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**London
Economics**

The impact of funding changes in response to Augar

London Economics
February 2022

Overview of the analysis

Following the governments publication of its response to the Augar Review, London Economics have assessed the impact of the proposed changes to higher education fees and funding to the Exchequer, education institutions and students/graduates.

Overview of the modelling

- We estimate the impact of the full range of fees and student support arrangements (and changes) on the **Exchequer, HEIs, and students/graduates**, using:
 - The **2020-21 cohort¹** of first-year English-domiciled undergraduate students (across the UK), and EU-domiciled students studying in England;
 - **Full-time and part-time students**; and
 - **All undergraduate qualifications** (including first degrees and other undergraduate qualifications).
- The analysis incorporates the **fees and funding arrangements** facing the cohort of starters in **2021-22** (including the recent freeze to the threshold) - **– and proposed changes - to ensure a like for like comparison**
- The modelling assesses a range of **metrics**, including:
 - The **RAB charge** (i.e. proportion of loan written off), **student loan debt on graduation**, expected **lifetime loan repayments** (by gender and income decile), the proportion of graduates expected to **never fully repay** their loan, and the proportion expected to **never make any repayments**;
 - The total **Exchequer costs** (including the cost of **student support** and **Teaching Grant** funding to institutions **across the UK**); and
 - **HEI funding**, in terms of **tuition fee income** and **Teaching Grant** funding, minus the costs of any bursaries provided to students.

Scenarios modelled

- **Scenario 1:** Compared to the current (i.e. Baseline) fees and funding arrangements for first-year students in 2021-22, **Scenario 1** consists of **removing the real interest rate, reducing the earnings repayment thresholds to £25,000** (and the associated maximum interest rate threshold), and **extending the repayment period to 40 years** .
- **Scenario 2:** In this second scenario,
 - In addition to Scenario 1, we model the introduction of **Minimum Entry Requirements** and reintroduction of **Student Number Controls**
 - For **Minimum Entry Requirements (MER)**, we have modelled a **6.4% reduction** in the size of the cohort based on the proportion of students without DDD or equivalent at A Level. We assume that 30% of students undertaking ‘Other HE’, 50% undertaking HNC/HNDs; 37% undertaking Foundation degrees; and 5% undertaking first degrees are affected.
 - For the imposition of Student Number Controls, on top of the MER, we have made the simple assumption that there is a **2% reduction** in student numbers (in proportion to the current cohort composition). This may overstate the cost to the Exchequer given the fact that some subject areas are likely to be protected (Medicine and STEM)
 - Combined, this represents approximately 7.5% of the cohort

¹Note that the underlying student data are based on the 2017-18 academic year; in other words, we assume the same size and characteristics of the 2020-21 cohort as for the 2017-18 cohort. Importantly, there is less than a **0.5%** size difference between the 2017-18 and 2020-21 cohorts. Using information from UCAS End of Cycle Reports ([link](#)), there were **394,620** English domiciled placed applicants across the UK and EU-domiciled students placed applicants in English HEIs 28 days post Clearing in 2017-18. In 2020-21, this had increased to **395,870**, representing an increase of **0.3%**

Impact of the current funding system (Baseline)

Impact of the current system (Baseline)

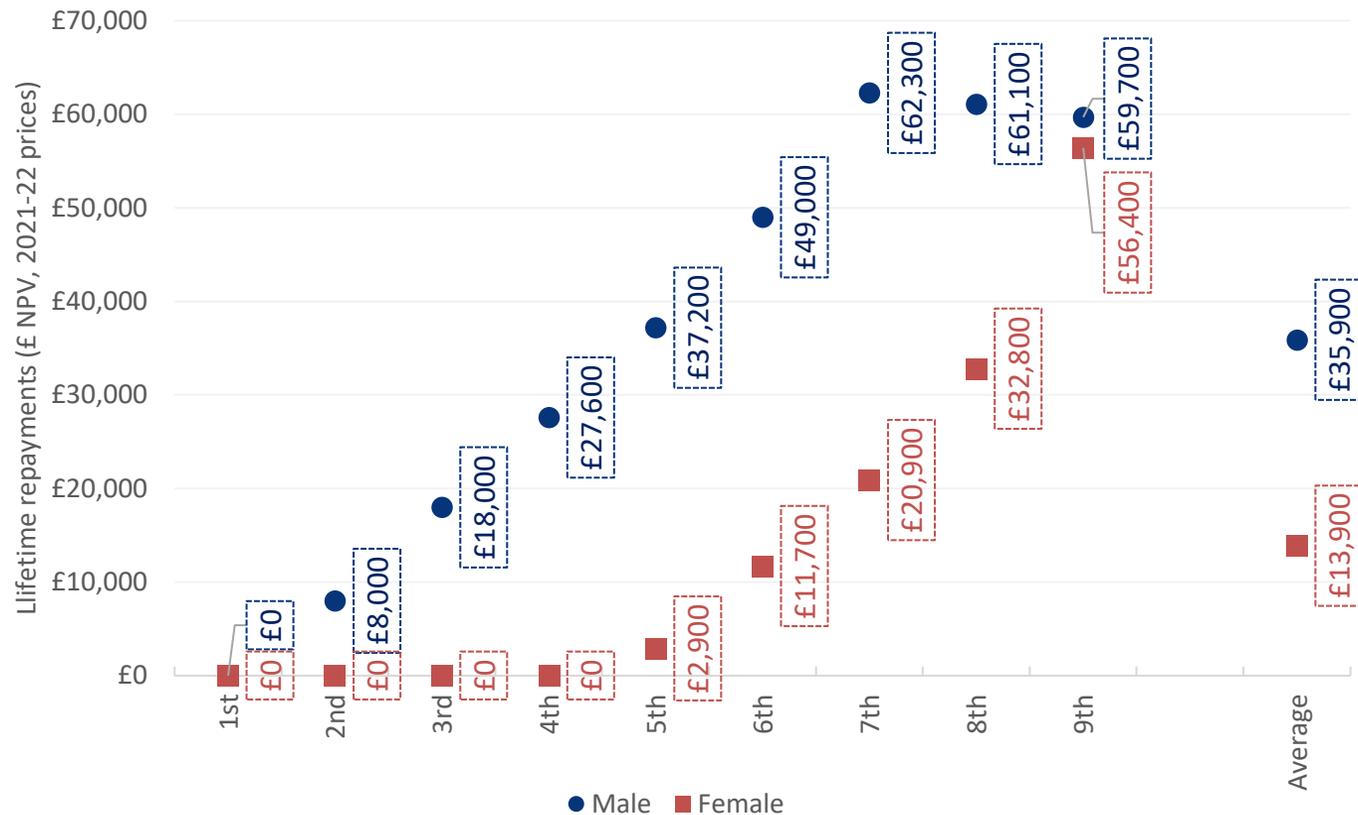
Baseline system

Resource flows (£/£m/%)	Baseline
Exchequer	
Cost of maintenance grant	-
Cost of maintenance loan	(£4,105m)
Cost of tuition fee loan	(£5,303m)
Cost of Teaching Grants	(£1,222m)
Total Exchequer cost	(£10,630m)
Higher education institutions	
RAB charge (%)	52.5%
% never repaying full loan/anything	88.2%/33.0%
Students/Graduates (FT first degrees)	
Gross fee income	£10,112m
Teaching Grant income	£1,222m
Cost of bursary provision	(£189m)
Net HEI income	£11,144m
Average debt on graduation	£47,500
Average lifetime repayments (M/F)	£35,900/£13,900

