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LSE Enterprise

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Table of Contents

Boxes

Figures

Tables

Appendices

Executive summary

This summary sets out the main findings of the study, in particular the EU added value and the design of an EU-wide student loan scheme. In addition, it outlines the report's methodology (section 2 of the report), empirical evidence (section 4) and consultation process (section 7).

1 Policy objectives

1. The report is based on two fundamental lines of argument: human capital matters and mobility matters.

2. HUMAN CAPITAL MATTERS (section 1.1). In explaining why investment in human capital is an essential ingredient in achieving the objectives of the Lisbon Treaty and Europe 2020, the starting point is to recognise that technological advance is driving demand for new skills, more diverse, and skills. Separately, skills possess a shorter half-life than they did a generation ago, and require being frequently refreshed if they are to stay relevant. As a result, high-level and lifelong learning have major impacts on individual life chances and national economic performance. Higher education contributes to these by endowing graduates with broad, flexible problem-solving skills. Rising participation rates in higher education are thus no accident, and with no sign that these trends are slowing:

> "Universities will be central to economic success in this century. They produce the raw material of a flourishing society: thoughtful, articulate and creative young people, trained to ask the right questions and to develop interesting new ideas." (Cairncross 2010)

3. MOBILITY MATTERS (section 1.2) for four sets of reasons. It brings social gain through enhancing human rights and promotes European citizenship and cohesion. There are also economic gains, since mobility optimises adjustment to economic cycles, creates a more competitive knowledge economy, provides new skills and strengthens human capital. Student mobility assists subsequent labour mobility. These arguments underpin the EU objective that 20% of students should be internationally mobile, compared with the current figure of around 5%.

4. *Increased EU competitiveness*. Mobility in higher education can foster labour mobility in several ways, making labour markets more efficient.

- Knowledge transfer and convergence: there are significant differences in real income across member states. Circulation of skilled labour induces knowledge transfer and helps to bring real income in the poorer Member States closer to that in the richer ones, with benefits for both groups of countries
- Improvement in personal skills: international mobility develops personal skills that improve employment prospects. Language skills improve employability and assist the functioning of the single market

5. Though these gains are substantial, mobility also has potential costs. There are concerns that the single market will cause a "brain drain" from poorer to richer Member States, though it is important to be aware of countervailing factors, notably return migration, "brain circulation" (i.e. temporary migration), and remittances.

6. *Stronger human capital*. Several of the EU Flagship Initiatives seek to strengthen human capital – examples include "Youth on the Move" and "An Agenda for Skills and Jobs".

Student mobility:

- Increases competition between universities through pressures for transferable credits, for more courses in foreign languages, for better foreign language teaching, and, more generally, pressures from more demanding students to improve quality
- Contributes to labour mobility
- At postgraduate level, fosters research and innovation
- Can reduce brain drain: spending time in a foreign institution can be an alternative to emigration
- Encourages talented students to stay in the EU rather than studying elsewhere
- Increases skill sets through cross-cultural fertilisation of ideas – transferable skills that are valued by employers, e.g. flexibility, adaptability, problem-solving, critical thinking and deeper understanding of cultural differences in approaching problems

7. OBJECTIVES OF HIGHER EDUCATION POLICY. The resulting policy objectives for higher education are:

- Quality: high-quality higher education is an essential element in deepening human capital
- Size: given the technological drivers already mentioned, comprehensive provision of higher education is an essential component of any efforts to increase the stock of human capital within the European Union.
- Access: countries cannot afford to waste talent, thus widening participation by students from disadvantaged backgrounds creates both efficiency and equity gains

These three objectives all apply to national systems. At an EU level, a fourth objective is:

- Greater mobility

2 Policies to foster mobility: Why a student loan scheme is necessary

8. Mobility, though desirable, faces major impediments. These include constraints relating to information, language and financing. Given its terms of reference, the report concentrates on the last of these.

9. The finance of higher education faces a head-on collision between two competing imperatives. On the one hand is the need for more resources to finance large, high-quality systems of tertiary education. On the other, constraints on public finance arising from competing demands, including ageing populations and spending on health, and those arising from elements of an increasingly competitive global economy which limits a country's capacity to increase taxes. These fiscal constraints existed prior to the current economic crisis; but they have been aggravated.

11. The central conclusion from this line of argument is that public finance needs to be supplemented by private finance, for example, to finance student living costs. This conclusion is based not on ideology but on a realistic view of the contemporary world.

12. There are six potential sources of private finance:
(a) Family resources: while not unhelpful, this approach fails to widen participation
(b) A student's earnings while a student: again, this activity is not unhelpful, but is at the expense of study time and leisure activities
(c) A student's future earnings, i.e. loans
(d) Employers: this option is limited by weak incentives for any single employer to contribute in a world with high labour mobility

(e) Entrepreneurial activities by universities: the effectiveness of this approach is easily overestimated
(f) Charitable giving: again the effectiveness of this approach is easily overestimated

13. Of these various sources of private finance, only student loans have the potential to be both large-scale and socially equitable.

