.

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**Dr Gavan Conlon**  
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The UK higher education sector is renowned for its strength, diversity and excellence and it is important that this reputation is maintained, upheld and enhanced over the next decade and beyond. Previous work by million+ and London Economics has established conclusively that higher education remains a good investment for both the Treasury and individuals<sup>1</sup>.

Investing in higher education, then, makes sense. But it is also important that Government spending on higher education is understood to be an investment in individuals, the stock of human capital and the long-term competitiveness of the United Kingdom, rather than as a cost that must be minimised.

### Participation and Aspiration

For the United Kingdom to compete internationally, it needs a well-funded higher education system with a high rate of participation and a diverse student body. The transformational, life-changing effects of higher education have been acknowledged by successive

Governments and funding policies need to encourage aspiration and support participation, including by those who wish to study for a degree and higher education qualifications later in life or on a flexible basis.

University applications and enrolments fell substantially in 2012-13 following the introduction of a maximum tuition fee of £9,000 in England. Whilst applications to study full-time have recovered slightly in the 2013-14 cycle<sup>2</sup>, there are legitimate concerns about the impact of the new fee regime on mature students and others from less traditional backgrounds. There is also evidence of substantial depressed demand for study on a part-time basis<sup>3</sup>, despite the introduction of fee loans for part-time students. This may point to wider issues associated with the headline tuition fee and the differentiated treatment of part-time and full-time study within the student support system.

### Alternative Funding Proposals

The higher education funding system in England has undergone rapid change over the past two years. Amidst some concerns about the sustainability and equity of the current funding model, two alternative funding models have been mooted, the first involving a maximum tuition fee of £6,000<sup>4</sup> and the second based on a graduate tax to cover the costs of fees<sup>5</sup>.

Given the potential for further debate about policy and funding, this pamphlet, the third in the *Behind the Headlines* series, explores these two proposals and compares them to the funding system introduced in England in 2012-13. The report builds on previous research undertaken by London Economics and million+ which mapped the resource flows between higher education institutions, students/graduates and the Exchequer arising from this 2012-13 higher education funding regime<sup>6</sup>. Taking the 2012/13 system, which involves a tuition fee capped at £9,000 as the baseline scenario (referred to in this pamphlet as the 2012 System), we consider the implications of two alternative funding proposals referred to as Alternative 1 (a tuition fee cap of £6,000) and Alternative 2 (a graduate tax or Higher Education Contribution System (HECS)).

Debates about the funding of higher education have frequently been confused by terminology. For example, the 2012 system has sometimes been described as a 'graduate tax system' on the basis that graduates contribute to the costs of their student fee and maintenance loans via HMRC and the tax system.

In fact there are there are clear distinctions between this system – where entry to higher education is linked with a fee – and a graduate tax system where there is no tuition fee.

A pure graduate tax might suggest a lifetime tax commitment based on earnings but for the purposes of this modelling, we have assumed that it would not be an open ended commitment. Instead, higher education would be free at the point of entry, with tuition fees being replaced by HEFCE funding and graduates contributing a stepped proportion of their taxable income through the standard taxation system for a set period of time following graduation. Graduates would therefore contribute to the costs of higher education according to the financial benefits they derive from participating, with the rates and conditions under which these contributions are made being set by government.

<sup>1</sup> million+ and London Economics (2013) *Behind the Headlines: What's the value of a UK degree?*

<sup>2</sup> Amongst England-domiciled applicants, UCAS applications for full-time courses to 22nd April 2013 increased by 9,469 or 2.3% compared to the 2012-13 cycle. However applications from England-domiciled applicants remain substantially (-32,668 or -7.2%) below the same point in the 2010-11 applications cycle.

<sup>3</sup> HEFCE (2013) Higher Education in England: Impact of the 2012 reforms

<sup>4</sup> Speech by Rt Hon Ed Miliband MP at the Labour Party Conference 2011, available from <http://bit.ly/q34WXk>. In 2011 Labour planned to fund the reduced cap on tuition fees by scrapping the planned cut in corporation tax for financial services and increasing the interest rate on the loans of the highest-earning graduates. Note that in January 2013 there were also reports that a £6,000 fee was among the options being considered by a Liberal Democrat a working party on higher education policy – see <http://ind.pn/13HwRun>

<sup>5</sup> The graduate tax or 'purer contribution' proposal was outlined in Liberal Democrats (2013) Policy Consultation Paper 111: Education and Skills, available from <http://bit.ly/15crQgz>. In March 2013 there were reports that graduate tax was also being considered by the Labour party – see <http://bit.ly/XQ5IRR>.

<sup>6</sup> million+ and London Economics (2013) *Behind the Headlines: Are the changes to higher education funding in England cost-effective?*

### Assumptions

The report assesses the resource implications of each proposal for the key stakeholders in the higher education system. It is important to note that the modelling rests on three underlying principles.

First, that demand for higher education is responsive to headline changes in the maximum tuition fee, albeit only to a relatively limited extent<sup>7</sup>. Second, that the per unit resource available to universities should be no lower than under the current system of fees and funding. Third, that the economic cost<sup>8</sup> to the Exchequer would be no more than is currently the case.

We have also assumed that a maintenance loan and grant system based on household income would apply under all three systems and that this would

also be subject to repayment via the tax system under conditions set by government. The cost of providing maintenance support has been factored into the modelling.

Whilst in *economic* terms we have adopted the principle of cost neutrality, there is a strong case for Government to increase investment in higher education since public expenditure on tertiary education as a percentage of GDP currently falls well below the OECD average, standing at 0.8% in 2009 compared to an OECD average of 1.3%<sup>9</sup>. If Government choose to invest more in higher education or in particular aspects of the funding system, the outcomes of the modelling discussed in this pamphlet would change.

**“There is a strong case for Government to increase investment in higher education since public expenditure on tertiary education as a percentage of GDP falls well below the OECD average.”**

<sup>7</sup> Specifically, London Economics assume that following a 100% increase in tuition fee, demand for higher education declines by 5% (i.e. an elasticity of demand equal to -0.05).

<sup>8</sup> The economic cost of a particular option is defined the total cost of a particular option (expressed in present value terms). The total economic cost includes the *accountancy cost*, or the actual resources spent undertaking the particular option, as well as the *opportunity cost*, which represents the benefit foregone associated with the next best option.