- Under the current funding system in 2021-22 (i.e. the Baseline), the **Exchequer** contributes approximately **£10.630bn** per cohort to the funding of higher education. In terms of constituent components, given that the **RAB charge** (the proportion of the total loan balance written off) stands at approximately **52.5%**, **maintenance loan write-offs** cost the Exchequer **£4.105bn** per cohort, while **tuition fee loan write-offs** cost **£5.303bn**. The recent freeze in the repayment threshold reduced HMT costs by approximately **£300 million**. The provision of **Teaching Grants** to higher education institutions (for high-cost subjects) results in additional costs of **£1.222bn** per cohort.
- Higher Education Institutions** receive **£11.144bn** per cohort in net income from undergraduate students, made up of **£10.112bn** in **tuition fee income**, as well as **£1.222bn** in **Teaching Grants**. Against this, institutions contribute **£189 million** per cohort in fee and maintenance **bursaries** (predominantly the latter) in exchange for the right to charge tuition fees in excess of the 'Basic Fee' (**£6,165** per annum for full-time students).
- For **students/graduates**, the average debt on graduation (including accumulated interest) was estimated to be **£47,500** (for full-time first degree students), with average lifetime repayments of **£35,900** for male graduates and **£13,900** for female graduates.
- We estimate that **88.2%** of all graduates **never repay their full loan**, while **33.0%** **never make any loan repayment**.

Total graduate loan repayments in the Baseline system

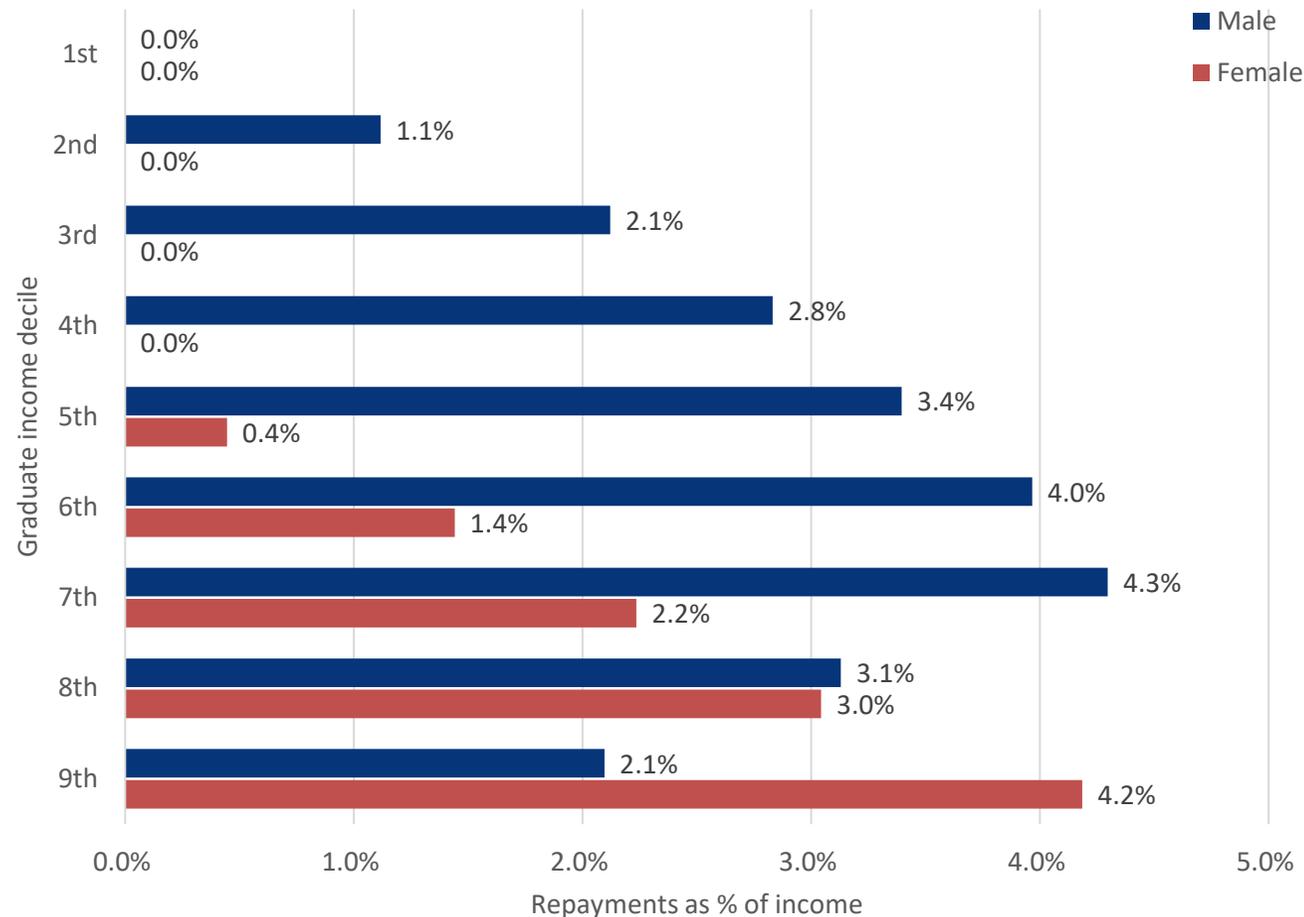
Total loan repayments by English-domiciled FT first degree graduates (NPV in 2021-22 prices), by earnings decile and gender



- While the average repayments made by **male graduates** stand at **£35,900**, there is considerable variation across the earnings distribution. Male graduates in the top three earnings deciles make repayments of between **£59,700** and **£62,300**, while male graduates in the bottom earnings decile make no repayments.
- Female graduates** in the bottom four earnings deciles are not expected to make any loan repayments over the 30-year repayment period. However, repayments increase sharply thereafter. Female graduates on the 7th, 8th and 9th earnings deciles would be expected to make repayments of **£20,900**, **£32,800** and **£56,400** respectively (with an average of **£13,900** across all deciles).

Graduate loan repayments (Baseline): Progressivity

Total loan repayments by English-domiciled FT first degree graduates, as a % of income (during repayment period), by earnings decile and gender



- The current loan system is regressive at the upper end of the earnings distribution.
- Reflecting lifetime loan repayments, up until the 7th earnings decile, male graduates contribute an increasing proportion of their income in loan repayments (over the 30-year repayment period). For male graduates on the 5th earnings decile, the proportion stands at 3.4%, increasing to 4.3% on the 7th earnings decile. However, illustrating the ‘local regressivity’ of the repayment system, after this point, the proportion of earnings over the period contributed as loan repayments decreases to 3.1% and 2.1% on the 8th and 9th deciles, respectively.
- Female graduates in the bottom 4 deciles make no repayments, while the proportion of income contributed on the 5th decile stands at 0.4%. This increases in successive earnings deciles – reaching 3.0% of total income over the period on the 8th decile and 4.2% on the 9th decile.

