

AN EQUITABLE APPROACH TO THE PRIVATE SECTOR FUNDING OF UNIVERSITY TUITION FEES

A FINANCIAL INNOVATION TO SUPPORT THE
GROWING DEMAND FOR HIGHER EDUCATION
THAT WILL ASSIST IN THE REBALANCING OF THE
UK ECONOMY

transforming what once was the workshop of the world
into the university of the world

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Contents

ACKNOWLEDGEMENTS	2
THE AUTHOR.....	2
CONCEPTS.....	2
BACKGROUND	2
KEY CONSIDERATIONS	3
CONTRACTING PARTY.....	4
DEBT VS EQUITY	5
THE FAIR PROPOSAL	8
IMPLEMENTATION	10
POTENTIAL PROCEEDS.....	12
PRECEDENTS	12
FAIRNESS	13
PRICING STRATEGY	15
SUBJECT EFFECTS.....	16
IMPACT ON DONATIONS	17
FAIR VS GRADUATE TAX	17
INVESTMENT DEMAND	18
REGULATION.....	20
EXPORT POTENTIAL	21
POLITICS.....	21
ADVERSE SELECTION & FEE INCOME STABILITY	22
ALIGNMENT OF INTERESTS.....	23
COMPETITION BETWEEN UNIVERSITIES AND VARIABLE FEES	24
“FAILING” INSTITUTIONS	25
EXTERNALITIES.....	25
ADMINISTRATION.....	26
CONCLUSION	27

FUNDING with AFFORDABLE INCOME based REPAYMENTS

A FAIR AND EFFICIENT SYSTEM THAT ALIGNS RISKS WITH RETURNS FOR
STUDENTS, UNIVERSITIES AND INVESTORS

ACKNOWLEDGEMENTS

I would like to thank Jason Hathorn, Concordia Advisors LLP and board member Concordia Advisors Bermuda Ltd, Derek Pretty, Registrar and Secretary, University of Bristol, and Cameron Stevens, Chief Executive of Prodigy Finance for their help in developing this proposal.

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CONCEPTS

Securitisation means "making into a security", where a security is an asset, such as a bond or an equity (share), which can be traded by investors. It is the process by which a large number of financial assets of small value and high variability of expected return are pooled together to create a single financial asset of large value and more predictable expected return. The larger size of the created security and the greater stability of its expected returns make it capable of being efficiently traded between investors. The assets created through "securitisation" can be either debt or equity securities with the division between them being a function of the expected variability of returns; the higher the variability the greater the proportion of equity that is appropriate.

BACKGROUND

Post the 2008 "Credit Crunch" the UK economy's dependence for wealth generation on the financial services industry is considered a weakness. The Coalition Government has stated its desire to "re-balance" the UK economy. While this is typically considered to imply an increased share of GDP contributed by manufacturing, the UK's share of global manufacturing output is in long term declineⁱ and it lacks comparative advantage in this field. Higher Education, on the other hand, is a long term growth sector where the UK has a strong reputation and comparative advantage.ⁱⁱ

The 2010 budget implied a reduction in government expenditure on education over five years of up to 25% in real terms.

In a recent speech David Willetts, Universities Minister, was quoted as saying that Universities should: "secure new funding streams" and innovate.ⁱⁱⁱ

The clear implication is that UK Universities need to find a means of raising funds from the private sector to support their growth and export success while simultaneously reducing their demands on the government's purse.

Students, as the "customers" of Universities, are the most likely source of material additional income. Companies are only likely to pay for value added provided to them, such as research, and not for the general education of undergraduates. Benefactors are an important source of income in the US and a growing source in the UK but too small to have a material impact for many years.

However students, typically, do not have access to the funds to pay for their education up front. Hence this paper will examine possible Government sponsored private market mechanisms that could transfer funds between investors, students and Universities in an efficient and fair manner.

KEY CONSIDERATIONS

In raising private sector finance there are two key dimensions to the range of possible solutions:

- (i) is the contracting party taking on the obligation to pay the provider of external finance (the investor) the University or the student, and;
- (ii) is the quantum of repayment in the form of a fixed loan amount or in the style of an equity-like participation in the graduate's future success (earnings).

How a selection of different solutions that have been proposed might fit within these dimensions is shown in table 1:

Table 1:	University contracts	Student contracts
Key Dimensions		
Loan basis	Securitised income contingent graduate debt (University issues) Sale of annuities Bank loans (with University guarantee)	Securitised income contingent graduate debt (Pooled, no University obligation) Bank loans (without University guarantee)
Equity basis	N/A	Securitised earnings linked payments (Private sector graduate tax)

The table treats any form of income contingent debt repayment as wholly equivalent to a loan basis scheme because the obligation is fixed and the income contingency simply acts as prior notice from lender to borrower of the basis on which the lender will not seek to enforce the debt.

The table does not include a pure “Graduate Tax” as that would require Government funding in the first instance and so does not raise private sector finance and would not address the need for the Government to reduce its financial commitments.

This paper will consider the implications of the different key dimensions and will argue that the most politically acceptable and economically efficient solution is for the obligation to be taken by the students in the form of an equity-style participation in their future success.

As Friedman (“Capitalism and Freedom”, 1962) noted:

“The device adopted to meet the corresponding problem for other risky investments is equity investment plus limited liability on the part of shareholders. The counter-part for education would be to “buy” a share in an individual’s earnings prospects; to advance him the funds needed to finance his training on condition that he agree to pay [] a specified fraction of his future earnings”^{iv}

CONTRACTING PARTY

A priori, if the University is the contracting party, nothing in this approach directly addresses the inability of students to pay for their education. Given that students, especially from lower income backgrounds, have no means of paying for their education at the outset, it means that the University must bear that cost in the first instance in the hope that it recoups the income from graduates over time.

This would make Universities financial intermediaries.

They would be operating like banks, lending students the cost of their educational services subject to a contract whereby the student must repay that cost, with interest, over time.

First and foremost this exposes Universities to the full financial risk of default by the graduates. This is not an efficient risk for Universities to take since they would not be able to diversify their loan book across other types of lending, and they would have no security and no control over the probability of default.

For example, let’s say a University had a particular subject bias towards computer science. At a point in time there is a development in the computing industry that means that computer scientists are no longer needed and they are all made redundant. That University would be faced with a liability (educational costs already incurred and borrowed against) in excess of its assets (prospective income) and would become insolvent.

In addition, given that in the case of the Securitised income contingent graduate debt (University issues) scheme and the Sale of annuities scheme, Universities would be entering into lending agreements with students, it is hard to avoid the logical conclusion that they would become subject to regulation as financial services providers. Consequently, representations made by a University about the cost and value of its services would potentially be deemed to be part of the contract with the student with the possibility of a subsequent “mis-selling” claim in the event that the “product” did not live up to reasonable expectations.

Students, on the other hand, are clearly the “buyers” of education from the Universities. It is they who need, in some way, to pay for that education and it is appropriate that, just as they contract with the University to supply their education, so they should enter into a contract to pay for their education.

With the consequence of a financial risk that would be beyond their control and the potential for regulation as financial services providers, it cannot be attractive or efficient for Universities to be the contracting party. Students, as the buyers of education, should therefore be the party that enters into a contract to pay for that education.

DEBT VS EQUITY

Although it is preferable that it be the student who is contractually responsible for paying for their education, the “price” that they pay needs some consideration because education is a special case. When purchasing a tangible product (e.g. food, clothing) or promptly consumed or well defined service (e.g. rent, car insurance) the value to the student of the purchase can be assessed by the individual prior to making the purchase. However, with higher education, the value to the student of the “purchase” of that education is something that will not be known for many years. A priori, this makes conventional pricing approaches problematic.