3 EU Added Value: Why an EU-wide loan scheme is desirable

The next step in the argument (section 1.3) is to establish the added value of an EU-wide student loan scheme, as opposed to relying on national schemes. The argument has three elements:

- A student loan system is a necessary condition for higher-level EU policies. National student loan schemes are inadequate for those purposes. Though large-scale schemes exist in some countries, e.g. Sweden, the Netherlands, the UK and Hungary, a number possess no such schemes, while in others loans are limited in scope, number and size. National schemes tend not to be portable and, where they are, generally limited in size and number. And information about student loans across countries is scarce and often available only in the national language
- National student loan schemes are designed to reflect the situation of a particular country, e.g. the size of the loan is related to the domestic living costs, risk assessments are made at national level, and the costs of finance are related to the national cohort risk. Even if they are adequate at national level, such schemes will generally be inadequate for mobility purposes, particularly if a student from a poorer country wishes to study in a richer country. Potential conflicts of interest, e.g. concerns about the loss of talent ("brain drain") or protectionist attitudes toward domestic higher education institutions, can render national governments reluctant to establish large-scale portable schemes. Secondly, there is an incentive to "free-ride" in the sense that while mobility is in the interests of Member States collectively, each has an interest in limiting its student lending (because establishing and running a wide-scale student loan scheme may be costly and risky), and relying on other countries' loan schemes.
- Thirdly, a national system with generous subsidies or government guarantees could lead to an influx of foreign students, risking uncontained increases in education budgets designed for domestic operation. Finally, loans for mobile students compound administrative costs and defaults, with potential risks for the stability of national schemes

For these reasons an EU-level student mobility policy cannot be based solely on existing national level student loan schemes, since these are designed to serve mainly national purposes, and are diverse in many crucial aspects such as size, eligibility criteria and portability.

14. An EU-wide loan scheme has major advantages, both in assisting the achievement of high-level EU goals and in operational terms.

15. Assisting the achievement of EU goals:

- Fostering mobility is one of the competencies of the EU, with the specific goal of 20% learning mobility by 2020
- An EU-wide loan promotes the competitiveness of the EU by helping to strengthen human capital and by facilitating student mobility, thereby assisting labour mobility through the development of transferable skills
- An EU-wide loan assists asymmetric student migration. To promote citizenship and

cohesion it is desirable to have a reasonably balanced flow of people between countries. For the purposes of economic competitiveness, in contrast, an unbalanced flow is generally optimal. Students should flow to whichever higher education course most enhances their productivity, just as labour migrates to opportunities in which it can flourish.

16. Operational advantages:

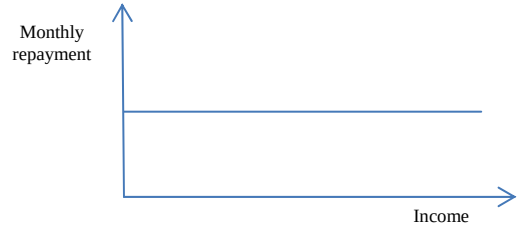
- An EU-wide loan scheme has economies of scale. It provides a wider risk cohort and better diversification; facilitates efficient financing and risk management through improved market position; is more resistant to political, financial and social crises; and spreads the costs of design and implementation (e.g. set-up costs) over larger numbers of prospective borrowers
- An EU-wide loan scheme may also have an informational advantage in mobile lending. Since it will be designed for mobile lending, it should have an EU-wide overview of all important aspects of lending, e.g. the ability to track borrowers at EU level
- An EU-wide scheme addresses many of the problems discussed earlier, e.g. conflicts of interest, incentives to free-riding, etc., that arise with national loan schemes designed to support non-mobile borrowers

4 Design and implementation of the loan scheme

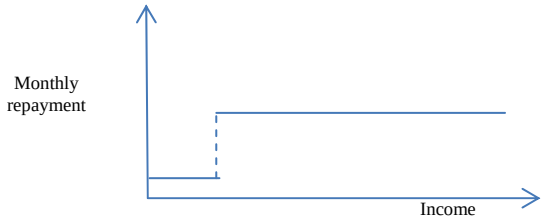
17. DESIGN. The theoretical discussion in section 3 of the report argues for a loan design with income-contingent repayments at least for low earners, i.e. where a borrower's repayments take the form of *x*% of his/her subsequent earnings. The core of the argument is that, in contrast with home loans, lending for human capital has no physical collateral. As a result, lenders face considerable risk and will charge a high premium. Borrowers also face considerable risk: if earnings fall, a mortgage holder can usually sell his or her home and repay their loan. This option is not available with human capital. Thus lenders and borrowers both face high risk and, as a result, borrowing is inefficiently low. Income-contingent repayments are designed to reduce the risk that borrowers face by providing loans with in-built insurance against inability to repay.