Scenario 1: Removal of real interest rate, extending the repayment period and reducing the repayment threshold

Impact of Scenario 1 on Higher Education Funding

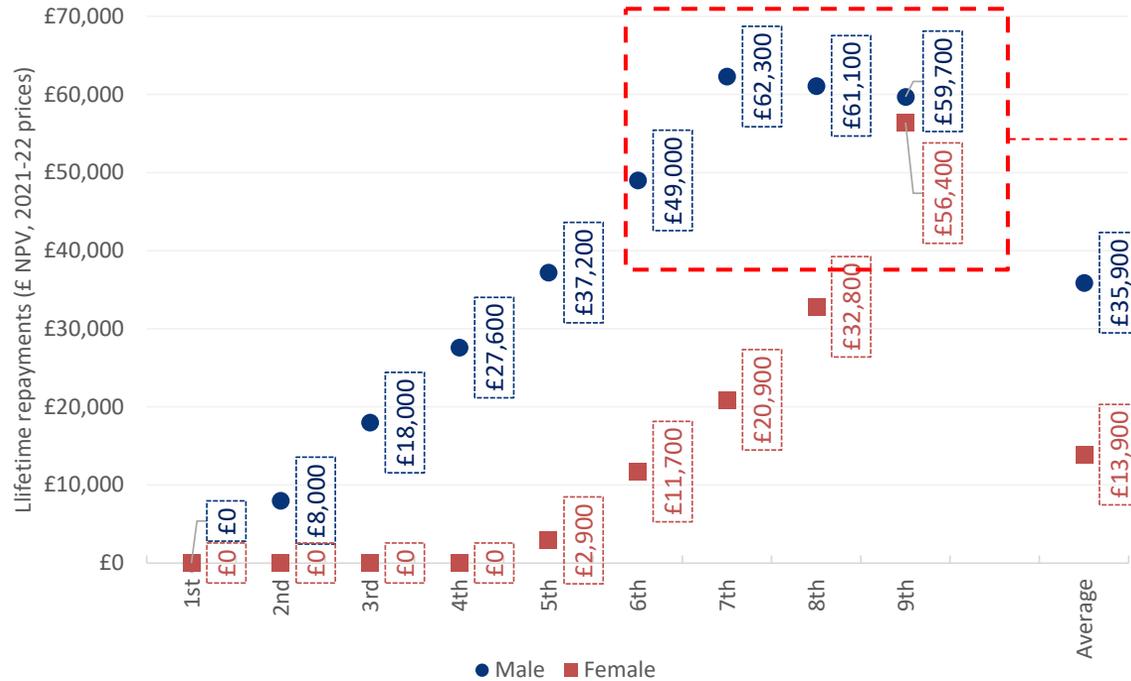
Resource flows (£/£m/%)	Baseline	Scenario 1	Difference
Exchequer			
Cost of maintenance grant	-	-	-
Cost of maintenance loan	(£4,105m)	(£3,871m)	£235m
Cost of tuition fee loan	(£5,303m)	(£4,999m)	£304m
Cost of Teaching Grants	(£1,222m)	(£1,222m)	-
Total Exchequer cost	(£10,630m)	(£10,092m)	£539m
RAB charge (%)	52.5%	49.5%	-3.0 pp
% never repaying full loan/anything	88.2%/33.0%	60.5% / 22.5%	-27.7 pp/-10.5 pp
Higher education institutions			
Gross fee income	£10,112m	£10,112m	-
Teaching Grant income	£1,222m	£1,222m	-
Cost of bursary provision	(£189m)	(£189m)	-
Net HEI income	£11,144m	£11,144m	-
Students/Graduates (FT first degrees)			
Average debt on graduation	£47,500	£46,100	(£1,600)
Average lifetime repayments (M/F)	£35,900/£13,900	£33,900 / £17,800	(£2,000) / £3,900

- The combination of changes essentially result in a significant saving for the Exchequer (**£539 million**).
 - These savings are driven by **£1.767bn** in savings from the reduction in the repayment threshold (a significant proportion driven by the fact that the £25,000 threshold will be significantly lower in real terms by the time students graduate);
 - a **£1.704bn increase** in costs associated with the removal of real interest rates during and post graduation; and
 - a **£476 million saving** from the extension of the repayment period.
- The RAB charge would be expected to decline by **3.0 percentage points** to **49.5%** and the proportion of graduates not making any loan repayments over the 40-year repayment period declines by **10.5 percentage points** to **22.5%**.
- Higher Education Institutions are unaffected by the changes.
- The average debt on graduation is declines following the changes (by **£1,600**). Average lifetime repayments decline for male graduates (by **£2,000**) but increase for female graduates (by **£3,900**).
- However, these are averages and there are important distributional effects associated with these proposals

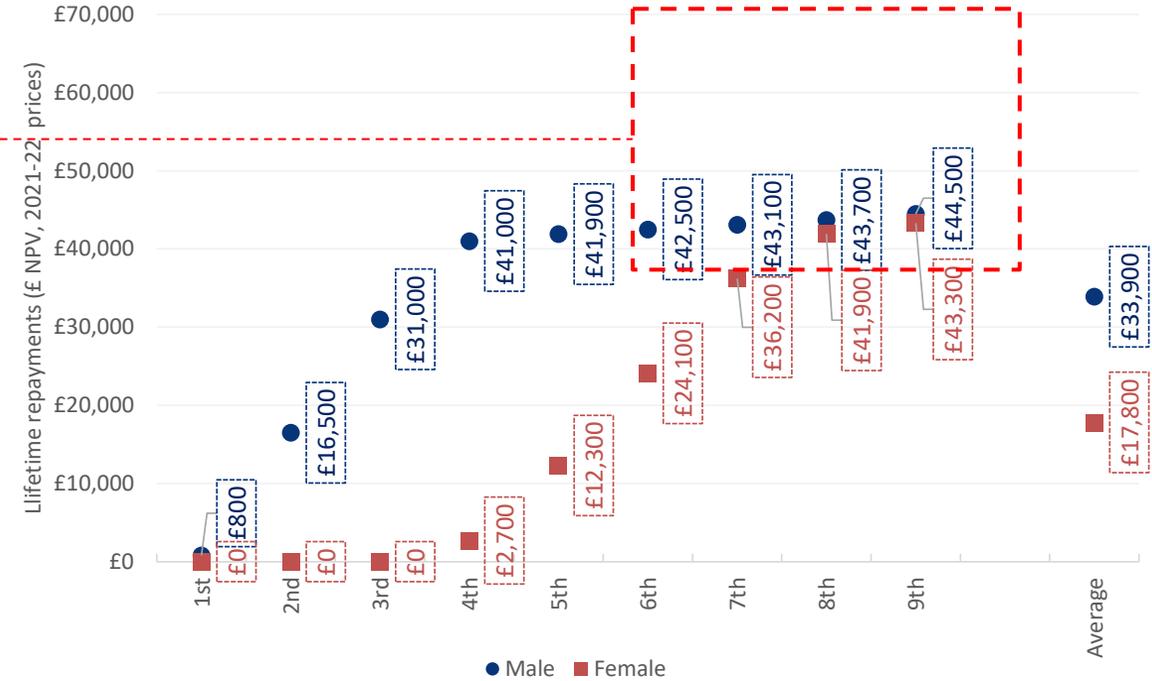
Graduate loan repayments: Total

Total loan repayments by English-domiciled FT first degree graduates (NPV in 2021-22 prices), by earnings decile and gender