For instance, for a student attending university, the accountancy or direct cost associated with attendance is simply the tuition fee, while the full economic cost includes both the tuition fee and the value of the foregone earnings that would have been achieved whilst in university.

<sup>9</sup> TOECD (2012). Education at a Glance 2012. Countries spending more per student include Australia, Netherlands, Germany, USA and Sweden

**The analysis presented here shows that there are alternatives to the current system of higher education funding in England and in particular that:**

- > Both funding proposals – a maximum tuition fee of £6,000 (Alternative 1) and a Higher Education Contribution System (Alternative 2) – are financially viable.
- > It is possible to structure each alternative so as to preserve the unit of resource available to universities and result in no additional Treasury cost in economic terms over the repayment or contribution period.
- > Under a **£6,000 tuition fee** modelled on the parameters employed here, participation would most likely increase by approximately 12,500, producing a host of benefits for these individuals, society and the Treasury in the long-term<sup>10</sup>.

- > The short-term costs of funding these additional student places and the increased funding that would be required by universities could be recovered over a 30 year period through amended repayment terms for graduates.
- > Lower tuition fees would reduce inflation and government spending on, for example, inflation-linked welfare benefits and the government's cost of borrowing.
- > Less is known about likely rates of participation under a Higher Education Contribution System but modelled on the parameters presented here, Treasury borrowing would decline marginally compared to the 2012 System and the system would in *economic* terms cost no more than the current system.
- > From an accountancy perspective the introduction of a Higher Education Contribution System would lead to an increase in BIS departmental expenditure and an adjustment in the accountancy rules would be required to negate this.
- > Students would graduate with lower levels of debt under both the £6,000 fee cap and the Higher Education Contribution System but this does not necessarily mean that graduates would contribute less to the costs of their higher education over their working lifetimes since the rate and extent of their contribution would be determined by Government.

<sup>10</sup> million+ and London Economics (2013) *Behind the Headlines: What's the value of a UK degree?*

## Key Findings continued

The analysis highlights the need to consider the participation implications of any funding proposal and also raises questions about the relative influence of **economic costs** versus **accountancy costs** in political decision making. The disparity between the real (economic) and apparent (accountancy) costs associated with the Higher Education Contribution System arises from the way in which account is taken of the student loan book in respect of departmental expenditure. This raises fundamental questions about how the merits of a particular funding proposal should be assessed and points to the need for accounting rules to be reviewed so that accurate comparisons can be made about the costs and benefits to taxpayers of different higher education funding systems.

This is, of course, only one part of the story. Successive governments have focused on funding and student support systems for young, full-time students. When reviewing options for higher education funding, there is a strong case for a more holistic approach. Such an approach would take into account the diversity of the student profile, participation by those who want to study for a degree later in life or on a more flexible basis. It would also consider the potential impact of any undergraduate funding system on postgraduate funding and participation and on participation by students who wish to study for a second degree or for another higher education qualification.

**“There is a need for Treasury accounting rules to be reviewed so that accurate comparisons can be made about the costs and benefits to taxpayers of different higher education funding systems.”**

## Background

**The higher education funding system in England has changed radically. Following the May 2010 General Election and the formation of a Coalition Government that pledged to eliminate the structural deficit by 2014/15, a number of changes to the higher education funding regime were proposed. These proposals were voted through Parliament in December 2010 and have been implemented for the 2012/13 cohort of undergraduate students.**

The most significant changes to higher education funding at undergraduate level include:

- > The removal of teaching funding provided by the Higher Education Funding Council for England (HEFCE) relating to predominantly classroom taught subjects (funding for high-cost subjects such as medicine has been retained);

- > An increase in the maximum tuition fee that higher education institutions are able to charge to £9,000 per annum for full-time undergraduates, subject to an Access Agreement with the Office for Fair Access (OFFA);
- > An increase in the scale of tuition fee loans available to cover increased undergraduate tuition fees;
- > An increase in the maintenance loans and grants available to eligible full-time undergraduates;
- > The introduction of tuition fee loans for eligible part-time undergraduates;
- > The introduction of higher tuition fee loans for individuals studying at private institutions;
- > Amendments of tuition fee and maintenance loan conditions to incorporate:
  - A positive and variable real interest rate on outstanding loans (dependent on earnings);
  - An extension of the repayment period before debt write off;
  - An increase in the nominal earnings threshold before loan repayment commences; and
  - The introduction of the National Scholarship Programme with matched funding from the higher education sector<sup>11</sup>.

<sup>11</sup> Note HEFCE has announced a revised approach to the distribution of National Scholarship Programme funds in 2014-15. See <http://www.HEFCE.ac.uk/media/HEFCE/content/pubs/2013/201302/HEFCE%202013-02.pdf>

Figure 1: Resource flows in 2012/13 – 2012 System

2012/13		To			
		Students/ Graduates	Institutions	Exchequer	Total
From	Students/Graduates	NA	£7,340m	(£5,468m)	<b>£1,872m</b>
	Institutions	(£7,340m)	NA	(£314m)	<b>(£7,653m)</b>
	Exchequer	£5,468m	£314m	NA	<b>£5,781m</b>
	<b>Total</b>	<b>(£1,872m)</b>	<b>£7,653m</b>	<b>(£5,781m)</b>	

Source: London Economics' analysis (2013). All estimates are presented in present value terms. Figures in brackets imply a contribution of resources (i.e. a cost or expenditure). The total contribution of 2012/13 cohort students/graduates to the cost of their higher education stands at (£1.872 billion), compared to a contribution of (£5.781 billion) from HMT. HEIs receive this resource of £7.653 billion from the combined contributions of students/graduates and the Treasury. All results presented cover the income and expenditure incurred in both the short term and longer term (i.e. while students are engaged in HE until their student loans are written off 30 years following graduation).