Normally, an enterprise would seek to price its product or service such that, for any individual customer, the revenue received from that customer exceeded the marginal (incremental) cost to it of providing the product or service to that customer and, for its customers as a whole, such that the average revenue received exceeded its average costs, so that it is able to meet its liabilities and stay in operation. It will aim to achieve this by charging according to the benefit gained from the product or service, so that those who value the product or service more will pay more. Ideally then, the University would not turn away any student that would pay more than the marginal cost of being educated at that institution, but would collect sufficient fees on average to cover its fixed costs.

Turning to the point of view of the student, the “special case” problem is that the value of a higher education to a given student is highly uncertain and not known at the point of “purchase” (when the student accepts a place at a given university). While the existence of a “graduate premium” is well documented, so is the wide dispersion of outcomes. A University education shifts the mean expected lifetime earnings in an upward direction, but the distribution of lifetime earnings remains wide.

Evidence shows that there is variation in future earnings between subjects studied, within subjects and over time. Students’ careers are subject both to macro-economic changes and personal good and bad fortune. Although a higher education certainly raises the expected level

of a student's future income, the high dispersion of actual incomes about this raised mean makes debt finance, with an obligation to repay a fixed sum of money, problematical.

Figure 1 illustrates this dispersion by subject. It demonstrates that the dispersion of returns is such that, for certain measurement periods and subjects, the returns to a University education may even be negative. Figure 2 shows the difference in returns for subjects between their best and worst years. Given that within a given subject cohort there will be a distribution of outcomes by individual, it is unarguable that a given individual cannot be certain of the value to them of a University education.

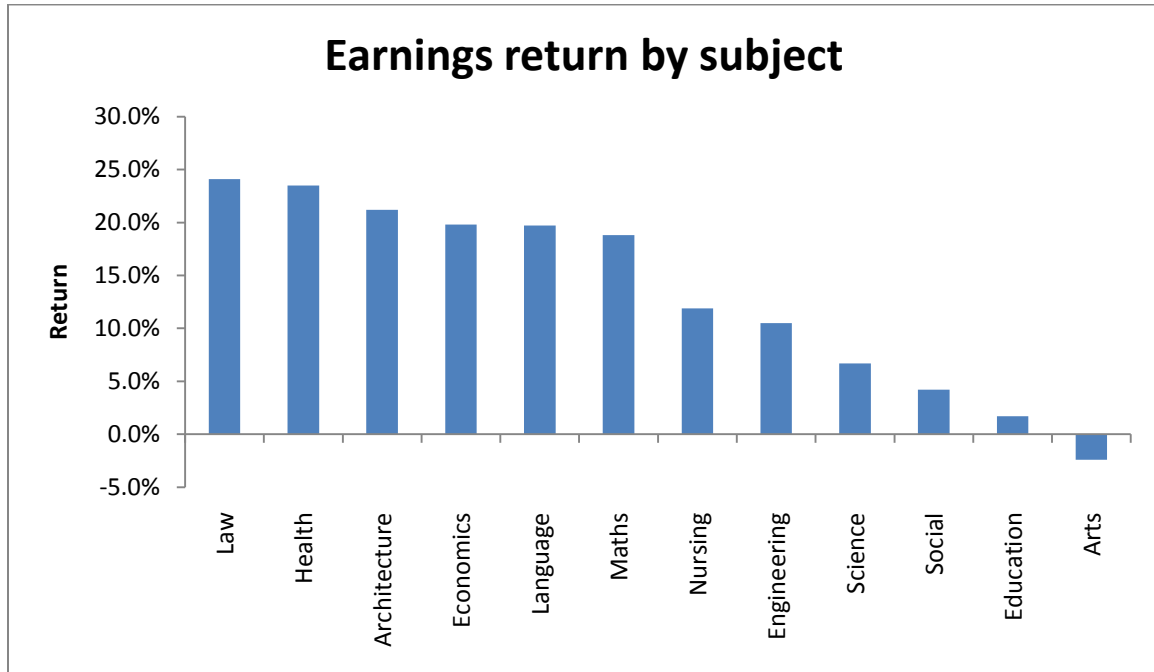


Figure 1: The Returns to Education, Walker and Zhu, 2001 (Table 15, Men)

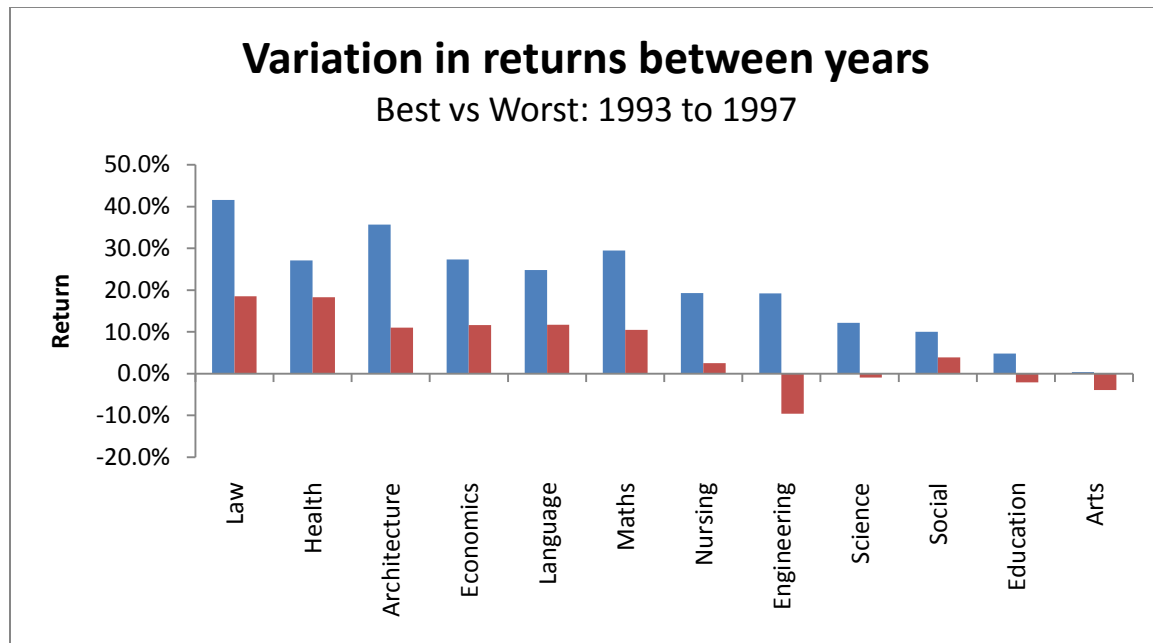


Figure 2: The Returns to Education, Walker and Zhu, 2001 (Table 15, Men)

The consequence of this uncertainty is that the taking on, at the point of purchase, of an obligation to repay a fixed amount of money in exchange for an education, when the value of the education is unknown, will result in some students being obliged to pay far more than the education was worth to them while some others will pay far less. Such a mis-alignment between the cost of education and its value is untenable, politically and economically.

In many cases, where the graduate's earnings are low, the burden of a fixed amount of debt could become unaffordable leading to a default on part or all of the debt. Fear of debt is likely to discourage students from less wealthy, less financially confident, backgrounds from engaging in higher education. Given that the earnings payoff is lower for graduates living in certain regions, high fixed costs to education would have an effect on participation by region.

To address the affordability aspect of debt finance a number of countries, the UK included, have made the repayment obligation subject to income. Income contingent loan schemes are fundamentally unfair to middle income earners as they will pay a higher share of their earnings than either the high earners or the low earners, where the latter are not required to re-pay the whole debt. In addition, such schemes create an unhealthy disincentive to delay earnings and to earn less than the minimum on which repayment is based as the liability is reduced by these strategies.