18. However, income-contingent loans are administratively demanding. Section 5.2 therefore explores a range of designs.

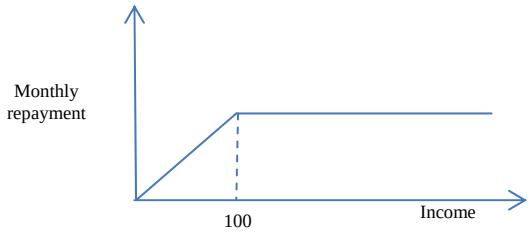
Model 1a A pure mortgage loan



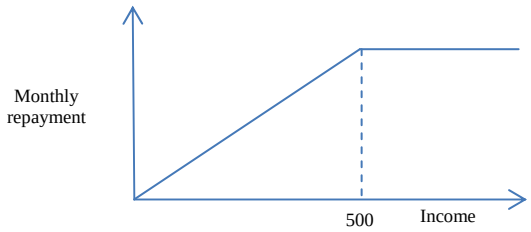
Model 1b Mortgage loan with remission for low earners



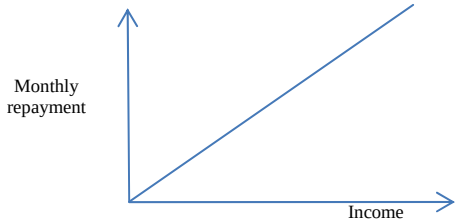
Model 2a Hybrid model with income-contingent repayments for low earners



Model 2b Hybrid model with income-contingent repayments for low- and middle-income earners



Model 3 Purely income-contingent loan



19. The conclusion in section 5.2 is that the preferred option is model 2a, in which all but the lowest earners (in the diagram everyone who earns more than 100) make fixed monthly repayments, but with income-contingent protection for the lowest earners. In this model, the fixed monthly repayment (which rises each year in line with an aggregate variable such as average earnings) is low enough to make it realistic for a typical graduate earner in a poorer Member State to repay his/her loan. The advantage of this approach is twofold: it respects administrative constraints; and, if desired, model 2a has the capacity to evolve over time towards model 2b, with a wider range of income over which income contingency applies.

20. Section 5.3 considers broader aspects of loan design. It suggests that for a range of reasons the loan facility should be available initially only (a) to postgraduate students, (b) who are internationally mobile, and (c) should be limited in size. There is also discussion of the relation between the size of the loan and repayment conditions, which are heavily constrained by the wide variation in income across Member States, and of the interest rate, which should take into account the cost of finance, the cohort risk, and operational costs. Finally there is discussion of appropriate (and inappropriate) ways of subsidising the loan scheme and of appropriate sources of finance for such subsidies.

- IMPLEMENTING THE LOAN SCHEME involves disbursing loans (which is relatively easy) and collecting repayments (which is considerably harder), with appropriate enforcement activity. At the time a student applies (section 6.2) it is necessary to (a) identify students, (b) establish that they are mobile, and (c) ensure that they then attend the university to which they have applied. A central issue is the extent to which, when the loan is first introduced, the application process should be available on-line. Though clearly desirable as soon as

feasible, it is very much the case that *if you get it right, nobody remembers, but if you get it wrong, nobody forgets*. Namely, bad implementation compromises policy.

21. Collecting repayments (section 6.3) involves assessing monthly repayments, tracking repayments, and enforcement activities.

- Section 6.4 discusses finance, in particular the likely size of the loan portfolio, default risks and potential sources of finance. Section 6.5 considers different ways in which the student loans administration might be organised, in particular whether there should be a specialised EU agency, or whether administration should be shared with existing stakeholders such as tax authorities or national student loans administrations.

22. THE INITIAL PROPOSAL, summarised in section 8, has:
- Limited eligibility
- A fixed and long maturity period with income contingent elements for low earners (Model 2a)
- The fixed level of monthly repayments and the income threshold below which repayments are income-contingent and country-specific
- The interest rate, which is the same for all borrowers but variable over time. The interest rate comprises the risk-free rate, cohort risk premium and operational margin, adjusted in the light of any subsidy from outside the system (e.g. to help to finance start-up administrative costs)
- The size of loan is limited to a maximum of between €10,000 and €12 000
- EU-level subsidies should cover at least the start-up costs, and perhaps also provide some sort of guarantee
- The scheme requires an essential core at EU-level, but administration can to a substantial extent be outsourced to national-level institutions such as tax authorities, national student loan centres, universities and commercial banks

23. EVOLUTIONARY POTENTIAL. The report concludes by showing how the initial system has the capacity to evolve over time:
- The size of the loan: over time Model 2a (income contingency only for the poorest) could morph into 2b (income contingency for low and medium earners). This direction of travel makes it possible to offer larger loans per graduate, provided that (a) incomes grow; (b) incomes converge; (c) administrative capacity improves
- Extending coverage to include a wider range of education levels, wider geographical coverage (e.g. loans for EU students studying outside the EU), and wider eligibility rules, e.g. loans for older students, for vocational education etc
- A more sophisticated loan design

Introduction: an EU student loan facility

The European Union is aiming to become
"the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and greater social cohesion." [1]

The most recent iteration of the objectives of the EU are summarised in "Europe 2020", which in the light of the post-2008 economic crisis and the challenges of global competition, sets out a vision of Europe's social market economy for the 21st century.