**“The higher education funding system in England has changed radically. Proposals voted through Parliament in December 2010 have been implemented for the 2012/13 cohort of undergraduate students.”**

In previous analysis undertaken for the *Behind the Headlines* series, London Economics factored in a **30,000** reduction in UK-domiciled undergraduate students entering English higher education institutions (HEIs) between 2010/11 and **2012/13**<sup>12,13</sup>, resulting in a cohort of approximately 300,000 full-time and 47,000 part-time first degree undergraduates students. The resource flows between the Treasury, higher education institutions and students/graduates in 2012/13 under this baseline scenario are shown in Figure 1.

In present value terms, this means:

- > Under the 2012 System which entails an average fee of **£8,142**<sup>14</sup>, the 2012/13 student cohort will contribute a total of **£1.872 billion** (in present value terms) to the cost of undertaking their degrees.
- > The contribution from the Treasury associated with the 2012/13 cohort is expected to be **£5.781 billion**.

<sup>12</sup> London Economics modelled the impact of changes in student support arrangements on higher education participation. In written evidence to the BIS Select Committee Inquiry into higher education fees and funding, London Economics forecast that the change in fees and funding arrangements would result in a reduction in first degree undergraduates of approximately 45,000 (both full-time and part-time) - see <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmbis/885/885.pdf>. In the *Behind the Headlines* series, we utilise a more conservative estimate of the reduction in student numbers of 30,000.

- > Following the changes to higher education fees and funding, higher education institutions are in aggregate expected to receive approximately **£7.653 billion** in funding for the 2012/13 cohort.
- > For the 2012/13 cohort of students, higher education institutions receive approximately **5%** of their teaching income direct from the Treasury, via the Department for Business, Innovation and Skills and then HEFCE.

**“From 2012/13, higher education institutions receive approximately 5% of their teaching income direct from Government. The remainder is provided indirectly via student loans.”**

<sup>13</sup> Of the estimated 30,000 reduction in undergraduate students, it is assessed that approximately 22,600 are full-time students and 7,400 are part-time students

<sup>14</sup> The average fee was calculated directly from Access Agreement information contained on the Office for Fair Access website. The average fee is calculated across all institutions, weighted by student numbers, and is net of stated fee waivers.

## Exchequer Expenditure in detail

**Table 1: Exchequer Expenditure – 2012 System**  
(net present value over 30 year period)

FT Student Maintenance grants	(£1,259m)
FT RAB Maintenance loan cost	(£1,298m)
FT RAB Fee loan cost	(£2,798m)
PT RAB cost	£33m
National Scholarship Fund	(£47m)
<b>Total Student Support</b>	<b>(£5,369m)</b>
FT HEFCE grant	(£292m)
PT HEFCE grant	(£22m)
<b>Total HEFCE funding</b>	<b>(£314m)</b>
FT RAB cost for private students	(£71m)
FT Maintenance grants for private students	(£28m)
<b>Total Exchequer Funding</b>	<b>(£5,781m)</b>
FT RAB charge (% of loan value)	39.6%
PT RAB charge (% of loan value)	-7.5%

London Economics (2013). Based on 299,640 FT and 47,243 PT first time undergraduates attending public institutions, and 6,000 students attending privately funded institutions.

Looking in detail at Exchequer expenditure under the 2012 System, the analysis demonstrates that of the **£5.781 billion** spent by the Exchequer, approximately **95%** is allocated to student support with only **5%** being allocated through HEFCE teaching funding.

However, the presentation of the Exchequer costs masks a number of issues that are very important when comparing different options.

Specifically, Table 1 presents the **economic cost** of the 2012 System in present value terms rather than cashflows, borrowing or Departmental expenditure from an accounting perspective. These methodological differences become increasingly important when trying to understand the costs and benefits of alternative funding models. They also raise broader questions about whether it is the economic costs and benefits of a particular funding proposal that should be assessed when decisions are being made about the allocation of scarce public resources (as per HM Treasury Green Book) or accountancy costs.

In Table 1, the economic costs associated with maintenance loans (available to full-time students only) and tuition fees (available to all students) for the 2012/13 cohort stood at **£4.124 billion**.

**Table 2: Exchequer Borrowing – 2012 System**

	<b>Borrowing</b>	<b>Economic Cost</b>	<b>BIS Account cost</b>
Student Loan Book (FT and PT)	(£10,980m)	<i>(£10,980m)</i>	<i>(£10,980m)</i>
Student Loan Repayment (FT and PT)		£6,846m	£6,846m
Student Loan Costs (FT and PT)		(£4,134m)	(£4,134m)
Student Maintenance Grants (FT)	(£1,259m)	(£1,259m)	(£1,259m)
HEFCE Teaching Grant	(£314m)	(£314m)	(£314m)
Other Student Support	(£75m)	(£75m)	(£75m)
<b>Total</b>	<b>(£12,627m)</b>	<b>(£5,781m)</b>	<b>(£5,781m)</b>

London Economics (2013). Based on 299,640 FT and 47,243 PT first time undergraduates attending public institutions, and 6,000 students attending privately funded institutions. For information, in 2010/11 when there were approximately 30,000 more students, the corresponding estimates were as follows: Student Loan Book FT and PT (£6,418m); Student Loan Repayment (FT and PT) £4,740m; Student Loan Costs (FT and PT) (£1,678m); Student Maintenance Grants (FT) (£1,082m); HEFCE Teaching Grant (£4,185m). Total borrowing (£11,685m); Total Economic cost (£6,889m); and BIS Account Cost (£6,945m). Note that in the Table above, the column totals are arrived at by adding all items that have not been presented in italics.

Given the estimated Resource Accounting and Budgeting (RAB) charge of 39.6% for full-time students and -7.5% for part-time students<sup>15</sup>, this implies that the student loan book for the 2012/13 cohort stands at approximately **£10.980 billion**. Of this, **£6.864 billion** will be repaid in the thirty years following graduation and **£4.124 billion** will remain outstanding at the point of write off.

If we assume that maintenance grants, HEFCE teaching funding and other smaller student support items are also funded through borrowing, this

implies that the Exchequer borrowing requirement for a cohort of students under the 2012 System stands at **£12.627 billion**. This is summarised in Table 2.

Under these arrangements, although borrowing stands at **£12.627 billion** for the 2012/13 cohort, the **economic cost** of the system – and in this case the accountancy cost – stands at **£5.781 billion**. This is because accountancy rules dictate that it is only the estimated value of the RAB charge associated with student loans that is counted within the BIS departmental accounts, rather than the total value of the loan.