Income contingent loan schemes are uneconomic as they cap the liability of those who benefit most from their education and can afford to overpay but do not recover the full cost from those who benefit least or who cannot afford to pay. A priori, any debt based scheme will result in losses for the University where the University is the contracting party or the investor if the student contracts directly.

In order to raise investment returns, one possible approach is to add a high default premium to the level of the debt so that the higher earners subsidise the fail-to-payers. Adding such a

“default premium” to the loan level is even more unfair to middle income earners as they would be obliged to bear the same burden of premium as much higher earning graduates.

A debt based scheme is therefore not a viable private sector solution; it is only feasible where, for policy reasons, a government is willing to take the loss on the under-payers. Putting aside policy, it is probable that the UK Coalition government would argue that it is unable to take this loss.

As Friedman argued, a student pursuing a higher education is more akin to a company making an investment of uncertain future value, as opposed to a situation where it purchases an asset with readily marketable value. Whereas debt finance is suitable for the latter, companies would typically finance risky investments with the issue of equity (shares) in exchange for the promise to pay out a participation in the future profits arising from the investment, should there be any.

In the case of the financing of students to pay for a higher education this could operate as students contracting to pay X% of their future income for Y years. Assuming X is a low percentage and Y is less than an expected working lifetime this repayment obligation directly relates cost to benefit and affordability and is thus economically efficient and a low risk option for the student.

Consequently, this approach is unlikely to discourage participation by students from less wealthy backgrounds. This same factor also means that losses on underpayment will be minimized, as the burden of repayment will be proportionate to the ability to pay.

Of course, this formula means that high earning graduates will pay far more than low earning graduates and some commentators have expressed this as the high earners paying more than their education “cost”. As explained below, “cost” is not an appropriate metric for higher education; a priori, it is rational for those who gain the greatest benefit to be willing to pay the highest fees. Furthermore, as with other high fixed cost businesses, it is the higher payments by the greatest beneficiaries of the service that makes the industry in general economically viable.

Given the uncertain earnings future a given student faces, charging for higher education on a fixed obligation debt basis is likely to discourage participation and lead to credit impairment for many graduates and losses for lenders. An equity based scheme matches cost to ability to pay without these problems and appears more appropriate for financing higher education.

THE FAIR PROPOSAL

Having reached the conclusion that the most efficient solution for the private sector financing of higher education is an equity based scheme where the student contracts directly with the lender the next step is to design such a scheme so that it meets a broader range of needs and is politically feasible.

This paper will therefore now set out a proposal for a scheme which it labels “FAIR” for “Funding with Affordable Income based Repayments” and the assets created under this scheme, being pools of earnings based obligations, shall be known as “FAIR assets”.

The various issues that this scheme needs to satisfy or address will then be discussed in turn.

The FAIR scheme:

1. The cap on standard tuition fees stays but is reduced in real terms, possibly to nil.
2. Universities are allowed to publish “top up” tuition fees which are in addition to the regulated and capped standard level. There is no upper limit to the “top up” fee and it may vary by course and by institution.
3. On accepting a place at University, in relation to the top-up fee, students have an option:
 - i. to pay the deregulated top up fee from their own means OR
 - ii. to take on an obligation to pay a fixed percentage, X%, of their total earnings (capital and income) for the first Y years that they pay income or capital gains tax in any jurisdiction.
 - This obligation, the “FAIR contract”, is in the form of a private contract with a special purpose company which would be set up to provide funding for a given University or group of Universities.
 - in the contract the Student nominates the University in relation to which they are willing to make future income based payments. A similarity is the mobile phone contract, where a subscriber contracts with a network but selects a phone from a manufacturer to whom the network pays the cost of the phone, recovering the cost from the subscriber over the contract period.
 - Should a student not complete their course a reduced or nil fee would be charged. Given there is a benefit to partial completion of a course it is suggested that there be no charge where the ungraduated student discontinues before the end of the first year of a two year course or the end of the second year for longer courses and otherwise is charged at half the standard rate.
4. The Government sets X and Y to apply across all subjects and all Universities
 - i. Higher values of X and Y could be set for non-EU students.
5. The FAIR contract would be regulated, standardised^v and designed to be effective in all jurisdictions^{vi}
 - i. The terms of the FAIR scheme remain under Government control. It is thus a government sponsored and controlled scheme, where the private sector simply acts as the provider of the funds.
6. By agreement with the special purpose companies, banks would act as financial intermediaries, processing the contracts and, in due course, collecting payments from graduates.

- i. Neither the special purpose companies nor the banks have any financial risk as the FAIR investor will be paying (buying shares) at the point of student acceptance of a place, prior to any costs being incurred, so there is no pre-funding requirement.
7. Banks would pool the contracts for a given special purpose company and sell them, as share issues (equity), or as a mix of annuities (debt) and equity, to the investment community.
8. The sale proceeds, less issue costs, would be paid to the University or group of Universities whose students' obligations had been pooled.
9. The sale proceeds will vary based on the market's perception of the future earnings potential of the group of students whose obligations are in a given pool.
 - i. Although students will contract on identical terms, universities will receive different amounts of money based on their value added
 - ii. The Universities will know their receipts for the duration of the student's course shortly after the student has accepted their place and have no financial risk in relation to the student fulfilling the terms of the agreement.
10. Banks would manage the process of collecting payments, compensating Universities where students move from one to the other during their undergraduate career, of re-packaging the obligations of those students who fall below the tax threshold in some years (to ensure economic pools of assets are maintained) etc.

IMPLEMENTATION

As there are friction costs whenever an economic system changes it is recommended that FAIR be introduced in a gradualist manner.

One approach would be for the present income contingent loan scheme to continue for the meantime but with its real value eroding over time. This will reduce the burden on the government's finances in accordance with its long term objectives while FAIR receipts provide a boost to Universities' financial positions.

The FAIR scheme will simply be a separate contractual charge that a graduate must pay in addition to their student loan obligation, in the same way that they must pay for rent, utilities etc. As the real value of the Student Loan Scheme tuition fee loan will reduce with each new intake, the rate at which the loan is paid off will accelerate. This will help with the state's financial position and will relieve graduates of those payments before higher nominal payments under FAIR which are tied to higher earnings later in their careers become payable.

In due course, when the current loan scheme has, in real terms, eroded to a much lower level, it could be abolished and the FAIR rate increased accordingly.

This approach is most suitable if a key objective is to introduce market discipline into the services Universities provide as quickly as possible. As the bulk of University tuition fee income will arise from the standard capped fee, which is funded through the government's income contingent loan scheme, it will be possible to issue FAIR assets to the market based on the students of single or small groups of Universities. Although this could result in a wide range of valuations placed on different institution's paper (the securitised asset being sold) that will serve as a powerful signal of the markets' view of a given institution (or small group).

An alternative would be to scrap the standard tuition fee altogether and set the FAIR parameters at such a level that they would be expected to provide, on average, a level of tuition fee approximately equal to or greater than, the current level. Because Universities would then be substantially dependent on the FAIR asset proceeds, to avoid extreme outcomes that could cause financial difficulties for some institutions, it would be better to pool FAIR assets into very large groups, or for the government to guarantee that all institutions will receive funding at least equal to the present level (inflation adjusted) for a limited period, say 5 years. This would mean that those institutions that were adding sufficient value to earn more from FAIR than the current standard tuition fee rate provided for would be free to use the additional income to enhance their teaching provision and international competitiveness, while those that were adding insufficient value would have sufficient time to adjust their programmes to improve their value add and earn sufficient income for them to thrive.