The stated objective is to:
"…turn the EU into a smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion".

"The three mutually reinforcing priorities are:

- Smart growth: developing an economy based on knowledge and innovation
- Sustainable growth: promoting a more resource-efficient, greener and more competitive economy
- Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion" [2]

In pursuing these objectives, this report is based on a series of strategic arguments:

- Technological advance is driving the demand for skills.
- Failure to meet that demand through mass, high-quality higher education (and tertiary education more generally) puts Europe's competitive performance at risk.
- However, expansion of higher education faces fiscal constraints, given competing imperatives for public spending that long predate the economic crisis, including ageing populations and the spiralling cost of health provision.
- Thus taxpayer finance of higher education, though an essential and continuing element in paying for higher education, is no longer sufficient or fit for purposes. Taxpayers alone cannot shoulder the cost of higher education, (including living costs). To achieve the aims of Lisbon and Europe 2020, public finance needs to be supplemented on a substantial scale by private finance, if only so that resources currently being used to finance living costs can be diverted to financing universities.
- However students (and their families) face high costs in attending and completing higher education, which may act as a financial barrier to participation. A well-designed student loan scheme could be an appropriate tool for providing financial assistance for students by enabling redistribution of some part of future incomes of individuals to finance part of the costs of higher education.

To that end, this report discusses an EU-wide student loan facility. Section 1 considers why such an instrument is necessary, i.e. assesses the EU added value of an EU-wide loan, including cross references to salient responses from a series of interviews with stakeholders (the interviews are summarised in Appendix 1). Section 2 summarises the method and approach.

[1] Lisbon Treaty 2009.

[2] Europe 2020.

Section 3 sets out the analytical framework in some depth, with the theoretical core set out in section 3.1, (and which sceptical readers may wish to read at an early stage).

Section 4 considers international experience, including an overview of student financial support in Member States, with particular emphasis on mobility and its costs. Section 4 also benefits from the interviews with stakeholders summarised in Appendix 1.

The subsequent two sections provide a set of recommendations for the design (section 5) and implementation (section 6) of the loan facility. Section 7 offers an analysis of the loan options proposed in section 5, building on the responses of a panel of experts consulted through the Delphi Method, using the Multi-Criteria Scoring Method and drawing from selected country studies. Section 8 concludes by considering a range of longer term options.

1. Why an EU loan facility: Student loans and human capital formation

Section 1 sets out the core arguments, and is designed to be self-contained for readers who are prepared to take on trust the more detailed analytical arguments in section 3.1 regarding the gains – in terms of efficiency and equity – from competition and student loans in higher education. Section 1.1 explains why human capital is central and briefly introduces the idea of student loans. Section 1.2 explains why mobility within the EU matters. Section 1.3 sets out the potential gains from an EU-wide system of student loans, that is, the EU added value.

1.1 The centrality of human capital in the 21st century

In explaining why investment in human capital is an essential ingredient in achieving the objectives of Lisbon and Europe 2020, the starting point is to compare today's world with that of the earlier years of the EU.

THE WORLD ECONOMY HAS CHANGED. The depth and scale of the 21st century knowledge economy was unimaginable 50 years ago. Today education plays a key role in:

- Promoting core values (democracy, human rights, social cohesion, protection of minorities etc) – as in the past
- Developing knowledge for its own sake (intellectual freedom, independent voice, innovations etc) – as in the past
- Fostering economic growth in a competitive economy (flexible skills, employment and competitiveness) – now more than ever

Cairncross (2010) makes the point cogently:

> "Universities will be central to economic success in this century. They produce the raw material of a flourishing society: thoughtful, articulate and creative young people, trained to ask the right questions and to develop interesting new ideas." (Cairncross 2010)

TECHNOLOGICAL DRIVERS. Technological advance, in particular information technology, has become a major driving force of increasing demand for new and flexible skills, and thus for greater and more frequent investment in learning, as knowledge has a shorter half-life than it did, say, a generation ago. Thus high-level learning and lifelong learning both have major impacts on individual life chances and national economic performance. Higher education contributes to all these attributes, notably by giving graduates broad, flexible skills and the ability to "learn to learn"[3].