<sup>15</sup> Loans provided to part-time students are likely to generate revenue for the Treasury, reflecting the smaller size of the loans (owing to the continued ineligibility of part-time students for maintenance loans), the positive real interest rate charged on

them and the fact that part-time students often combine work and study and therefore achieve earnings in excess of the repayment threshold earlier than full-time students.

## What are the alternatives?

To date, two alternative funding proposals have been proposed. The first is for a tuition fee capped at £6,000; the second for a system whereby fees are eliminated and graduates contribute a stepped proportion of their taxable income through the standard taxation system for a set period of time following graduation, referred to here as the Higher Education Contribution System (HECS).

Using the 2012 System as the baseline for comparisons, we have modelled these funding alternatives in an attempt to understand the potential costs and benefits of each proposal. Throughout, we have adopted the underlying principle that a) the economic cost to the Exchequer would be no more than is currently the case; and b) the per unit resource available to universities should be no lower than under the current system of fees and funding.

### Alternative 1: £6,000 fee

The first alternative involves a reduction in the headline tuition fee from a maximum of £9,000 to **£6,000**.

Since we assume that demand for higher education is somewhat responsive to headline changes in the maximum tuition fee charged, the reduction of tuition fees from a sticker price of £9,000 to £6,000 would be expected to increase demand for higher education. Our modelling suggests that there would be a 10,098 increase in the number of full-time students and a 2,638 increase in the number of part-time students which would produce a host of benefits for these individuals, society and the Treasury in the long-term.

Whilst all students would be borrowing £6,000 rather than £9,000, higher rates of participation would create increased demand for maintenance loans and grants. Compared to the 2012 System, the immediate additional cost to the Exchequer associated with this expansion in student numbers stands at approximately **£200 million** (made up of £70 million in additional HEFCE Teaching Grant, £49 million in additional maintenance grant costs and £81 million in new loan costs<sup>16</sup>).

<sup>16</sup> Note that students would contribute a further £203 million in additional tuition fees of which some of this cost is carried by the Exchequer through the RAB charge on tuition fee loans.

Without any compensating increase in HEFCE funding, the reduction in the gross fee would make universities worse off by approximately **£2.028 billion**. This outcome is offset in part by the assumption that universities are no longer required to offer bursaries and scholarships to prospective students on fee levels in excess of £6,000 ('saving' institutions approximately **£356 million**).

Following our underpinning assumptions, the funding gap associated with higher student numbers and lower tuition fee income would need to be made up through increased HEFCE teaching funding from the Exchequer. If the unit of resource is to be maintained then the Exchequer would need to provide an additional **£1.720 billion** in HEFCE funding<sup>17</sup>.

By increasing the maximum real interest rate levied on student loans from the current range of **0% to 3.0%** for graduates earning between **£21,000 and £41,000** and **3.0%** thereafter, so that the maximum real interest rate levied stood at **4.8%** instead of 3.0%, the RAB charge on the student loan book would fall from **39.6%** on a loan book of approximately £10.980 billion<sup>18</sup> under the 2012 System compared to **27.9%** on a loan book of approximately £9.137 billion<sup>19</sup> under Alternative 1. This potential amendment to the loan system would generate the £1.720bn savings necessary.

<sup>17</sup> Given there is an increase in the size of the student cohort, universities receive further funding to maintain the unit of resource from additional HEFCE funding and the tuition fees incurred by the additional 12,500 students (amounting to approximately **£273 million**). Of this additional resource requirement, £70 million is provided by

**Table 3: Exchequer Expenditure – Option 1 (net present value over 30 year period)**

FT Student Maintenance grants	(£1,302m)
FT RAB Maintenance loan cost	(£953m)
FT RAB Fee loan cost	(£1,513m)
PT RAB cost	£68m
National Scholarship Fund	(£47m)
<b>Total Student Support</b>	<b>(£3,747m)</b>
FT HEFCE grant	(£1,867m)
PT HEFCE grant	(£167m)
<b>Total HEFCE funding</b>	<b>(£2,034m)</b>
<b>Total Exchequer Funding</b>	<b>(£5,781m)</b>
FT RAB charge (% of loan value)	27.9%
PT RAB charge (% of loan value)	-22.0%

London Economics (2013). Based on 309,738 FT and 49,881 first time undergraduates attending public institutions. When assessing this alternative, we have not incorporated the funding that is currently allocated to those students attending privately funded institutions. Re-instating this resource requirement would cost £99 million, which is the equivalent of raising the interest charged on the highest earning graduates from 4.80% to 4.95%.

the Exchequer in HEFCE Teaching grant and the remaining £203 million provided by new students in tuition fees (which in turn is part subsidised by the Exchequer).

<sup>18</sup> Equating to £4.124bn in economic costs

<sup>19</sup> Equating to £2.398bn in economic costs

## What are the alternatives? continued

Since the earnings threshold (£21,000) and the repayment rate (9% of income above £21,000) remains unchanged, graduates would make the same monthly contribution as under the 2012 System but could potentially repay for a longer period of time.

In other words, by amending some of the repayment terms for student loans, so that a greater proportion of maintenance and fee loans are recovered, and reallocating these cost savings to HEIs in the form of additional HEFCE funding,

it is possible to accommodate a substantial reduction in the tuition fee charged. When modelled on these parameters Alternative 1 is economically cost neutral to the Exchequer.

The breakdown of Exchequer borrowing requirements, economic costs and the 'BIS Account Costs' is presented in Table 4 below.

Table 4: Exchequer Borrowing – Alternative 1 (net present value)

	Borrowing	Economic Cost	BIS Account cost
Student Loan Book (FT and PT)	(£9,137m)	(£9,137m)	(£9,137m)
Student Loan Repayment(FT and PT)		£6,739m	£6,739m
Student Loan Costs (FT and PT)		(£2,398m)	(£2,398m)
Student Maintenance Grants (FT)	(£1,302m)	(£1,302m)	(£1,302m)
HEFCE Teaching Grant	(£2,034m)	(£2,034m)	(£2,034m)
Other Student Support	(£47m)	(£47m)	(£47m)
<b>Total</b>	<b>(£12,520m)</b>	<b>(£5,781m)</b>	<b>(£5,781m)</b>
Difference from 2012 System	£108m	0	0

London Economics (2013). Based on 309,738 FT and 49,881 PT undergraduates first time undergraduates attending public institutions. Note that in the Table above, the column totals are arrived at by adding all items that have not been presented in italics.