This approach is most suitable if the primary objective is to reduce the burden on the government's finances. The whole of the standard tuition fee would be funded by the private sector and the government would then be free to provide additional funds to selected institutions to meet policy objectives, while able to keep the overall demand on the public purse down. However, as it would require FAIR assets, at least initially while data and experience are being accumulated, to be constructed from large groups of Universities, the market discipline on any given University will be less apparent and effective.

The FAIR scheme is not designed to help with maintenance costs as they are not necessarily payable to the University and the student can mitigate these costs through lifestyle choices – living at home, quality of accommodation etc. The current system of subsidised loans and parental support seem appropriate for financing this element of the University experience though it is odd that the requirement to repay a maintenance loan is a function of parental income rather than graduate income. That means that a high earning graduate from a poor background gets their maintenance for free, while a low earning graduate from a less well off, but above the grant threshold level household, faces the full burden of repayment. It would seem fairer and more efficient to give the same maintenance loan to all students regardless of background, but make the repayment income contingent. This could then be administered in the private sector (so as to have contracts that are enforceable when graduates move abroad) with the government covering the costs of default by low earners.

Although data on graduate income over the long term is currently sparse, it is growing rapidly as a consequence of the implementation of the income contingent loan scheme. The implication is that methods for valuing the FAIR assets income stream will improve over time. This is no different to the comparison between when a company makes an initial public offering and its future share issues. The IPO is hard to value and subject to instant market conditions, but subsequent issue values are much easier to forecast.

POTENTIAL PROCEEDS

As an example of the potential value of FAIR assets, if we assume:

1. FAIR terms of a 1% payment over 20 years
2. Starting salaries in three years time of an average of £25,000
3. Growth in average earnings to £45,000 over 20 years
4. All figures in current prices
5. A discount rate of 1.25%, as on index linked gilts

Then the present value of that stream of income is £5,600. These figures are potentially conservative as they represent current graduate incomes (rather than 3 year's time) and are medians whereas the mean is most likely higher.

Using the same figures but assuming a 2% obligation the present value is £11,200

This means that with a FAIR charge of just 1% a more than a 50% funding increase could be used to significantly improve Universities' financial positions, or a 2% charge could be used to replace the existing standard tuition fee altogether and so eliminate the burden on the government's finances.

The fact that a greater than 50% funding increase can be achieved with a 1% of earnings obligation creates the potential for an increase in student contributions that is considered equitable and affordable while delivering significant additional funding to Universities, or a 2% obligation could be used to eliminate tuition fees altogether.

PRECEDENTS

There are two private sector companies which have been identified as creating useful precedents for the FAIR scheme.

CareerConcept AG, a German Company which was set up in 2002 has, as of 31.10.2009, offered equity-style (wholly income dependent) educational finance to German undergraduate students studying in 20 countries, attending over 300 Universities, generating returns of EUR 2.8 million. The financing has been raised mainly by means of closed ended funds sold to private individuals. CareerConcept agree student-specific fees as a percentage of their monthly gross income, normally between 4% and 10% over 4-8 years. Despite the fees being much higher than the FAIR examples above, they claim to have a greater demand for provision of funds than they are able to meet.

Prodigy Finance is a U.K. company, founded in 2006, which is in the business of providing funding for MBA studies. Although Prodigy offers loan based finance it offers useful legal and operational precedents. It has created a contract that is enforceable in over 100 countries, has

set up a global payments network, has developed means of using social media to track graduates and maintain compliance with debt obligations and has sold pooled debt securities in the financial markets.

The current situation in the United States is a precedent that illustrates the problems that arise when Universities are free to set their own fee levels with no reference to the value of their courses in terms of future earnings power. Indeed, on July 23, the Obama Administration proposed restricting - and in extreme cases, cutting off entirely - programs whose graduates end up with the highest debts relative to their salaries and have the most trouble repaying their student loans.^{vii} It would be unfortunate for the UK to introduce a system that did not link fees to earnings power just at the time when the US is questioning such an approach

FAIRNESS

Although under an equity style scheme high earning graduates will pay back a larger sum of money than lower earning graduates the scheme is just on the basis that the terms are known at the point of entering into the contract and they are the same for all students.

If a student is confident that they will be a very high earner but they cannot afford to pay the deregulated tuition fee it is more rational for them to attend their favoured University but to leave the country at some point to avoid high UK income tax rates, rather than to seek to avoid the FAIR obligation. Although it is true that wealthy students could avoid ever paying the FAIR obligation on future high earnings by paying the upfront tuition fee while a less well off student, in practice, does not have that option, by the time the problem becomes apparent that less well-off student is a very wealthy graduate. As they will have been a significant beneficiary of higher education being made available to those who could not afford to pay it would be hard for them to argue that paying a large sum for a life-changing and highly beneficial investment was unfair.

In any case, the present income contingent loan scheme is already unfair in that high earning graduates pay the loan in full while some low earning graduates see the loan waived.

The potential resentment felt by some high earning graduates can be addressed by recognising their payments as benefactors. It is likely that many of the high earners are competitive types and the recognition of their earnings success by comparison with their peers will be valuable compensation.

It is also the case that FAIR is not punitive towards high earners in the way that the tax system is. Although they have an obligation to pay a higher nominal amount than low earners, the percentage they pay will be the same and, as a proportion of disposable income, the proportion they pay will be lower. On the other hand, as the FAIR payment is due on gross income, the pre-tax cost to a graduate will rise with their highest tax rate, which will be considered fair by those who feel higher income earners should pay higher rates of tax. It remains reasonable from the higher income earner point of view because, were they to pay upfront for their education, that would, in any case, come out of post-tax earnings,

In the initial years of operation it is not envisaged that it would be possible to permit graduates who have signed up to the FAIR scheme, to buy themselves out of future obligations. The FAIR

program operates like a private sector tax and it is not possible to buy ones way out of future tax obligations. If a graduate was keen to neutralize their future obligations with a capital payment they could, of course, buy the appropriate security in the marketplace. If their earnings are in line with the average, apart from costs, owning the FAIR asset will be a perfect hedge for their liabilities. Once FAIR has been in operation for a number of years it may be possible to allow early exits at a premium, subject to it being possible to model the consequences of so allowing in such a way that the attractiveness of the asset to investors is not materially prejudiced.

The impact of the FAIR scheme on very low earning graduates does not follow the approach of most tax systems. The X% is a flat non-varying rate payable on total earnings, not on an excess over some figure. A graduate earning just enough to pay tax would be liable for X% on their whole income. Of course, if X is 1, that would mean a modest liability of just £100 on an income of £10,000. If the Government felt that such graduates should be relieved of the burden of paying such a fee, it would be free to bear that cost itself in the same way that it pays, for example, housing costs for low earners.

This flat, non-varying, approach is preferred because at the point of the parties (the student and the bank) entering into the contract future values of inflation are not known so appropriate hurdles at which the rate changes cannot easily be set. Also, the FAIR scheme is designed to facilitate the growth of demand for a UK university education from non-EU nationals and setting globally appropriate hurdles would be impractical.

The contract could be written so that hurdles were related to future experienced inflation. But this would mean that investor returns and graduate costs would be subject to the relationship between the measure of inflation chosen and graduate earnings growth. This adds a level of complexity which would diminish the appeal of the FAIR asset to both students and the investor community.

If hurdles were related to future income tax bands it would mean that investor returns would be subject to government whim, which would be an unacceptable risk and such securities would likely be unmarketable.

The obligation to pay under FAIR does however only trigger should the graduate have a liability for tax (income or capital gains). So if they are not working or are earning insufficient to pay tax they are relieved of any obligation. To balance this relief, investors are protected because the duration of the obligation is a set number of years that payments are made, so if a graduate is out of the labour market for a few years they merely postpone their obligation but cannot eliminate it.