Baseline



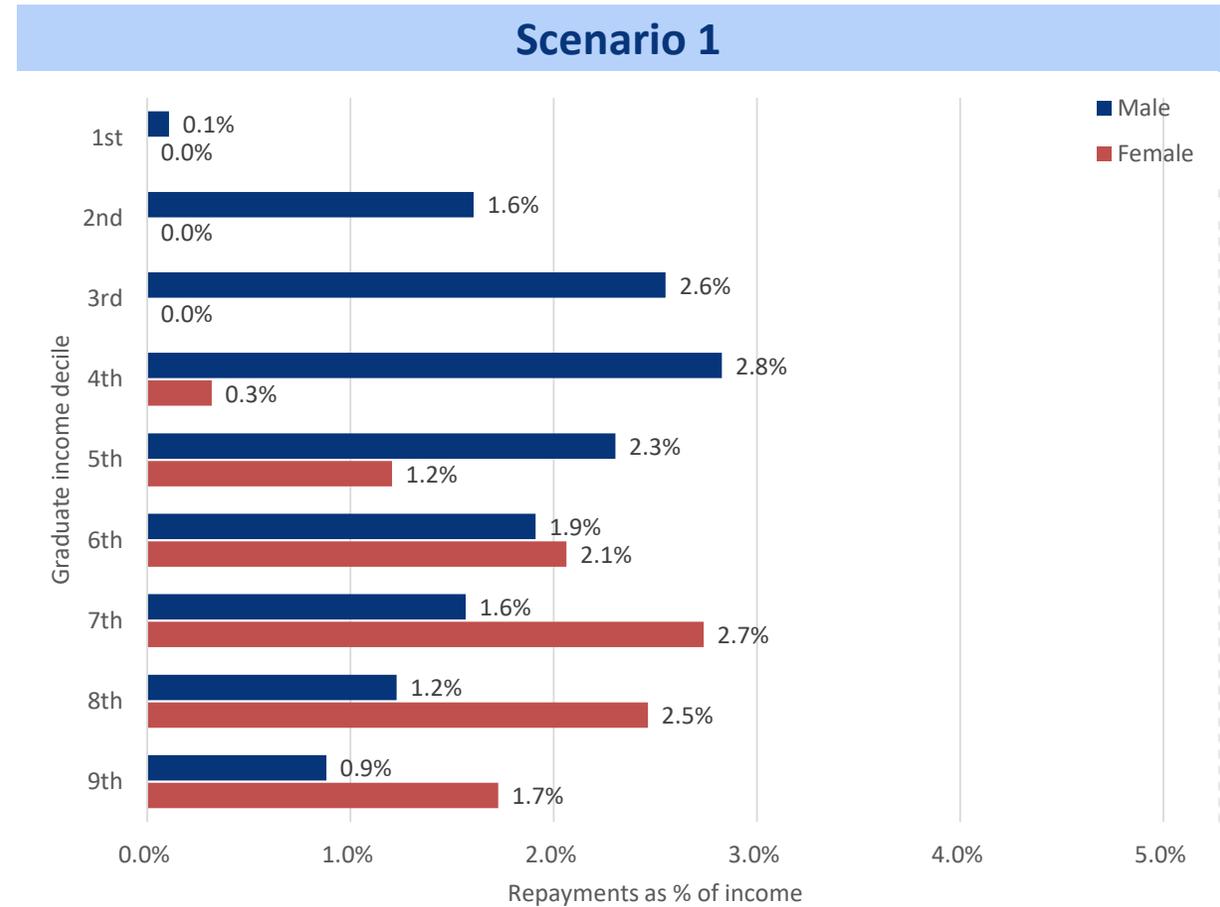
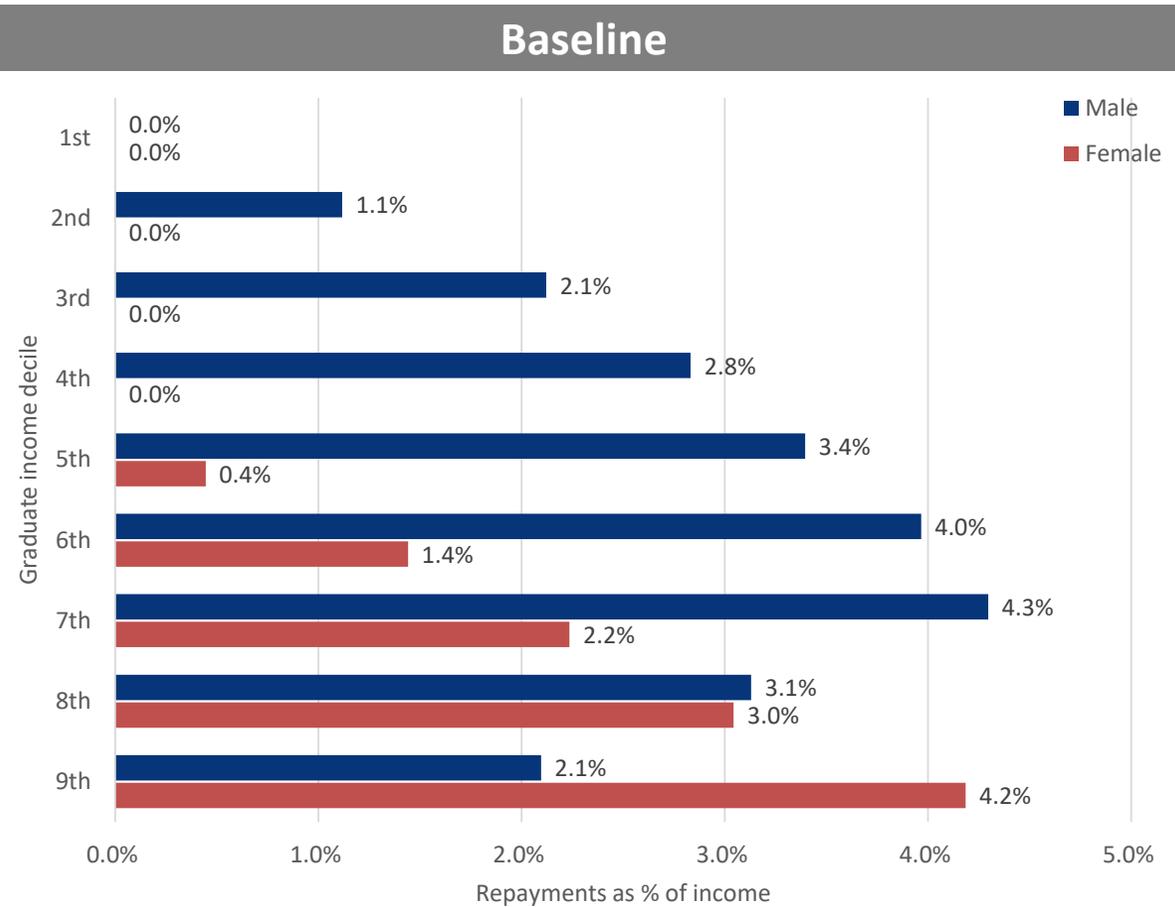
Scenario 1