### Impact on inflation and Government borrowing

Previous work by million+ and London Economics shows that there would be substantial long-term benefits associated with higher rates of participation in higher education<sup>20</sup>, resulting from enhanced earnings and employment outcomes for these graduates.

Because tuition fees form part of the basket of goods which the ONS uses to calculate inflation, the increase in fees to £9,000 under the 2012 System has also increased inflation and the costs of government borrowing for three years commencing in 2012.

Conversely, a lower tuition fee would be expected to reduce inflation and thereby the cost of government debt and welfare payments that are linked to inflation<sup>21</sup>.

Replacing part of the current tuition fee with increased HEFCE funding and imposing marginally higher loan interest rates on the highest earning graduates could therefore potentially produce a number of economic benefits at no additional cost to the Exchequer and with no reduction in the unit of resource for universities.

“A lower tuition fee would be expected to reduce inflation and thereby the cost of government debt and welfare payments that are linked with inflation.”

<sup>20</sup> million+ and London Economics (2013) *Behind the Headlines: What's the value of a UK degree?*

<sup>21</sup> million+ and London Economics (2013) *Behind the Headlines: Are the changes to higher education funding in England cost-effective?*

## What are the alternatives? continued

**Table 5: Exchequer Expenditure – Option 2  
(net present value over 30 year period)**

FT Student Maintenance grants	(£1,259m)
FT RAB Maintenance loan cost	(£971m)
FT RAB Fee loan cost	-
PT RAB cost	-
National Scholarship Fund	-
<b>Total Student Support</b>	<b>(£2,230)</b>
FT HEFCE grant	(£7,002m)
PT HEFCE grant	(£652m)
<b>Total HEFCE funding</b>	<b>(£7,653m)</b>
HECS Receipts	£4,102m
<b>Total Exchequer Funding</b>	<b>(£5,781m)</b>
FT RAB charge (% of loan value)	29.4%
PT RAB charge (% of loan value)	-

London Economics (2013). Based on 299,640 FT and 47,243 PT undergraduates first time undergraduates attending public institutions. When assessing this alternative, we have not incorporated the funding that is currently allocated to those students attending privately funded institutions. Re-instating this resource requirement would cost £81 million, which is the equivalent of raising the HECS contribution rate by 0.04% on earnings above £10,000.

### Alternative 2: Higher Education Contribution System

The second potential alternative that we have modelled involves **replacing undergraduate tuition fees with comparable HEFCE Teaching funding, which would ultimately be paid for through a Higher Education Contribution System (HECS)** that levies a proportion of graduate taxable income for an agreed period of time.

The abolition of tuition fees could well incentivise participation in higher education but given uncertainty about the precise nature of student demand under a HECS system, we have adopted a cautious approach. We model participation at 2012/13 levels but we also consider the implications of demand returning to 2010/11 levels. It is envisaged here the HECS would apply to tuition fees only as it is possible that abolition of the tuition fee may alter student and family decisions about taking out a maintenance loan. We have assumed that maintenance loans are still subject to the existing system of repayment and write-off i.e. 9% of income over £21,000 for 30 years or until the debt is repaid.

With the removal of undergraduate tuition fees, higher education institutions would 'lose' approximately **£7.340 billion** in annual funding, which would need to be made up through increased HEFCE Teaching funding to guarantee that the unit of resource was unchanged.

<sup>22</sup> If participation returns to 2010/11 levels, then under the HECS, the approximate size of the student loan book would stand at £3.55 billion instead of the current £10.89 billion.

<sup>23</sup> If student numbers returned to 2010/11 levels (i.e. an increase of 30,000 students, the HECS contribution rate would need to increase by a further 0.3% i.e. to 2.3%/3.05%/3.8% over a 30 year period or to 1.8%/2.55%/3.3% over a 40 year period.

The abolition of tuition fees would lead to a substantial reduction in the size of the student loan book, from **£10.890 billion** in 2012/13 to **£3.302 billion per cohort**<sup>22</sup>. This, combined with the associated fall in the RAB charge from **39.6%** to **29.4%**, results in an Exchequer saving of **£3.163 billion** per cohort.

In the short-term the Government would need to borrow **£4.102 billion** to cover the remaining gap in funding. To recover these costs over a 30 year period via a Higher Education Contribution System, we have modelled a system under which graduates would contribute **0%** of their annual earnings below £10,000; **2.00%** of earnings between £10,000 and £25,000; **2.75%** of earnings between £25,000 and £42,000; and **3.50%** of earnings over £42,000. We have assumed a 30 year contribution period in line with the 2012 System. If it was decided that a Higher Education Contribution System should operate over a 40 year period then graduates would contribute 0% of their annual earnings below £10,000; **1.50%** of earnings between £10,000 and £25,000; **2.25%** of earnings between £25,000 and £42,000; and **3.00%** of earnings over £42,000<sup>23</sup>.

Modelled on these lines, a Higher Education Contribution System, whereby the Exchequer borrows money to fund universities directly rather than

<sup>24</sup> Specifically, HM Government creates a debtor (the student) on HMG's balance sheet. As soon as HMG feels it has lost certainty that the debt will be repaid, the element it thinks will not be repaid is written-off as an in-year expense. Accounting best practice says this should be written off as quickly as HMG is aware of it, to not pervert the true valuation of HMG's assets.

borrowing to fund tuition fee loans involves **economic costs that are identical to the current approach to fees and funding**. However, our understanding is that under current accounting rules, graduate contributions or payments would not be counted against the increased borrowing, unlike student loan repayments under the 2012 System. The breakdown of Exchequer borrowing requirements, economic costs and the 'BIS Account Costs' is presented in Table 6 below. This shows that the Higher Education Contribution System would appear to cost £4.102 billion per cohort more than the 2012 System even though there is no difference in cost from an economic perspective.