The fact that avoiding earning a taxable income does not reduce the obligation to pay for a given number of years also has a positive incentive effect, discouraging intentional absence from the workplace. It is also fair between graduates who wish to take time out to bring up a family and those who do not. The obligation to pay for Y years survives that period. If Y is 20 years, given a working lifetime of approximately 40 years, there is sufficient time to bring up a family and also repay the FAIR obligation in full.

Although the effect of the life of the FAIR liability being 20 tax-paying years is that, for some, the liability will exist until retirement, in many cases that will be the individual's choice. Where,

perhaps due to ill health, a delay in payment is not a free choice, a political decision could be made to compensate such unfortunates for their liability, in exactly the same way that the state pays other private sector costs, such as rent, for selected groups.

A charge of just 1% or 2% on earnings has the potential to achieve a meaningful increase in University funding, while being unlikely to be regarded as an onerous obligation on the low paid or an unfair obligation on the highly paid.

PRICING STRATEGY

The debate between different possible schemes by which tuition fees may be paid often hinges on the fairness or otherwise of students paying “more” or “less” than their education “cost”.

This line of argument assumes that: (i) the “cost” of providing an education can be correctly measured and (ii) that it is appropriate for education to be priced on a “cost-plus” basis.

Given that higher education is a service business with high fixed costs and low marginal costs it is questionable whether either of these assumptions hold.

The true “cost” to any business of a given customer is the incremental staff and resources it needs to provide its service to that customer. Its fixed costs are – by definition – fixed. They cannot be attributed to any given customer; they exist because without them the business would not. There is no doubt that the incremental cost to a university of any one student is very small and, furthermore, quite immeasurable at the outset as some students will require a large amount of academic and/or pastoral support and others will not.

To explain the second point, it may be useful to consider the airline business which also offers a service that faces very high fixed costs and low marginal costs. Rather than charge on a cost-plus basis airlines segment the market of potential customers according to a number of dimensions to deliver essentially the same product – getting the customer from A to B – but for a very wide range of different prices. The segmentation is designed to categorise customers according to the benefit they receive. The airline is aiming to cover its overall costs with money to spare for future investment, and to reach that objective the airline industry has established that it is most efficient to charge each customer according to the value that customer attributes to the service provided.

Nobody questions the “fairness” of customers who book at the last minute paying more than those who book in advance – with both flying economy class. It is accepted that the person who booked at the last minute simply places a higher value on being able to fly at short notice and it is their free choice to pay the greater amount rather than waiting.

Hence the fact is that the cost of provision of a service is not an appropriate guide to a fair price – it is the benefit to the customer that is the relevant metric.

Nevertheless, and consistent with the “freedom” policy objective of the coalition government, students should be allowed to pay an amount of money at the start of their studies as an alternative to joining the FAIR scheme. To compute the charge for being excused from

participation in FAIR the Universities should base their calculations on the benefit that a student will gain from avoiding the FAIR obligation.

Let us assume that the University needs to receive £10,000 per student to cover its average costs (not the cost for an additional student) and invest for the future. The estimate of the present value of the average student's income over the period that FAIR would be charged is £1m. If all students participated in FAIR, a charge of 1% would provide the required income. However, we estimate that 10% of students will choose to buy themselves out of FAIR by paying upfront. Based on survey data and experience of current students paying tuition fees up front we estimate that such students are likely to be well above average earners with relevant expected earnings of £1.9m. That means that the other 90% of students must have average expected earnings of £900k. To generate the same income as when there is 100% participation in FAIR, the fee payable to avoid FAIR should be £19,000.

While the numbers above are very artificial, the example demonstrates that it is possible for the University to set the "top-up" alternative to FAIR at a level that accounts for the risk that future high earners may be over-represented among those students willing and able to pay the top-up fee, and at a level that is proportionate to the benefit that the pre-payers will get from their education.

SUBJECT EFFECTS

It may seem that the FAIR scheme would encourage Universities to focus on teaching only those subjects that result in students achieving high earnings. Clearly one intent of the scheme is to encourage the expansion of courses that add value and contraction of those that detract value, but this will not mean that all universities will just teach, say, law and medicine.

The reasons why this will not be the effect are twofold. Universities are not rewarded for the success of their graduates; that reward falls to investors who take the risk that graduates earnings may fall below expectations. In fact, Universities are rewarded according to the market's view of the likely future success of their graduates. Investors are familiar with the laws of supply and demand. If a university that previously offered a wide range of subjects announced an intent to focus on law and medicine, for example, its FAIR issues would likely be marked down because the focus creates risk through lack of diversification – as it is not certain that what was true in the past (that lawyers and doctors were high earners) will hold in the future - and the increased supply of lawyers and doctors is likely to depress their future earnings.

Of course, some institutions, by design, specialise in a narrow range of subjects. There is nothing in FAIR that challenges their viability or that forces or obliges them to change their subject focus. However, if it were the case that the future earnings of their students did not justify their average cost per student they would need to find strategies to raise those future earnings or reduce their costs.

Secondly, the most prestigious institutions at present offer a wide range of courses. The students who attend such universities are probably looking for a broad experience and not just a narrow focus on their subject. Should a University focus on a few subjects that historically

generate the highest earnings it is possible they will discourage the highest achieving students which will again have the impact of reducing the value of their FAIR assets and their income.

IMPACT ON DONATIONS

Earlier it was suggested that Universities could address the resentment that may be felt by some high earning graduates by recognising their contribution as though they were benefactors. If Universities, for example, provided different levels of recognition to the top 10%, 1% and 0.1% of payers it is not unimaginable that some graduates will overpay in order to be recognised among a higher earning group.

Indeed, many Universities already recognise benefactors in this way, so the principle is already accepted and operational. Assuming the repayments under the scheme do not continue too late into a working life it is possible that there will be no detrimental impact on gifted donations as they will typically be made later in a working life. It is also possible the number of benefactors will increase as graduates will acquire the habit of putting money aside for their University and will have seen the recognition benefits of so doing.

A prominent American financier commented that the FAIR Scheme was, in effect, aiming to create, by compulsion, the American model where higher earning graduates are voluntary benefactors. This may be a better way to present the high payments by higher earners than as them paying more than their education cost – they are giving back in recognition of the benefit they gained, as is common in America. Longer term it is to be hoped that habit learned by compulsion will continue voluntarily and tuition costs will be able to fall as endowments grow.

FAIR VS GRADUATE TAX

The idea that graduates should pay X% of their income for Y years is, in principle, a graduate tax. However, there are important differences when the transaction is a private contract between parties freely entering into the contract of their own choice as opposed to a government levied tax:

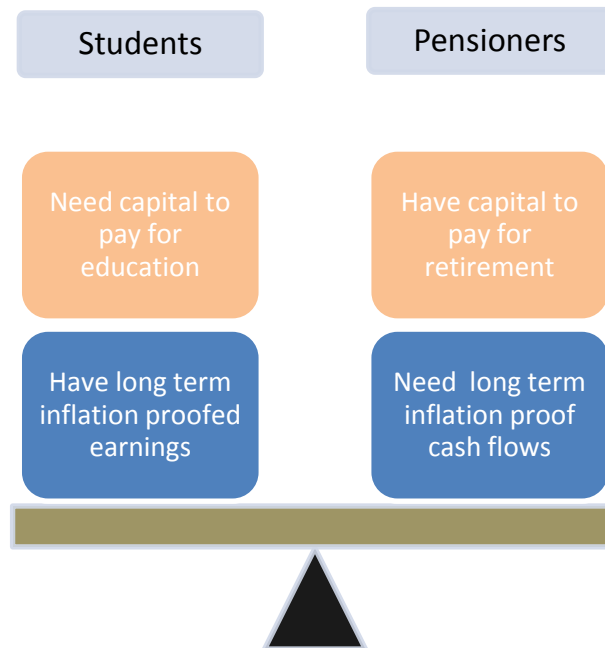
1. The terms of a private contract are known by the student at the point of entering into the contract and cannot be varied unilaterally by the lender.
 - a. In contrast, there can be no confidence that a tax will stay at a given level. Parliamentary sovereignty means that one Government cannot tie the hands of a future Government. The implication is that, with a graduate tax, a student is exposing themselves to an uncertain future obligation, which will discourage participation.
2. The value of the contract can accrue directly to the University that the student attends.
 - a. A graduate tax system leaves Universities subject to government whim about the level and distribution of funding.
3. As the present value of the University's receipts on the FAIR assets are tied to market expectations of that University's graduates' future earnings, there is direct alignment