- The proposals result in **significant increases in lifetime repayments** for middle income graduates (both male and female). Male and female graduates on the 5th earnings decile would be expected to make an increased contribution of **£4,700** and **£9,400**, respectively.
- **Male graduates in the top three earnings deciles and females in the top earnings decile would be significantly better off** as a result of these changes (by approximately **£15,000-£20,000**).
- The combination of options is a direct transfer from low/middle income graduates to high earning graduates

Graduate loan repayments: Progressivity

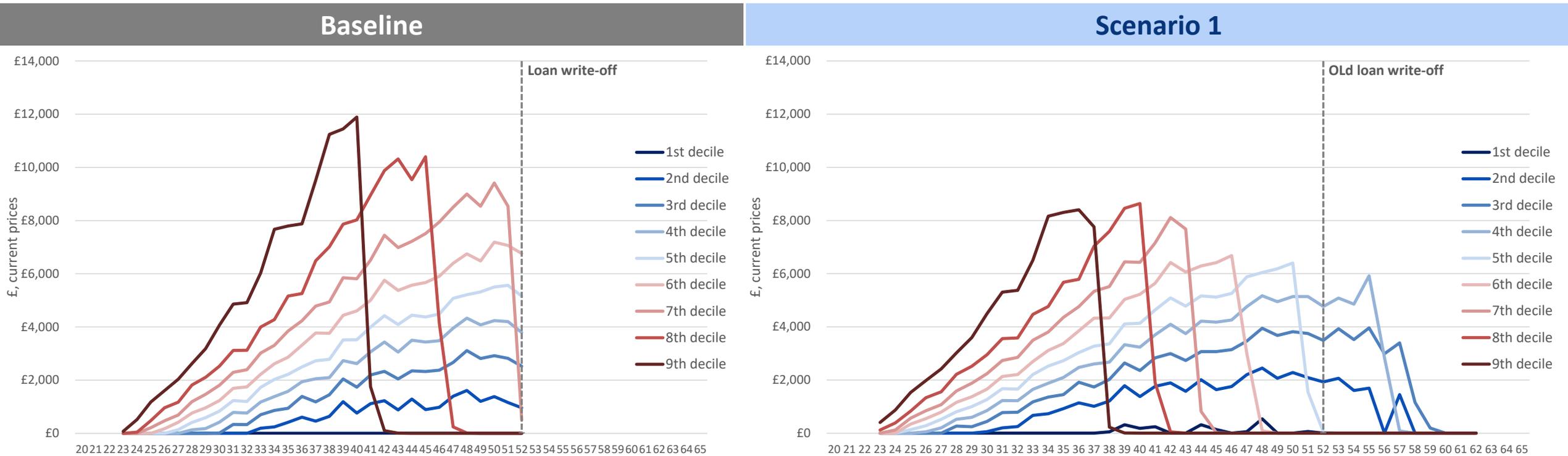
Total loan repayments by English-domiciled FT first degree graduates, as a % of income (during repayment period), by earnings decile and gender



- The reduction in the repayment threshold results in a more regressive system. Male graduates in the **4th decile** now contribute the greatest proportion of their post graduation earnings in loan repayments (compared to the **7th decile** under the Baseline scenario).

Graduate loan repayment profiles: Men

Lifetime loan repayment profiles for English-domiciled FT first degree *male* graduates (cash terms in current prices), by earnings decile

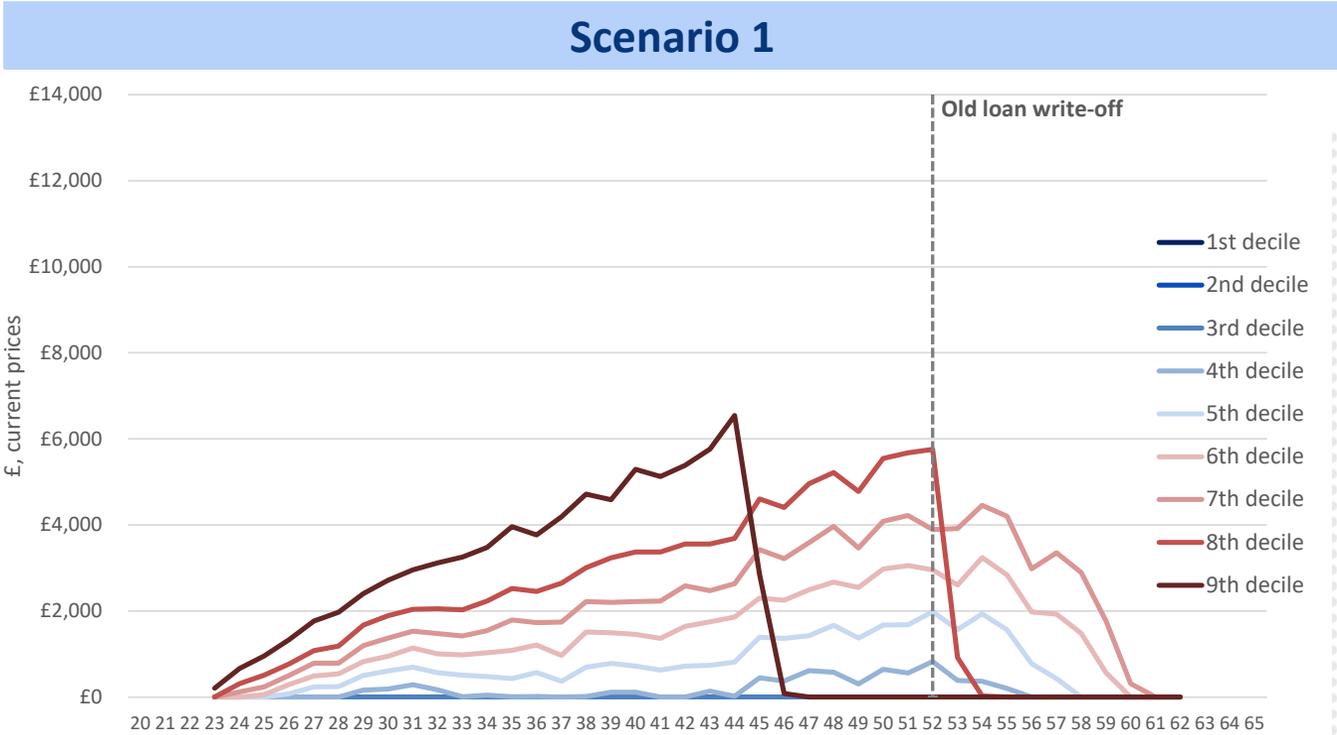
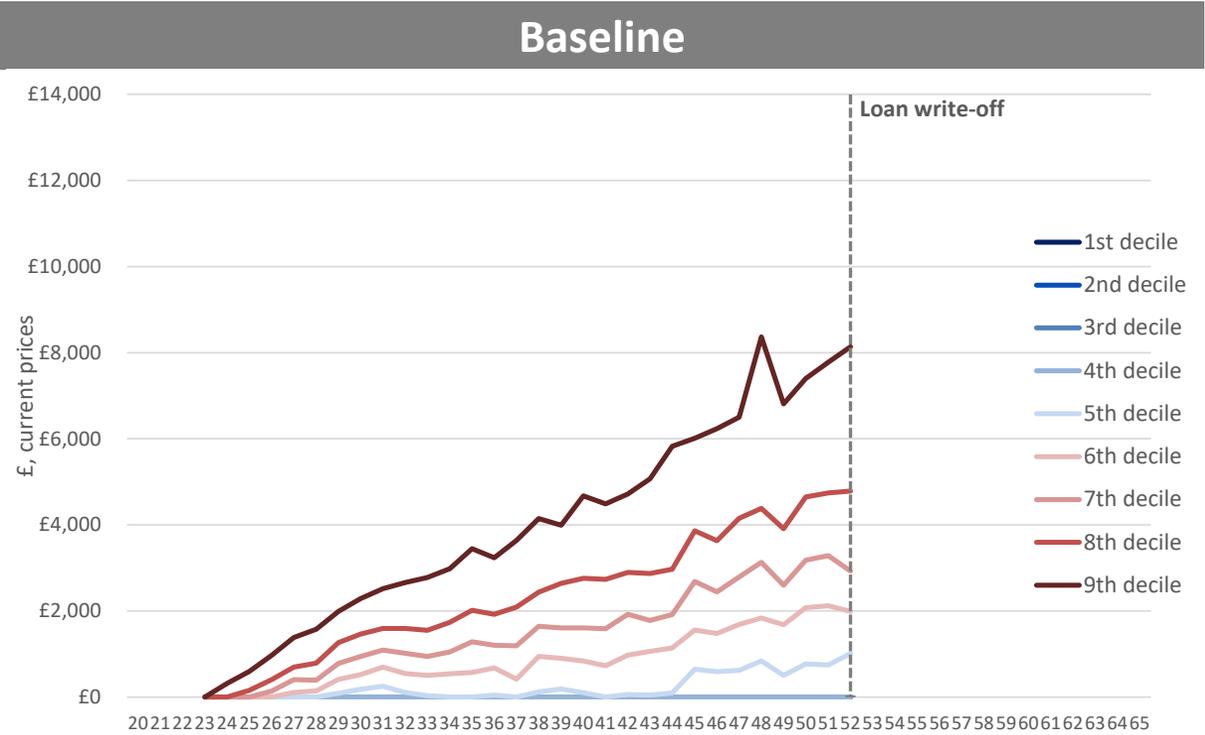