The accountancy treatment of the Higher Education Contribution System relates to the degree to which there is certainty about the future payments or non-payments. Under the 2012 System, it is only the future write-off costs that are recorded in BIS departmental expenditure because there is a contractual obligation for the borrower to repay the Student Loans Company both the principle and the interest following graduation<sup>24</sup>. Under a Higher Education Contribution System with no such contract, there is less 'certainty' in relation to the valuation of the revenue stream and it is not possible to recognise a debtor<sup>25</sup>.

<sup>25</sup> The 'certainty' (of repayment and non-repayment) that exists under the current student loan system results from the fact that the student signs a contract with the Student Loans Company. Similar level of certainty could be achieved under a HECS if an appropriately worded contract was in place. The fact that payments might take place through the taxation system in the future is immaterial, as this is how the current student loan system operates with future loan repayments being estimated using assumptions involving graduate earnings and real income growth.

## What are the alternatives? continued

**Table 6: Exchequer Borrowing – Option 2 (net present value)**

	<b>Borrowing</b>	<b>Economic Cost</b>	<b>BIS Account cost</b>
Student Loan Book (FT and PT)	(£3,302m)	(£3,302m)	(£3,302m)
Student Loan Repayment(FT and PT)		£2,331m	£2,331m
Student Loan Costs (FT and PT)		(£971m)	(£971m)
Student Maintenance Grants (FT)	(£1,259m)	(£1,259m)	(£1,259m)
HEFCE Teaching Grant	(£314m)	(£314m)	(£314m)
Other Student Support	£0m	£0m	£0m
Additional HEFCE funding (through HECS)	(£7,340m)	(£7,340m)	(£7,340m)
Higher Education Contribution System repayments		£4,102m	
<b>Total</b>	<b>(£12,215m)</b>	<b>(£5,781m)</b>	<b>(£9,984m)</b>
Difference from 2012 System	£402m	0	(£4,102m)

London Economics (2013). Based on 299,640 FT and 47,243 PT undergraduates first time undergraduates attending public institutions. Note that in the Table above, the column totals are arrived at by adding all items that have not been presented in italics.

The cost of funding the higher education system is therefore treated as an in-year expense, without any offset. However since HM Treasury determine accounting standards, it should be possible to straightforwardly overcome these issues, for instance through the creation of a contract between students and the Student Loans Company or HMRC.

Previous work undertaken by million+ and London Economics considered a number of issues associated with a HECS type approach including the potential

for tax avoidance by UK-domiciled graduates and non-payment by nationals from EU member states<sup>26</sup>. Recovering contributions from EU graduates under the current system is complex. The consequences of a graduate tax system in respect of EU students were discussed in detail in this previous analysis and were considered to have no material impact when compared to risks associated with EU students under the existing student loan repayment system. The main issue related to the accounting treatment of a Higher Education Contribution System.

<sup>26</sup> million+ and London Economics (2010) *A Graduate Tax: Would it work?*

## Distributional Effects

As set out above, the modelling of Alternative 1 and Alternative 2 is underpinned by three underlying principles. First, that demand for higher education responds to headline changes in the maximum tuition fee, albeit only to a certain extent. Second that the per unit resource available to universities should be no lower than under the current system of fees and funding. Third, that the economic cost to the Exchequer would be no more than is currently the case. In this section we also consider the implications of each funding model for individuals. This has two components, **firstly the sum of debt upon graduation; and secondly the repayment or contribution made over the 30 year period following graduation.**

The sum of debt upon graduation is important because perceptions of debt influence decisions about whether or not to participate in higher education, particularly amongst prospective students from lower socio-economic classes<sup>27</sup>. For most students, debt upon graduation depends on both the tuition fee regime and household income, as it is household income that determines entitlement to maintenance loans and grants as a student. This in turn determines the sum of the maintenance and tuition loan they are liable to repay under the 2012 System and Alternative 1 and the size of the maintenance loan they are liable to repay under Alternative 2.

We have assumed that maintenance eligibility would remain the same in Alternative 1 and Alternative 2 as under the Current System. A student who originates from a household with an income of £35,000 per annum would therefore receive a maintenance grant of approximately £1,500 and a maintenance loan of approximately £4,750 per annum if studying on a full-time basis. Under the Current System and Alternative 1, they would also borrow to fund tuition fees. As shown in Table 7 debt upon graduation varies substantially between the three funding systems. In relation to the 2012 System the calculation is based on the estimated *average* tuition fee applicable in 2012 which was £8,142<sup>28</sup>.

<sup>27</sup> Callender, C and Jackson, J (2005) Does the fear of debt deter students from higher education? *Journal of social policy*, 34 (4): 509-540.

<sup>28</sup> In the future, debts linked to tuition fees may rise under the 2012 System if more universities charge the £9,000 maximum fee.

## Distributional Effects continued

Table 7: Average debt upon graduation under each funding system

	Annual		Annual		Cumulative
	Maintenance Loan	Tuition Fee	Maintenance Loan	Tuition Fee	Debt Upon Graduation
2012 System (max £9,000 fee)	£4,757	£8,142	£12,899	£14,271	£38,696
Alternative 1 (£6,000 fee)	£4,757	£6,000	£10,757	£14,271	£32,271
Alternative 2 (HECS)	£4,757	£0	£4,757	£14,271	£14,271

London Economics (2013). Based on a student originating from a household with an income of £35,000.

For simplicity, we have also assumed that the cumulative debt upon graduation is simply three times the debt incurred in the first year when, in reality, both fee and maintenance loans will be up-rated by RPI + 3% for the period that the student attends university, meaning that students are likely on average to leave university with slightly higher debts than these figures suggest.

However, the second component, the **repayment or contribution** made over the 30 year period following graduation, also needs to be considered. This is determined by graduate earnings, the repayment or contribution threshold and the interest rate applied to graduate debt, as well as the sum of debt upon graduation.

We have assumed that the repayment threshold and rate – 9% of income over £21,000 – remains the same for the repayment of maintenance loans under all three systems. Based on graduate earnings profiles and the modelling assumptions, we have estimated the average contribution that male (Figure 2) and female (Figure 3) graduates in different income brackets would make to the costs of higher education under the three different funding systems, over the course of the 30 year period following graduation. For the sake of simplicity we have excluded maintenance repayments from this calculation.