- between the University's revenues and the economic benefit that students gain from attendance.
- a. With a graduate tax the University's revenue is not directly related to the value it adds to its students careers.
4. A private contract will be enforceable in most jurisdictions.
 - a. A UK tax will garner little revenue from non-UK students and will create an incentive for graduates to leave the UK, reducing the government's graduate and normal tax receipts.
 5. As FAIR assets will be tradable a graduate can hedge their future liabilities by purchasing FAIR assets in proportion to the multiple of their expected income relative to the average, adjusted for tax.
 - a. It is not possible to hedge or otherwise avoid future tax obligations.
 6. FAIR creates a new supply of private investment flows into the higher education sector, reducing the level of government funding required.
 - a. A graduate tax worsens the government's financial position in the short term, and it faces the risk that the long term take from the tax may not compensate it for the initial costs.
 7. The FAIR contract can be made optional, with the alternative to pay a "top-up" tuition fee directly, consistent with the political objective of "freedom".
 - a. It is hard to see how it would be politically feasible to allow certain graduates to buy their way out of a future tax liability, making a graduate tax inconsistent with "freedom".
 8. The FAIR system would itself represent exportable expertise which could generate foreign earnings.
 - a. A graduate tax would not create any marketable expertise.

Consequently, FAIR has the positive attributes of a graduate tax, matching graduate payments to the benefit gained from education, while eliminating the arbitrariness that flows from government involvement. From the government's point of view, FAIR also means the financing of higher education has the potential to move off its balance sheet altogether.

INVESTMENT DEMAND

At the point of applying for University students are cash poor but have the potential for many years of strong inflation proof cash flows (earnings). At the point of retirement pensioners (excluding those who rely wholly on the state) are cash rich but in need of many years of inflation proof cash flows. Their positions offset each other perfectly and a market that facilitates transactions between the two parties should be economically efficient. This is illustrated in the diagram below:



Pensioners, either as individuals or in the form of pension funds or insurance companies, typically seek to meet their long term inflation proof income needs with a balance of debt investments to provide high levels of nominal cash flow and equities for long term growth to provide protection against inflation. However, the poor long term performance of equities over the last decade has driven strong demand for inflation proof cash generating assets, such as index-linked gilts.

Assuming GDP per head growth continues earnings growth will exceed inflation; in which case an asset that generates reliable cash flows that grow with earnings should see significant demand from pension investors. Index linked gilts currently yield around 1.25% and FAIR assets could conceivably be traded at even lower yields given the repayments would be indexed to earnings rather than inflation.

Preliminary discussions with a number of financial intermediaries suggest a range of sources of demand for FAIR assets.

Pension funds, both in the UK and abroad, especially public or quasi-public sector schemes, were identified as a key source of demand. It was suggested that investing in FAIR assets would help pension funds to satisfy their "Socially Responsible Investing" obligations. For such schemes a total issuance of around £5bn of FAIR issues – assuming half a million students at approximately £10,000 per student - would be easily absorbed.

Mutual funds seeking to generate low risk high income returns, typically for pension related investors, would benefit from a new asset class that offered stable cash flows relatively uncorrelated to equity or bond market prices. A mutual fund could be offered by National Savings, possibly tied to the earnings of all students, so creating a national public scheme for intergenerational capital & income transfers.

University endowment plans currently invest in debt securities which are a poorer match for their salary linked liabilities than FAIR assets on which the returns would grow with the earnings of cohorts of graduates. A given University's plan could choose to buy FAIR assets tied to the earnings of its own graduates to benefit from its success or it could reduce its risk by diversifying across the Universities sector as a whole.

Alumni at or close to retirement could well be an enthusiastic purchaser of a given University's FAIR assets. The positive association many alumni have with their University will raise the valuation of the FAIR assets.

The government could support selected institutions by purchasing their FAIR asset issues, using the assets as a hedge against its own pension liabilities.

The fact that FAIR assets will be pooled and securitised is not expected to have an impact on demand for them. Securitisation remains an attractive investment proposition so long as the underlying assets are of good quality and their nature transparent.

Finally, while FAIR assets, in effect "human equity", would generally be considered a wholly new asset class in current financial practice, they are not without precedent as CareerConcept is lending to students on an equity basis and financing itself in the market. The CareerConcept scheme is different in that, as it is not government ordained, it offers terms that differ by student, but its growing success supports the contention that there would be substantial investor demand for this new asset class.

The valuation of FAIR assets, in the first instance, has some similarity to the valuation of an equity investment in a new company, which is familiar territory for many investors. In the same way that new valuation approaches get developed for new business models (e.g. dot.com, green energy, bio-tech), so new analytical techniques will need to be developed in relation to FAIR assets for a wide universe of investors to be comfortable with their return characteristics and valuation. Taking a big picture view, for all graduates in one year, UK GNP should be a good proxy for their aggregate earnings. Consequently, simulations of possible UK GNP outcomes over 20 year time periods should be the basis for valuing FAIR assets as a whole. As mean GNP growth is high relative to the volatility of GNP around the mean (in booms and recessions) the expected returns to FAIR assets, in aggregate, should be quite stable. This means that a straightforward discounted cash flow methodology, less an adjustment for administration cost and defaults, should be a good estimate of how the market would price FAIR assets.

FAIR assets, generating earnings linked cash-flows, should be very attractive to pension investors seeking inflation proof income, subject to overcoming the lack of general precedent for this new asset class.

REGULATION

As a private sector scheme whereby students take on an obligation to make long term monetary payments it is likely that FAIR would ordinarily be subject to financial services regulation. To reduce the costs and risks associated with a regulated environment it is envisaged that the contractual form of the agreement underpinning FAIR would be mandated by a state or quasi-state body. As there is no underlying asset over which security may be taken it is important to

the value of the FAIR asset that graduates cannot in due course argue that they did not understand the terms of the transaction and seek to avoid fulfilling their part of the bargain.

A government approved, standardized, contract should mean that investors have an implicit government guarantee that the contracts will be enforceable. Banks would have a duty of care to investors to use reasonable efforts to collect payments, but would be immune to claims that the contract had been mis-sold.

EXPORT POTENTIAL

It is recognised that higher education is a significant export earner for the United Kingdom and is an economic sector in which this country has a comparative advantage. It is also the case that the global demand for higher education is growing, while globalisation is encouraging more students to study abroad.

Rational students will compare the cost of a foreign education with the boost it will give to their likely future earnings. If the UK operates a scheme whereby the risk that their future earnings may not meet their expectations is shared with investors it will lower the effective cost of a UK education and should lead to an expansion in the non-EU demand for higher education in the UK.