- The highest-earning male graduates (in the top three or four deciles) benefit from the policy changes, as the increased repayments as a result of the reduction in the repayment threshold and the removal of real interest rates simply result in the shorter duration of repayments. However, for all other deciles (and almost all female graduates (see next slide)), as full repayment is not achieved, the big impact is as a result of the extension of the repayment period.

Graduate loan repayment profiles: Women



Lifetime loan repayment profiles for English-domiciled FT first degree *female* graduates (cash terms in current prices), by earnings decile



Scenario 2: Scenario 1 plus introduction of Student Number Controls and Minimum Entry Requirements

Impact of Scenario 2 on Higher Education Funding

Resource flows (£/£m/%)	Baseline	Scenario 2	Difference
Exchequer			
Cost of maintenance grant	-		
Cost of maintenance loan	(£4,105m)	(£3,562m)	£543m
Cost of tuition fee loan	(£5,303m)	(£4,616m)	£687m
Cost of Teaching Grants	(£1,222m)	(£1,129m)	£92m
Total Exchequer cost	(£10,630m)	(£9,308m)	£1,322m
RAB charge (%)	52.5%	49.5%	-3.0 pp
% never repaying full loan/anything	88.2%/33.0%	60.5% / 22.5%	-27.7 pp/-10.5 pp
Higher education institutions			
Gross fee income	£10,112m	£9,350m	(£762m)
Teaching Grant income	£1,222m	£1,129m	(£92m)
Cost of bursary provision	(£189m)	(£176m)	£14m
Net HEI income	£11,144m	£10,304m	(£840m)
Students/Graduates (FT first degrees)			
Average debt on graduation	£47,500	£46,100	(£1,600)
Average lifetime repayments (M/F)	£35,900/£13,900	£33,900 / £17,800	(£2,000) / £3,900

- The impact of the **Minimum Entry Requirement (MER)** is inherently difficult to quantify. Although there are a number of estimates of the proportion of the cohort that are not in possession of a minimum DDD (for instance), we have based our analysis if this proportion stands at 6.4%.
- Clearly, the potential reduction in numbers is concentrated amongst individuals that might enrol in sub degree undergraduate qualifications (Foundation Degrees, HNC/HNDs and ‘other’ undergraduate qualifications) rather than first degrees.
- Based on these assumptions, the introduction of a MER (assuming all individuals affected no longer enrol) would result in a loss of **£661 million** in HEI income and cost saving to the Exchequer.
- The introduction of Student Number Controls (SNC) is also up for consultation, and in the first instance, we have assumed that the ‘bite’ is **2%** of the current cohort in proportion to the current distribution of students – by level and subject. This is likely to overstate the cost saving to the Exchequer (and HEI income losses). The impact of this 2% SNC represents a further **£179 million** negative impact on HEIs (saving to HMT).
- The combined effect on HEIs stands at **£840 million**. This represents **7.5%** of the relevant undergraduate teaching income – and an additional **£103 million** for every 1% of the student cohort no longer attending HE.
- Combining this HMT cost saving with the cost saving generated through changes to student support, the Exchequer is estimated to be **£1.322 billion** better off. This represents a **12.4%** saving in the teaching and maintenance costs associated with a cohort of students.

Note: All monetary values have been discounted to net present values and are presented in constant 2021-22 prices. All monetary values per student have been rounded to the nearest £100, and all totals have been rounded to the nearest £1m. Debt on graduation and expected lifetime repayments per student are presented for full-time first degree students only. Gross fee income refers to fee income before the deduction of fee bursaries provided to students.

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Annex I

Methodology and assumptions



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Assumptions and methodology

- The model considers the total number of full-time and part-time **English domiciled** first-year students undertaking undergraduate qualifications **at any institution in the UK**, as well as full-time and part-time **EU students** engaged in undergraduate education **studying at English institutions**. We use information from the Higher Education Statistics Agency (HESA, [here](#)) for 2017-18, and we assume that the size and characteristics of the relevant cohort have **remained unchanged**¹ between 2017-18 and 2020-21.
- We use this cohort to assess current arrangements facing students in 2021-22 and proposed changes facing students entering HE in 2023/24
- Based on the same HESA data, we assume the following distribution of students by **qualification level**:

Qualification level	Full-time	Part-time
Other undergraduate	3%	57%
HNC/HND	1%	3%
Foundation Degree	2%	3%
First degree	94%	38%
Total	100%	100%

- Part-time students are estimated to study at **40%** full-time equivalence (FTE).
- Again based on HESA data ([here](#)), we assume an annual continuation rate of **92.5%** for full-time students and **82.5%** for part-time students.

¹ Using information from UCAS End of Cycle Reports ([link](#)), there were **394,620** English domiciled placed applicants across the UK and EU-domiciled students placed applicants in English HEIs 28 days post Clearing in 2017-18. In 2020-21, this had increased to **395,870**, representing an increase of **0.3%**.