Figure 2: Average contribution that male graduates in different income brackets would make to the costs of higher education under the three different funding systems, excluding maintenance

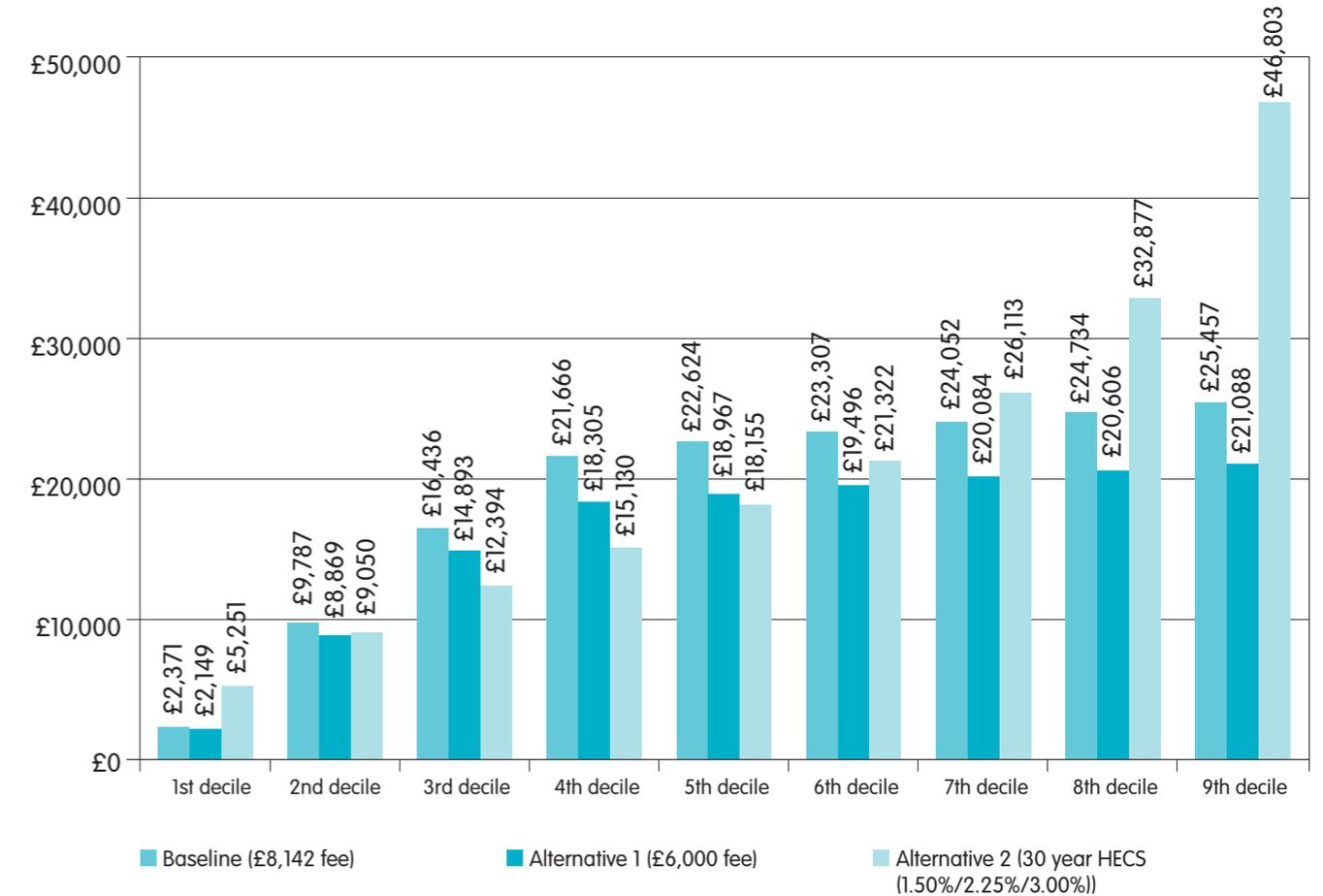
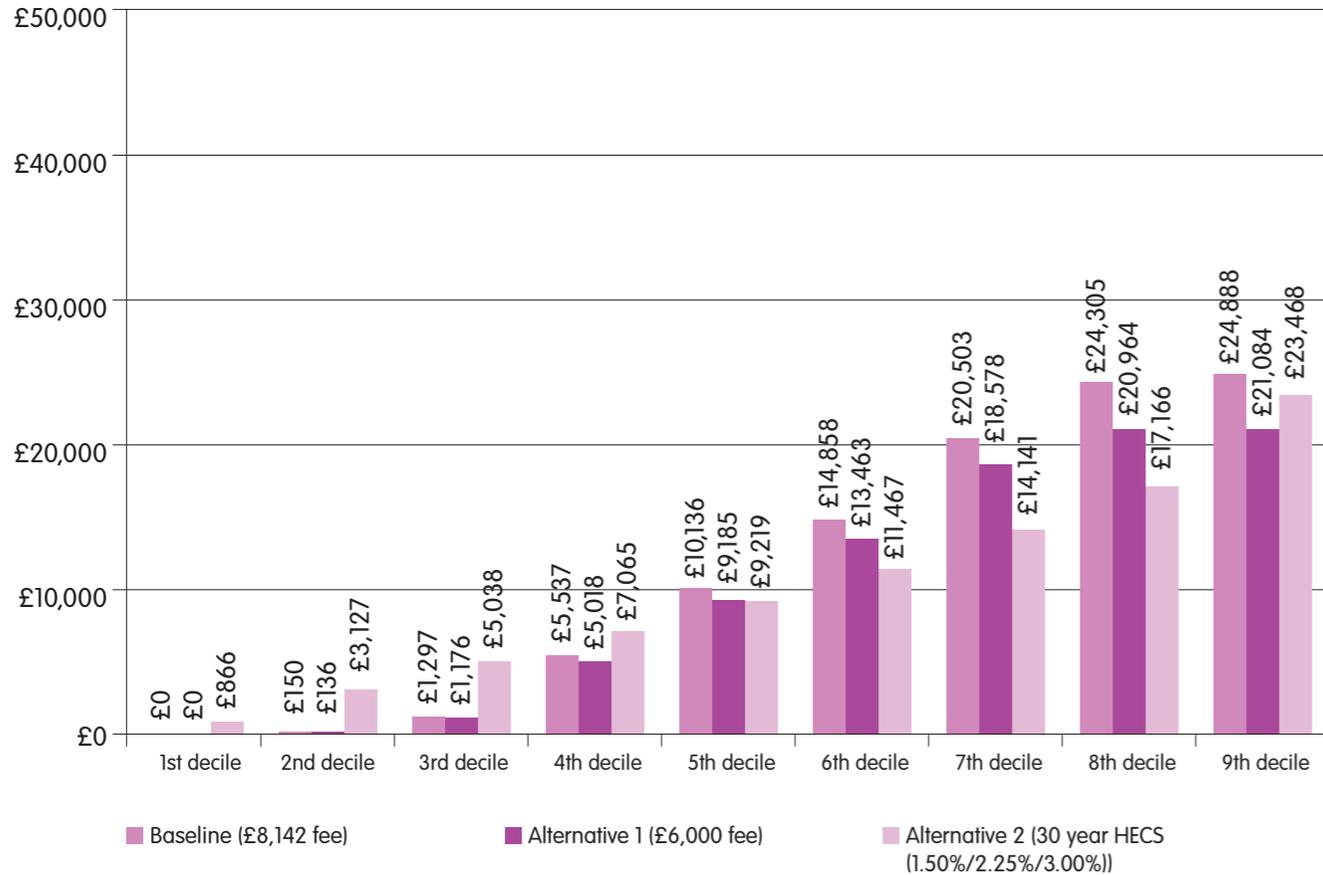