Higher rates of capital formation foster growth but, because of diminishing returns to physical capital, the effect on growth is only temporary. Long-term growth derives from innovation, technological development and accumulation of knowledge. "The key difference between physical and knowledge capital is that knowledge capital does not face diminishing returns…" (Baldwin – Wyplosz, 2009). It is noteworthy that despite expansion of student

[3] Key Competences for Lifelong Learning – A European Framework, 2006.

numbers, the graduate premium has not declined.[4] According to the 2005 Mid-Term Review of the Lisbon Strategy:

> "In advanced economies such as the EU, knowledge (meaning R&D, innovation and education) is a key driver of productivity growth. Knowledge is a critical factor with which Europe can ensure competitiveness in a global world where others compete with cheap labour or primary resources."[5]

Insufficient investment in human capital creates the risk that Europe will not be able to compete effectively with countries with higher spending on education and training. To illustrate the sort of competition Europe faces, 76% of 19-year-olds in South Korea were in tertiary education in 2007, by a long way the highest participation rate of any OECD country (the average for the EU19 was 29%); total spending on tertiary education in South Korea in 2006 was 2.5% of GDP, almost double the average for the EU19 of 1.3%; and *private* spending on tertiary education in South Korea was significantly higher than *total* (public plus private) spending in any OECD country except the US and Canada (OECD 2009, Tables C1.3 and B2.4). More generally, the EU27 ranks much lower in terms of private financing of higher education than its main competitors, the US and Japan [S-13] (see Section 4)

In sum, human capital matters. As a result, higher education – one of the main generators of human capital – is much more important than 50 years ago.

WHAT ARE THE OBJECTIVES FOR HIGHER EDUCATION POLICY? Given these considerations, this Report focuses on policies to achieve three strategic objectives in higher education:

- Size: the higher education sector has to be large enough to meet the demands of citizens, which derive in part from the rising demand for skills
- Quality needs to be high, for the reasons just set out
- Access to higher education should be open to anyone with the ability and the wish to participate, independent of family income. This objective can be defended as a value judgement; but it is also important for efficiency reasons

To set the context, Box 1 anticipates the more detailed discussion of section 3 by summarising the case for student loans, alongside grants, as part of the funding package for higher education.

Box 1: Why student loans, not just grants?

Why not finance higher education from taxation, like education? The short answer is that reliance mainly on taxation leads to a failure to achieve any of the objectives set out above. Moreover, over-reliance on taxation is a direct *cause* of the failure to achieve them.

> Failure 1: Size. Throughout Europe, mass higher education is losing in the political competition for public funds, *g*iven the competing and often politically more salient demands of pensions, health care and school education, and the pressures

[4] According to the Eurostat LFS data 2010, every tenth person (25-64 years old) with lower than secondary education was unemployed, with the figure as high as 24% in Czech Republic, 27% in Poland and 49% in Slovakia. Unemployment rate of persons with upper secondary or vocational education was 8% (16% in Poland), while unemployment rates of people with tertiary education were much lower: 5% on average in EU27 and as low as 2% in Ireland, Czech Republic, the UK and Hungary.

[5] Mid-Term Review of the Lisbon Strategy, 2005.

from international competition. As a result, shortage of finance constrains size in some countries. [S-12-13-14-15] This argument is based on long-term drivers, i.e. it is not a crisis response, e.g. see the Maastricht criteria. Meanwhile, increasing young people's participation in tertiary education from 31% to 40% is one of Europe 2020's headline targets.

Failure 2: quality. Over-reliance on public finance puts quality at risk in several ways. The shortage of resources harms quality. Separately, tax-financed systems reduce competitive incentives facing universities. As explained more fully in section 3.1, competition is essential for quality in a large, diverse higher education sector.

Failure 3: access. Again, over-reliance on the taxpayer causes multiple problems.

- Tax finance does not widen participation. Most university students are from middle-class backgrounds. This is true in most countries, and remains true in countries where there are no tuition fees, and even in countries where students receive grants to cover living costs. In the UK in 2002, when there were no tuition fees for people from poor backgrounds, 81% of young people whose parents were professionals went to university, as against 15% of people from manual backgrounds (UK Education and Skills Select Committee, 2002, p. 19)
- Tax finance redistributes from poorer to richer families. The case for public finance for health care or compulsory school education is clear because everyone uses them. Higher education is different precisely because participation is a matter of choice – and it is mainly people from better-off backgrounds who participate. Thus the taxes of poorer people pay for the degrees of people who are mainly from better-off backgrounds and will themselves on average become better off. In the words of a British socialist commentator,

  > "I, too, favour free, universal public services – schools, hospitals and so on. Though the more affluent could afford to pay, availability to all enhances social solidarity and ensures public services aren't second class. But higher education isn't universal: it is distributed not by right or by need, but by perceived merit. And the selected ones come mostly from more prosperous families. They will themselves go on to significantly higher earnings than average. Where is the social justice in that?" (Wilby, 2010)
- Tax finance can harm access, in that spending on "free" higher education crowds out spending that would genuinely widen participation. In contrast, student loans – if properly designed – enable individuals to redistribute from their future earnings to finance part of the costs of their higher education
- The real barrier to participation is lack of attainment in school, i.e. it is much more a problem relating to the 0-18 age bracket than it is for those aged 18+ problem. Thus the policies that genuinely address access are those that improve earlier educational outcomes. If policy makers have resources to widen participation, they are better spent on nursery education, improving schools, and on providing financial support for people who remain in school after the age of sixteen.