- The analysis is undertaken separately by gender. Based on HESA information on graduates by gender and qualification level ([here](#)), we assume the following **gender** split:

Qualification level	Full-time		Part-time	
	Male	Female	Male	Female
Other undergraduate	47%	53%	38%	62%
HNC/HND	47%	53%	38%	62%
Foundation Degree	47%	53%	38%	62%
First degree	42%	58%	43%	57%

- We assume the following **average age at enrolment** (based on HESA information) and **average duration of qualification attainment** (by qualification level and study mode):

Age at enrolment

Qualification level	Full-time	Part-time
Other undergraduate	28	36
HNC/HND	21	27
Foundation Degree	25	30
First degree	20	31

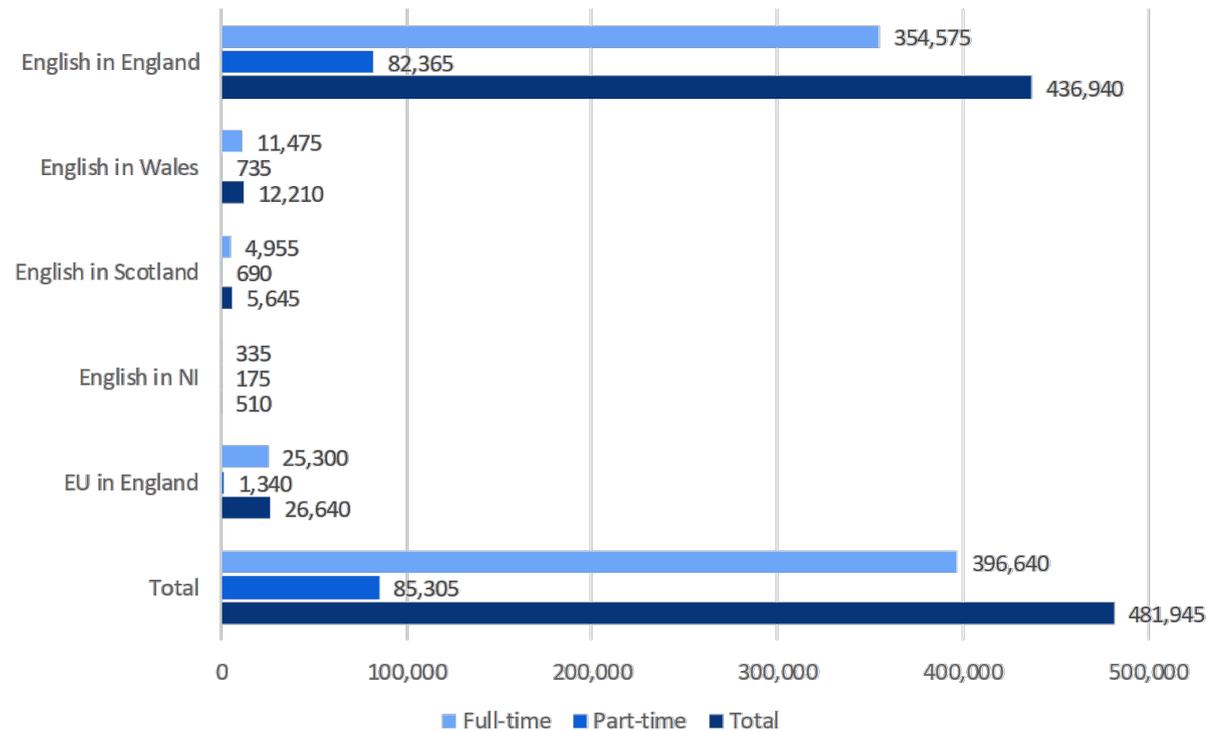
Duration of study

Qualification level	Full-time	Part-time
Other undergraduate	1	2
HNC/HND	2	5
Foundation Degree	2	5
First degree	3	7

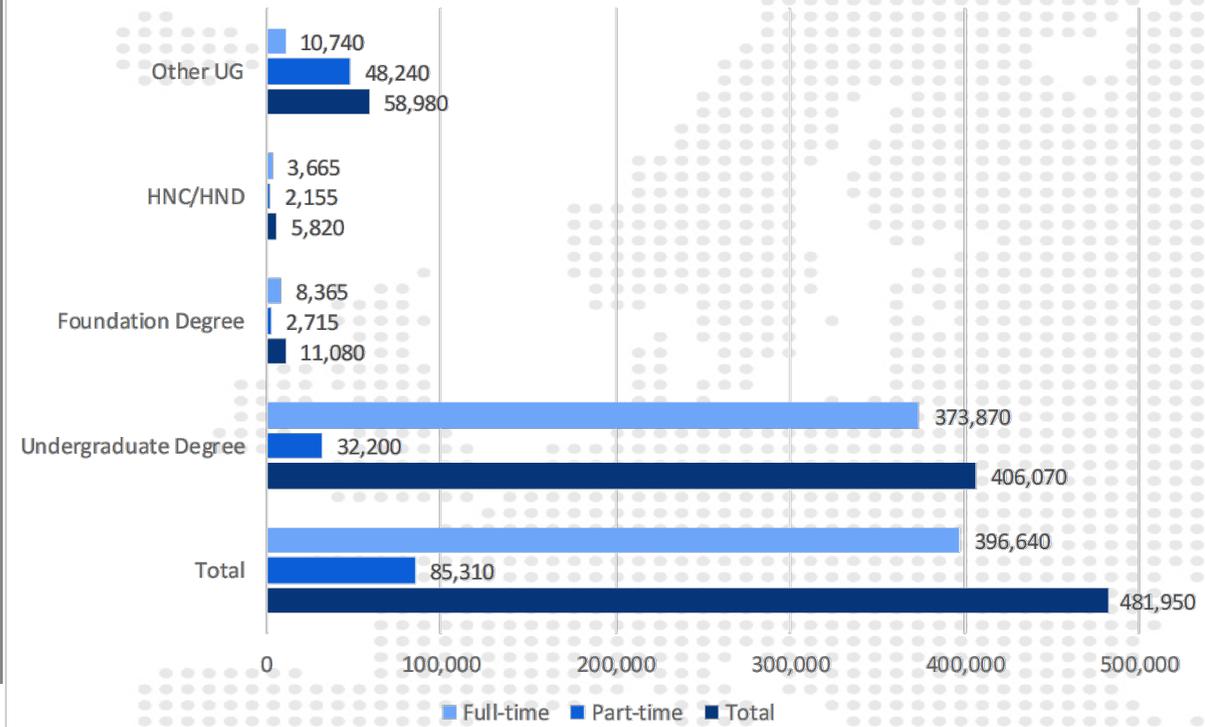
Assumptions and methodology

- The analysis is based on a total of 481,945 first-year undergraduate English-domiciled students studying anywhere in the UK and EU-domiciled students studying in England.

Breakdown by domicile, location of study and mode of study



Breakdown by level and mode of study



Note: All student numbers are rounded to the nearest 5. The information is based on the 2017-18 academic year, and we assume the same size and characteristics of the 2020-21 cohort as for the 2017-18 cohort.