Figure 3: Average contribution that female graduates in different income brackets would make to the costs of higher education under the three different funding systems, excluding maintenance



This analysis of the distributional effects of the alternative funding models highlights the complexities associated with understanding the impact of any changes to the higher education funding system. The two principles employed in this analysis relate to the economic cost of the funding system and the unit of resource rather than the distribution of repayments or contributions amongst graduates. Within each alternative there is the potential to modify aspects of the repayment or contribution system, including the initial earnings threshold, the rate of interest or contribution applied, the threshold at which higher rates of interest or rates of contribution are applied and the duration of payment, according to the desired goal.

There is also the potential to address some of the inequalities that remain within the higher education funding system, such as differential maintenance

entitlements according to the mode and intensity of study, and to consider the extent to which amending the undergraduate system would enhance rates of postgraduate participation and mitigate some of the issues associated with funding of the education of students who wish to study for a second degree or another higher education qualifications.

Part-time students studying for a degree for the first time are now, rightly, eligible for tuition fee loans but they remain ineligible for maintenance loans and grants. There is a strong case to adopt a holistic approach to student support whereby students are entitled to pro-rata support according to the intensity with which they are studying, and to consider any wider benefits that may be derived from different funding options.

**“There is also the potential to consider the extent to which amending the undergraduate system would enhance rates of part-time and postgraduate participation and encourage those who wanted to study for a degree later in life.”**

## Conclusion

Amidst some concerns about the sustainability and equity of the 2012 System of higher education funding model, two alternative funding propositions have emerged. The first (Alternative 1) revolves around a tuition fee of £6,000 and the second (Alternative 2) involves a Higher Education Contribution System whereby graduates contribute a stepped proportion of their taxable income through the standard taxation system.

In this pamphlet we have delved into these propositions in more detail, and assessed the resource implications of each for the major stakeholders in the higher education system, taking economic cost neutrality and the current unit of resource as our starting point and comparing each alternative to the current funding system. It is clear from the modelling that both alternative funding systems are economically viable but also that there are major

issues associated with likely participation rates and the difference between the economic costs and benefits of a particular funding proposal and the accountancy costs.

At the same time it is important to state that this is not the whole story. Irrespective of whether the funding system remains the same or alters significantly in the future, there are a number of important points of principle that must be resolved. These range from how a university should be defined and understood, to whether the existing highly concentrated system of research funding promotes innovation and supports research-informed teaching at all universities, to how and whether private providers should be incorporated within the existing student number control. These are important issues that any future government must address alongside the funding of university teaching funding.

## Glossary

### Cohort

The 2012/13 *cohort* of undergraduate students refers to students who started undergraduate-level study in the academic year 2012-13. Cohort costs refer to the costs of supporting these students from the point at which they commence study to graduation.

### Decile

In descriptive statistics, a *decile* is one of values that divide sorted data into ten groups of equal frequency, with each part represents 1/10 of the sample or population.

### Economic cost

The *economic cost* of a particular option is defined the total cost of a particular option (expressed in present value terms). The total economic cost includes the *accountancy cost*, or the actual resources spent undertaking the particular option, as well as the *opportunity cost*, which represents the benefit forgone associated with the next best option. For instance, for a student attending university, the accountancy or direct cost associated with attendance is simply the tuition fee, while the full economic cost includes both the tuition fee and the value of the foregone earnings that would have been achieved by an individual if they had entered the labour market rather than gone to university.

### Present Value (PV)

The *present value* is defined as the discounted value of a stream of payments made or received in the future, taking into consideration a specific interest or discount rate (see below). The present value represents a series of future cash flows expressed in today's money terms.

### Net Present Value (NPV)

The *net present value* is defined as the present value of the benefits minus the present value of the costs associated with particular activity.

### Resource and Accounting Budget charge (RAB charge)

The size of the Treasury maintenance and fee loan subsidy is measured by the *Resource Accounting and Budgeting charge* (RAB), which calculates the proportion of the nominal loan value that would not be expected to be repaid (in present value terms). Under the current student support regime, non-repayment occurs as a result of the interest subsidy; low earnings; debt forgiveness after 30 years; or in the case of permanent disability; or death. Based on graduate earnings profiles (from the Labour Force Surveys) and the administrative information relating to the criteria for repayment of loans, our estimates of the RAB charge stand at approximately 39.6%, which implies that for every £1,000 in loans that are provided by the government, approximately £604 would be expected to be repaid (in present value terms) with the remaining £396 being 'lost' to the Treasury as a result of write-offs and subsidies.



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