We return to all these arguments in more detail in section 3.

1.2 Why mobility matters

Having established the importance of higher education, the next step is to demonstrate the role of mobility, which is already a major item on the EU agenda. Article 18 of the Treaty states:

> "It is important... to emphasise that mobility requires Community intervention because by its nature it entails transnational aspects."

THE FOUR FREEDOMS. In EU law, the Four Freedoms is a common term for a set of treaty provisions, secondary legislation and court decisions which protect the ability of goods, capital, services, people and labour to move freely within the internal market of the EU. More precisely, they are:

1. The free movement of goods
2. The free movement of capital
3. The free movement of services
4. The free movement of persons

Since 2007, the European Commission has started to advocate the free movement of knowledge as a fifth freedom.[10]

THE CONCEPT. The free movement of persons refers to students, teachers, trainers, research staff and labour mobility. In this section we concentrate on the mobility of students in higher education and of the graduates who constitute the most skilled part of the labour force. Geographical and occupational mobility are both important EU objectives.[6]

Mobility is important because:

- It is an element in human rights
- It promotes European citizenship, cohesion and peace
- It promotes competitiveness by making labour markets more efficient
- It strengthens human capital by encouraging competition in higher education

1.2.1 Human rights

Freedom of movement is a human right protected by the constitutions of many countries. It asserts that a citizen of a state is free to travel, reside in, and/or work in any part of the state within the limits of respect for the liberty and rights of others, and to leave that state and return at any time.

The Copenhagen criteria required aspiring Member States to ensure the rule of law, stability of the institutions guaranteeing democracy, human rights and respect for and protection of minorities; to maintain the existence of a functioning market economy, and to ensure the capacity to cope with pressure and market forces within the Union, and the implementation of the "*acquis communautaire*", thus emphasising *inter alia* the importance of free movement of persons. The process continued with the Lisbon Treaty, which reinforced the Four Freedoms and guaranteed the freedoms set out in the Charter of Fundamental Rights.

[6] Though the arguments are general, mobility outside the EU is beyond the scope of this report.

1.2.2 EU citizenship and cohesion

The fundamental objective of the EU (and its predecessors) has been to create the conditions in which European nations can live together in peace. Its biggest threats have been closed cultural attitudes, nationalism and economic protectionism. Over the past half-century, economic integration has dramatically changed the landscape, but more remains to be done to address closed cultural attitudes and nationalism. Mobility is an element in widening and deepening European cohesion and citizenship.

THE CHALLENGE. Not least because of the economic crisis, new waves of protectionism are arising. Our interviews and less formal discussions with stakeholders highlighted the spread of nationalist and/or protectionist ways of thinking. Many people, even professionals, oppose competition, cost-sharing and mobility. These attitudes are a risk that any proposal to modernise higher education in the EU faces, and they serve to reinforce the importance of political implementation. [S-42] In addition,

> "A stronger, deeper, extended single market is vital for growth and job creation. However, current trends show signs of integration fatigue and disenchantment regarding the single market. The crisis has added temptations of economic nationalism. The Commission's vigilance and a shared sense of responsibility among Member States have prevented a drift towards disintegration. But a new momentum – a genuine political commitment – is needed to relaunch the single market, through a quick adoption of the [Flagship] initiatives… Such political commitment will require a combination of measures to fill the gaps in the single market." [7]

In contrast, empirical findings show that at an individual level, better understanding of each other's values and cultures and shared projects can encourage friendship and avoid conflict. [S-1-2-3-4] This is exactly what mobility fosters, so that the potential gains are large. Does that mean that European integrity necessitates all students studying abroad? Evidence shows that that is not required.

THE "TIPPING POINT" THEORY. Large-scale behavioural changes are possible by achieving a "tipping point" at which a critical mass has changed behaviour. Once the tipping point has been reached, positive feedback reinforces the change. The aim for policy is to reach this "tipping point". Gladwell, 2009 summarises the basic ideas of social epidemic:

- "Big changes can occur as a result of small events."[8] Thus small improvements can be enough to achieve policy goals
- "The 80/20 Principle states that in any situation roughly 80% of the "work" will be done by 20% of the participants (Law of the Few)."[9] Note the surprising coincidence with the mobility target of 20% of the EU
- "Three different kinds of people play key roles in the dynamics of social epidemics:
  Connectors – the kinds of people who know everyone and possess special gifts for bringing the world together. Connectors are defined by having many acquaintances, a sign of social power
  Maven – means those who accumulate knowledge and who have information on a lot of different products, prices or places
  Salesmen – are the selected group of people with the skills to persuade us

[7] Europe 2020.