Source: London Economics' analysis based on data provided by the Higher Education Statistics Agency ([here](#))

Baseline assumptions and methodology

Fees, fee loans and maintenance loans

- In the **Baseline** (i.e. the current funding system in 2021-22), the maximum (gross) tuition fee in 2021-22 is **£9,250**, with an average fee charged of approximately **£9,124** (rounded to the nearest £10, based on OFFA data, [here](#)). Despite the existence of Access agreements and the provision of bursaries and fee waivers by HEIs², the net tuition fee remains the same (**£9,124**) as the majority of financial support is paid to students in the form of maintenance bursaries. Based on average study intensity, the average part-time net tuition fee was estimated to be **£3,613** per annum.
- Based on the **current funding system**, we have modelled **maintenance loan eligibility by students' living conditions**, for students living at Home (LAH, **21%** of FT students, **0%** of PT students), living away from home outside of London (LAFHOL, **67%** of FT students, **85%** of PT students) and living away from home in London (LAFHIL, **12%** of FT students, **15%** of PT students) - using the current household income thresholds applied by Student Finance England.
- To determine the **size of maintenance loans received**, students in the cohort are categorised by gender, location of study, study intensity and living arrangements whilst in study. We assume that **all students take out the maximum available loan to which they are entitled**. For FT students, we base eligibility for loans using information from the Student Loans Company (SLC, [here](#)) on the distribution of students by household income, based on the % of students that were previously in receipt of full or partial maintenance grants (in 2015-16 which was the last year that maintenance grants were available). For PT students, we use the UK Labour Force Survey to estimate the distribution of individuals aged 30-40 in possession of Level 3 qualifications as their highest qualification by household income. We thus estimate that the average maintenance loan received by students stands at **£7,361** per full-time student and **£3,558** per part-time student per year.
- We assume that fees and maintenance loans do not increase over the duration of students' courses.

² approximately **13%** of the tuition fee charged in excess of the Basic fee of **£6,165** per annum is 'handed back' to students in the form of fee and maintenance bursaries. However, the overwhelming majority of bursaries are maintenance related (approximately 97%). As such, the relatively minor tuition fee bursary has a negligible impact on the net tuition fee.

Teaching Grants

- For the **Baseline**, the average **Teaching Grant** per student studying in **England** is derived by combining assumptions on the rate per FTE student by subject band (in 2021-22) with information on the distribution of students by subject band (both provided by the Office for Students, [here](#)), as follows:

Subject Band	Funding per FTE, £	% of FTE students
Band A	£10,100	2%
Band B	£1,515	22%
Band C1	£126	21%
Band C2	-	20%
Band D	-	35%
Total	-	100%

- Combining this with the average 'other targeted allocations' funding per student (e.g. including premium funding to support retention), the average total T-Grant per full-time student studying in England amounts to approximately **£1,066**. Based on average study intensity, the average funding per part-time student was estimated at **£422** per annum.
- For students studying in **Scotland**, we divide the total T-Grant funding provided by the SFC in 2018-19 by the number of funded FTE students in that year ([here](#)). We thus estimate that the average T-Grant per full-time student stands at **£5,630** per year, with the assumed part-time rate (again based on study intensity) standing at **£2,230**.
- For students studying in **Wales or Northern Ireland**, we make use of HESA financial data ([here](#)) and student data ([here](#)) for 2017-18. We divide the total Teaching Grant funding in each of these Home Nations by the total number of UK and EU students undertaking undergraduate or postgraduate taught qualifications (excluding postgraduate research and non-EU students). Adjusting for study intensity, the average T-Grant per full-time student in Wales and Northern Ireland is estimated to be **£300** and **£3,030** per student per annum respectively. The corresponding estimates for part-time students stand at **£120** and **£1,200** per student per annum.

Assumptions and methodology

Loan interest and repayment terms

- Under the **Baseline funding system**, tuition fee and maintenance loans accumulate **interest** at 3% + RPI during the period of study. After graduation, loans accumulate interest depending on earnings, with individuals earning **£27,295** incurring interest at 0% + RPI, increasing to 3% + RPI for individuals with earnings of **£49,130** per annum or above. For part-time students, we also apply current SLC rules in relation to the accumulation of interest during study.
- In the **Baseline**, we assume that loan repayment is **9%** of earnings in excess of **£27,295** per annum (frozen for 2022-23), and that all loans are written off **30 years** from the Statutory Repayment Due Date (SRDD).
- In the **Baseline**, we assume that the relevant earnings **thresholds** for interest accumulation and loan repayment (of **£27,295** and **£49,130**) increase with the rate of average nominal earnings growth per year.
- We use the most recent Office for Budget Responsibility medium- and long-term forecasts in relation to the expected **Retail Price Index** per annum, as well as expected **nominal average earnings growth** per annum ([here](#) and [here](#)).
- In relation to the estimation of the **RAB charge and lifetime loan repayments (in NPV)**, we assume a real discount rate of **0.7%** as used in the governmental accounts, with the nominal discount rate amounting to **0.7% + RPI**.
- In relation to the estimation of aggregate financial flows across the cohort, we assume the standard HMT Green Book real discount rate of **3.5%** (see [here](#)), with the nominal discount rate amounting to **3.5% + RPI**.
- **Scenario 1:**
 - Compared to the current (i.e. Baseline) fees and funding arrangements for first-year students in 2021-22, **Scenario 1** consists of **reducing the earnings repayment threshold from £27,295** (and the associated maximum interest rate threshold of **£49,130**) to **£25,000** and **£46,835** respectively. **This threshold is frozen for 2022-23.**
 - **Real interest rates have been removed both during and post graduation**
 - **The repayment threshold is extended to 40 years** (from 30 years)

Graduate earnings and employment probabilities

- **Scenario 2** consists of:
 - For **Minimum Entry Requirements (MER)**, we have modelled a 6.4% reduction in the size of the cohort based on the proportion of students without DDD or equivalent at A Level. We assume that 30% of students undertaking 'Other HE', 50% undertaking HNC/HNDs; 37% undertaking Foundation degrees; and 5% undertaking first degrees are affected.
 - For the imposition of Student Number Controls, on top of the MER, we have made the simple assumption that there is a **5%** reduction in student numbers (in proportion to the current cohort composition). This may overstate the cost to the Exchequer given the fact that some subject areas are likely to be protected (Medicine and STEM)
- To estimate graduates' lifetime loan repayments (by qualification level (i.e. first degrees, Foundation Degrees, HNCs/HNDs and other undergraduate qualifications), gender, study mode and decile), we make use of **pooled UK Quarterly Labour Force Survey data for the period 2010Q1-2020Q2**.
- Using this data, we estimate the **average earnings** (in June 2020 prices) among individuals in possession of each of the different qualifications as their highest level of attainment, separately by age (for first degrees) or age band (for qualifications below degree level (due to sample size)), gender, and income decile. To assess loan repayments for part-time students (who typically start repaying their loans *during study*), we further estimate the average earnings of individuals in possession of Level 3 qualifications as their highest level of attainment (used as part-time students' assumed earnings during study), separately by age, decile and gender.
- We also estimate the **average probability of being in employment**, again by qualification level, age or age band, and gender.
- Based on the above, we then estimate the **employment-adjusted annual earnings profiles** of graduates associated with each qualification, by study mode, gender and decile. We adjust these age-earnings profiles to account for the fact that earnings are expected to increase over time (again using Office for Budget Responsibility forecasts of average nominal earnings growth per year ([here](#) and [here](#))).