As non-EU students do not have access to the UK government's loan scheme and as the fees they pay are unregulated, it is suggested that the FAIR scheme for non-EU students should operate with higher values of X and Y, and Universities would be free to create pools of non-EU FAIR assets separate to the EU FAIR assets. The greater the sum that can be generated from the FAIR assets the lower the fixed fee that would need to be charged and the greater the market opportunity.

There is a long tradition of Indian students attending British Universities and currently there are 34,000 Indians attending courses, an all time high. Non-EU FAIR assets could, for example, be pooled by nationality so creating an asset that should be attractive to pension funds in that country.

FAIR assets will represent an investment in human capital and could be considered human equity. They represent a wholly new asset class. Just as the UK invented the process of Privatisation in the 1980's and then was able to sell that expertise to the world, being the first to place a marketable value on human capital and developing the associated expertise will also be a marketable skill, supporting the continued leadership of the UK's financial services sector.

POLITICS

For the coalition government to accept any new funding proposal it should be consistent with its stated principles of: "freedom, fairness and responsibility". It is also important to be cognisant of the Liberal Democrats' longstanding opposition to tuition fees in any form, though this may be tempered by budget realities.

The FAIR scheme is consistent with freedom. On the one hand FAIR will make higher education less financially intimidating for students who are less confident of their future earnings potential, typically those from lower income backgrounds. Therefore FAIR extends the freedom to choose advancement through higher education to a wider section of society.

On the other hand, students who are confident of their (high) future earnings potential and who have the means, are free to opt out of FAIR by paying the alternative deregulated tuition fee.

Fairness has been discussed above and, while there are some issues in relation to the FAIR repayments being due on total gross earnings, it must surely be the case that a flat rate across the board is easier to defend as equitable than a variable rate or variable fixed fees. Although tuition fees will rise under this plan and they will be variable, the fact that they are avoidable using a scheme that charges the same rate across all students should ensure that the whole arrangement is politically tenable.

FAIR is consistent with responsibility since students will be taking on a private contract from which they expect to benefit but for which they must, in due course, pay.

All loan based schemes are strongly objected to by the national student body. FAIR should address the students' legitimate concerns about taking on high levels of debt while, as a private sector scheme, addressing most of the Universities' justified concerns about a graduate tax.

Some commentators have expressed the view that there may be political implications of the potential for significant over-payment by wealthier graduates. This relies on the flawed "cost-plus" basis of pricing education and, in any case, the present perception will be that the most extreme earnings are likely to be made by high bonus earners in Banks and Hedge Funds. There is every likelihood that a greater burden on that community will be seen as a political positive.

ADVERSE SELECTION & FEE INCOME STABILITY

When setting the fee that a student can pay as an alternative to taking on a FAIR obligation, given that the value of the pooled FAIR assets will not be known by the University at the time of advertising the cost of a course, it is possible that it will make a charge for a course (in substitute for FAIR) that is less or more than the FAIR proceeds. However, there must be considerable uncertainty in determining the true marginal cost of a student studying for a given course in any case, so the University should have considerable flexibility in setting fee levels which can take account of the uncertainties.

This option to avoid the FAIR obligation creates the risk that all the future high earners will pay for their courses up front and the returns to the FAIR assets will be lower than expected. That assumes, of course, that there is a sizeable body of students who can afford to make a larger initial contribution for their education, who believe that they will be high earners, and who subsequently turn out to be so.

As data on student behavior and investor valuations of FAIR assets accumulates it should be possible to set the alternative fee option at a level that ensures sufficient returns to the University and investors.

Even if it were the case that all of the future high earners chose to pay for their tuition fees upfront the system still achieves the desired objectives if the deregulated tuition fees are set at such a level that the income from them plus the FAIR income meets the University's funding requirement. In any case, the risk that all the future high earners are the ones who have paid upfront is a risk that is taken by investors not by the University. The FAIR proceeds will only be impacted to the extent that investors believe that the future high earners are absent from a given pool.

With the FAIR system Universities know their receipts for a year intake at the beginning of study and can adjust fee levels for following intake years to take account of deviations from target levels. Once able to set fees, either directly or indirectly through FAIR, Universities will be in the same position as any other commercial enterprise – sales and income will not always be in line with targets. The only way to achieve security of income is with a wholly government funded scheme and, while this is secure, it is likely to be inadequate to maintain the long-term competitiveness of the UK Higher Education sector, especially at a time of fiscal stringency.

ALIGNMENT OF INTERESTS

While a University education yields benefits for the individual that go beyond the purely economic it is difficult to design a scheme that will fairly capture those non-economic gains because they will vary between students in an unmeasurable way. Consequently, when considering the alignment of interests between students and universities it is necessary to focus on the purely economic.

Even that is problematic as the true economic gain to a student is their lifetime earnings as a graduate less their lifetime earnings had they not attended university, which cannot be known. However, their actual lifetime earnings should be a good proxy for this gain and a fee based on earnings therefore proportionate to the benefit gained.

With the FAIR assets being sold to investors with each new intake of undergraduates a given University (or group of universities should they choose to pool their students' FAIR contracts) will receive an income that is based on investors' views as to the present value of a stream of earnings related income from graduates of that university.

Not only will investors take account of the past history of earnings for graduates of that university, but they will also take account of the University's current plans and actions to make both new students and past graduates more financially successful. Since, in our example, FAIR assets have a life of 20 years, the University will therefore have an interest in the earnings of its students for 20 years after they graduate. To the extent that the University can help those graduates onto a higher earnings path, perhaps with refresher courses or careers advice, it will be reflected in investors' valuation models of new FAIR issues by that University and hence current receipts by that University.

This is exactly as is the case with companies seeking investor capital. The rating (e.g. the Price:Earnings ratio) assigned to a company's equity will be a function of its past record of achieving investment returns and the convincingness of its current plans for achieving future success. In the current age where intellectual capital is becoming increasingly important as the key source of growth and competitive advantage, it is appropriate that universities, as

“manufacturers” of intellectual capital, should be able to finance themselves in a manner analogous to that successfully used by conventional manufacturers.

Since FAIR receipts become a function of a University’s past success in adding economic value and its future plans there is a direct alignment between the economic interests of students and the University that they attend. This economic alignment is likely to be a far more powerful means of driving up standards and efficiency than targeted measures which may not align with students actual and ever changing needs, both while at and post University.

COMPETITION BETWEEN UNIVERSITIES AND VARIABLE FEES

The second Russell Group submission to the Browne Review suggested that it desired competition between Universities. The FAIR system allows such competition but offers students a flat charging scheme across all subjects and universities. Allowing explicit price competition without a common rate choice could be considered elitist and would have a number of adverse consequences.

FAIR would support “needs blind” admissions policies because the student’s present financial situation is irrelevant to the cost or benefit to the University of admitting that applicant. The incentive under FAIR is for the University to focus on students that are likely to be successful in the future, which potential will, in many cases, be inversely correlated with family wealth.

Allowing competition in tuition fees could severely damage the standing of the more prestigious and higher charging Universities. Talented students from less confident backgrounds will be more likely to prefer the lower tuition fees of less prestigious Universities than less talented students from wealthier backgrounds. Higher charging Universities would therefore suffer from a bias in their applications towards the less talented wealthy which would have a negative effect on the quality of the graduate output, in due course damaging their reputation. In the United States this is addressed by a comprehensive range of scholarships being made available to the talented students from less confident backgrounds. In the absence of such scholarships a scheme of high and variable tuition fees is problematic.

Instead of exclusively competing on price, FAIR encourages competition on value added. The fact that success in adding value will raise the “price” (in terms of FAIR receipts) received by the University means that price competition is delivered, but in a way which is equitable between students.