[8] http://www.gladwell.com/tippingpoint/index.html

[9] http://www.gladwell.com/tippingpoint/index.html

when we are unconvinced of what we are hearing."[10]

These are exactly the main characteristics of the best students in higher education.

MOBILE STUDENTS AS KEY PLAYERS. The most mature, but open-minded and risk-taking upper 20% of students in higher education can play a crucial role in achieving EU objectives. [S-4] EU strategic documents highlight:

> "In the increasingly multicultural society of the future, the experience of mobility is critical to help form young people as future leaders and citizens, so that they can contribute to greater respect for diversity, a deepening of cooperation and a more stable and peaceful world."[11]

1.2.3 EU competitiveness

An efficient labour market requires that labour is geographically mobile and also occupationally mobile, e.g. through investment in flexible human capital. Mobility in higher education contributes to both.

THE CHALLENGE. The Four Freedoms are fundamental to the single market. Not only goods, but also factors of production can move freely between Member States. The single market is intended to bring about increased competition, increased specialisation and larger economies of scale by allowing goods and factors of production to move to where they are most valued, thereby improving allocative efficiency. Thus integration fuels economic growth. "GDP per capita of the EU would be approximately one-fifth lower today, if no economic integration had taken place since 1950." (Badinger, 2001).

Notwithstanding the Four Freedoms, mobility within the EU is limited. Approximately 1.5% of EU25 citizens live and work in a different Member State from their country of origin – a proportion that has hardly changed over the last 30 years.[12] The enlargement brought 12 countries and about 100 million new citizens into the EU. The substantial income gap between east and west in Europe raised the prospects of massive east-west migration, but that did not happen.

Why was there not more movement? There are two reasons – choice and constraint. As regards choice, the incentives to leave home, family and friends, to wade into a new culture with another language, have been too limited to trigger large-scale migration. (Baldwin, Wyplosz, 2009, 8.4.) It is also possible liberalisation itself has persuaded some people to stay or even return: "If I am allowed to leave, I want to stay". Newcomer countries became "good places" not least because of their new EU membership.

Movement to some countries was constrained by the seven-year transitory arrangements. Second, and directly relevant to EU policy, are constraints in the form of missing links and bottlenecks:

> "Every day businesses and citizens are faced with the reality that bottlenecks to cross-border activity remain despite the legal existence of the single market. They realise that networks are not sufficiently interconnected and that the enforcement of

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[10] http://www.gladwell.com/tippingpoint/index.html

[11] "Making learning mobility an opportunity for all", 2008.

[12] "Labour market mobility within Europe, Scientific Report on the Mobility of Cross-Border Workers within the EU-27/EEA/EFTA Countries", 2007

single market rules remains uneven."[13]
Section 1.3 will argue that the absence of an EU-wide student loan is just such a bottleneck.

Limited mobility presents both a problem and an opportunity. It is a problem because the EU's main competitors, the United States, China and Japan, are more advanced in this respect. Mobility of skilled workers and the possibility of temporary or permanent emigration is something Member States must not only live with but exploit. If EU Member States set barriers to labour mobility within the EU, and the EU fails to implement an attractive and innovation-driven environment – and an appropriate strategy – in order to benefit from the circulation of talented workers, it takes the risk that the best students and graduates will emigrate – for example, to the United States. It presents an opportunity in the sense that greater mobility offers the potential for large gains. Increased mobility is a core, not marginal, item on the agenda.

Mobility in higher education can foster labour mobility in several ways.

KNOWLEDGE TRANSFER AND CONVERGENCE**.** Not least because of the relatively rapid enlargement of the EU, there are significant differences in the level of development across Member States. For example, many spheres of knowledge were prohibited by or otherwise missing from the syllabus in communist regimes. Circulation of skilled labour induces knowledge transfer and helps to narrow the gap in the real income between poorer and richer Member States, benefiting both.

IMPROVEMENT IN PERSONAL SKILLS. International mobility develops personal skills that improve employment prospects. Learning mobility will lead to increased skill sets, which are valued by employers. These include flexibility, adaptability, creative problem-solving, critical thinking. Learning languages not only improves employability but also helps the functioning of the single market.

> "Mobility… allows young people to improve their personal skills and employability, and offers trainers the chance to broaden their experience and enhance their skills. In an increasingly complex Europe all the available means for facilitating and promoting mobility must be used in the most effective way possible, so that people – in particular young people – can identify with Europe."[14]

Though these gains are substantial, mobility has potential costs as well as benefits. Those costs may be economic, or the economic costs might be limited but politically difficult. Two that stand out are the possibility of brain drain, and of social dumping.

BRAIN DRAIN OR REVOLVING HUMAN CAPITAL? There are continuing concerns that the single market will cause a brain drain, that is, a flow in one direction of highly educated or professional people from one country, economic sector, or field to another, usually for better pay, living conditions or professional opportunities. This asymmetrical redistribution of talent can generate global benefits by improving knowledge transfer and satisfying the demand for skills. However, the 'countries of origin' regard such mobility as a direct loss, as emigrants effectively export the value of their training, which has been financed by the government or other organisations.