There are other problems with explicitly variable charges. There will be times when the costs of providing a given course are large relative to the expected earnings from graduates who read that subject. Whether such students are charged a fixed loan amount or equity based fee percentage, the payments will be prohibitively expensive. Setting a flat fee across all subjects should not be considered a cross-subsidy as that would only be true if the future earnings of all graduates, 20 years into the future, were known.

“FAILING” INSTITUTIONS

A number of Universities currently have high drop-out rates and they are considered by some to be “failing” and deserving of closure. However, high drop-out rates, from the point of view of the neutral observer, are not necessarily evidence of failure. This is because the current economic incentives structure dictates that Universities should seek to maximise the number of students *accepting places* at the institution, as opposed to the number *completing courses*, as that is how they are paid.

An historical example of the impact of incentives is instructive. In the 18th century, the UK exported its criminals to Australia, and paid on the basis of every convict shipped aboard at the quayside at Bristol or London. On average, 12 per cent of those who were shipped aboard in Britain died en route; on some voyages more than one in three of those shipped died before reaching Australia. In 1792, the system was changed (according to some reports, on the suggestion of Jeremy Bentham). Shippers were paid for every convict delivered alive in Australia, rather than shipped aboard in Britain. In 1793, three convict ships sailed to Australia transporting 422 convicts, of whom 421 were delivered alive – a mortality rate about 1/50th of what had previously occurred. The new reward structure produced immediate and dramatic change.^{viii}

By analogy, the incentive structure needs to change to reward Universities for the number of students completing courses (delivered alive) rather than for the number accepting places (shipped aboard). Although it is private investors, under FAIR, that take the risk that students may not complete courses and may have minimal earnings, to the extent that investors believe that a larger than average number of students at a given institution will not complete their course, they will reduce the amount of money they will pay for FAIR issues by that institution. Hence, Universities are incentivised to help students to complete their courses and it is probable that this shift in incentives will lead to a change in behavior by the Universities that some consider to be “failing” such that they justify their existence. This will avoid contraction of the higher education sector at a time when intellectual and human capital continues to grow in importance in the modern economy.

EXTERNALITIES

The second Russell Group submission to the Browne Review points out that there are many positive externalities offered both to students and society as a whole beyond the potential for improved earnings. As explained above, such externalities cannot readily be captured by a free market price mechanism.

However, it is notable that the earnings of Russell Group graduates exceed those of graduates of the Modern Universities, given that the latter probably provide more career oriented education. This indicates that a system that compensates Universities for the value they add in terms of graduates future earnings does not require a focus on technical or career specific courses. Indeed, many of the highest earning graduates now successful in the financial community will have studied arts subjects at University, demonstrating that the relationship between degree subject and earnings is obscure and that the totality of the University experience is often more important than the subject matter of the degree.

Of course, this may not be due to value added, but may instead be that students of Russell Group Universities were always destined to earn more than students attending Modern Universities given the higher A-level standards required (on average) to gain entry to a Russell Group University. If that is the case it means that students themselves are placing a higher value on a more academic education, or on other aspects of the service provided by top Universities, than could be attributed to the pure economic gain, meaning that under FAIR Universities will be compensated for providing an overall experience that attracts high achieving students.

To the extent that the FAIR system will not capture for specific Universities the full value of the positive externalities they generate it will be necessary for them to seek compensation where appropriate. If the externalities benefit companies, through R&D support, for example, they must seek to recover the benefits from companies. To the extent that Universities generate non-monetary benefits to the country as a whole, they must seek recompense from the state.

The purpose of FAIR is to materially increase the income to Universities in the short term while reducing the burden on Government finances so at least there is a possibility that the government will be financially capable of considering arguments in favour of funding the non-economic benefits supplied by Universities. If, for example, the government wishes to encourage provision of particular courses that, under the FAIR system, the market places a low value on, it should subsidise such courses directly.

ADMINISTRATION

As small amounts of money must be collected from, ultimately, millions of graduates, many overseas, it is essential that the collections system is highly efficient.

While it is envisaged that banks would be responsible for collecting payments the model is probably closer to how utilities currently operate. They set a standard monthly charge and review consumption on an annual basis, changing future payments to take account of current consumption and adjusting for prior over or under payment. Under the FAIR scheme simply replace consumption with gross income. Graduates would declare their estimated income at the beginning of a year and their actual income at the end and the bank would make a monthly deduction from their account accordingly. As “collection” would be by means of a direct debit, collection costs should be low.

As with the tax system a statistical model would highlight possible cases of mis-reporting which would then be investigated, with penalties should mis-reporting be established. When a graduate is seeking additional credit – for example for a car or house purchase – they will need to disclose their income with an incentive to maximise it, highlighting any conflict with their FAIR declaration. Career-Concept has data on expected salaries by occupation which helps to identify exceptions. Legally it should be possible to oblige graduates to disclose their aggregate gross income, as disclosed on their employer’s statement or personal tax return, on demand, subject to confidentiality. Default is less likely in an equity based scheme because the liability is always proportional to the ability to pay.

Although the obligations would not be backed by any physical security, neither are credit card obligations where the loan limits are also proportionate to income. The 2008 Credit Crunch, where the banks took significant losses on loans backed by physical property in the form of real

estate, demonstrated that physical security does not prevent large losses on default. As even bankruptcy would not extinguish a FAIR obligation, since a new obligation arises each year that income is earned, so long as collection costs can be minimised, default losses on FAIR should be small.

The UK's Student Loans Company would not be involved in the collection process as this is a private sector scheme with a global audience of students and graduates. Banks have experience of pooling mortgage payments and attributing them to particular securitised assets and it is this expertise that is required.

CONCLUSION

Loan based schemes cannot overcome the reality that for many students the cost of their education will exceed the economic benefit they gain from it. If the state is not willing to pay for the social benefits resulting from the extension of higher education opportunities to such students, loan based schemes will discourage many students, lead others into penury, while creating losses for lenders. The students' representatives recognise the burden placed on students by fixed loan commitments, adding to the political difficulties of promoting loan based schemes.

As implied by Willetts in his June speech, Universities have just two options, either to find a way of offering education much less expensively, possibly by distance learning or shorter courses, or to be innovative.

Distance learning or shorter courses would be hard to implement quickly and would change the whole character of the English University experience.

The FAIR scheme, on the other hand, satisfies the main objectives of the key stakeholders:

- 1) Universities
 - a) Increase in autonomy
 - b) Receive differential fee income
 - c) Export growth opportunity
- 2) Students
 - a) No fixed obligation debt
 - b) Equal terms for all students
 - c) Aligns universities' and students' economic interests
- 3) Financial sector
 - a) New asset class attractive to pensioners
 - b) Opportunity to export the concept to other countries
- 4) Government
 - a) Retains overall control of fee system

b) Moves cost of tuition fees off public sector balance sheet

The author therefore recommends that UK Universities and body politic be bold and innovative and work to develop the world's first effective market in human equity.



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July 2010

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ⁱ IHS Global Insight survey, published FT June 20, 2010

ⁱⁱ Russell Group Papers – Issue 2, 2010

ⁱⁱⁱ http://news.bbc.co.uk/2/hi/uk_news/education/10278662.stm

^{iv} Capitalism and Freedom, Milton Friedman, University of Chicago Press, 1962.

^v Ideally this would be written by the Bank of England and approved by the Consumer Protection arm of the FSA with the aim of avoiding future legal challenge in any jurisdiction

^{vi} Prodigy Finance run an MBA funding program and have developed a legal agreement which is enforceable in 100 countries.

^{vii} Reported on Bloomberg by John Hechinger, August 6 2010

^{viii} From a Speech by Callum McCarthy, Chairman, FSA entitled "Is the present business model bust?" given on 16 September 2006 at the Gleneagles Savings & Pensions Industry Leaders' Summit