But it is important to be aware of countervailing factors. [15]

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[13] Europe 2020.

[14] "Education and Training 2010" work program, 2001.

[15] http://www.oecdobserver.org/news/fullstory.php/aid/673/The_brain_drain:_Old_myths,_new_realities.html

- Return migration: in the longer term, return flows of people and capital can constitute an economic development strategy in their own right. In Chinese Taipei, for example, half the companies emerging from that economy's largest science park, Hsinchu, were established by people returning from the US. And in China, the Ministry of Science and Technology estimated that returning overseas students started most internet-based ventures.
- Fostering return migration: the reality, however, is that only a few countries have successfully lured their talented emigrants back home. The relative successes of Taiwan, South Korea and the Republic of Ireland have been attributed to economic and other policies that have encouraged domestic investment into innovation and R&D. The scientific diaspora and networks of immigrant entrepreneurs can also play an invaluable role as conduits of know-how and skills. Given the right mix of policies and sustained international co-operation, several countries could, as one Indian official pointed out, see the "brain drain" transformed into a "brain bank".
- "Brain circulation": there is little available information on the mobility of graduates. However, it seems that skilled migration between European countries is on the rise but appears to be dominated by temporary flows of advanced students, researchers, managers and IT specialists, suggesting more a pattern of brain circulation than a draining of skills from one place to another. [S-23]
- International contacts: even where emigration is permanent, countries gain in terms of contacts through their emigrant citizens, both economically and in terms of "soft power".
- Remittances: migrants often remit some of their earnings to their home country.

GAINS FROM TRADE OR SOCIAL DUMPING? Some commentators worry that competitive markets will increase inequality, while for others the concern is that free movement will lead to "social dumping", i.e. that international competition will exert downward pressure on the generosity of social protection in richer countries. Since economies are complex, multi-agency systems with nonlinear feedback effects, less direct consequences can be important in the long run but are difficult to predict. The principle of comparative advantage in conventional economic theory argues that the gains from free movement considerably outweigh the losses, since the market allows countries to specialise, thereby creating more jobs than are destroyed. Those arguments are hold to an extent as far as they go. But efficiency is not the only concern. Post-communist reforms promised (and were premised upon) higher living standards but also greater individual freedom and respect for human rights. Free movement is important because it contributes both to prosperity and to individual freedom. It is for this reason that the EU committed itself to free movement and free markets: these issues belong to the non-negotiable category for Member States.

1.2.4 Stronger human capital

It is useful to distinguish between two sorts of student mobility. In the first, a student undertaking a degree in country A takes part of his/her studies in country B (the average duration is 5-6 months) as part of his/her degree in country A. The Erasmus programme finances this type of mobility. In the second type, a student who obtains a bachelors degree in country A does a master's degree in country B (so-called Bologna students) (Konevas, Duoba, 2007).

THE CHALLENGE. Overall student mobility is around 5% of the total number of tertiary students, of which Erasmus programmes account for 1%[16]. Thus we can regard higher

[16] "Education & Training" 2010

education as comprising largely separate national "captive" markets.

Against this background, the target of 20% student mobility is ambitious. Higher education ministers from the 46 Bologna Process countries meeting in Leuven called upon each country to increase mobility, to ensure its high quality, and to diversify its types and scope. Ministers also agreed to set a target that by 2020 at least 20% of those graduating in the European Higher Education Area should have had some study or training abroad, and stated:

> "We believe that mobility of students, early stage researchers and staff enhances the quality of programmes and excellence in research; it strengthens the academic and cultural internationalisation of European higher education. Mobility is important for personal development and employability; it fosters respect for diversity and a capacity to deal with other cultures. It encourages linguistic pluralism, thus underpinning the multilingual tradition of the European Higher Education Area and it increases cooperation and competition between higher education institutions. Therefore, mobility shall be the hallmark of the European Higher Education Area."[17]

In pursuing the target of 20%, key barriers to mobility have been identified:

- Lack of awareness of the advantages of mobility to the student
- Lack of knowledge of language and culture of other countries
- Problems over recognition and certification
- Lack of portability of insurance (access to health services, pensions, etc)
- Additional financial costs (travel, living costs and fees) [18]

These findings suggest that increasing student mobility will be challenging, firstly, because the barriers are significant. The fact that barriers have a socioeconomic gradient will complicate the problem further:

> "Without targeted help, mobility risks being the preserve of elites, with young people from lower socio-economic backgrounds locked out because it is costly and because the benefits it brings are not evident to them." [19]

CURRENT ACTIONS: THE FLAGSHIP INITIATIVES. The Commission is putting forward a series of flagship initiatives, some of them directly linked to student mobility:

> "Youth on the move" is intended to enhance the performance of education systems and to facilitate the entry of young people into the labour market.
>
> "An agenda for new skills and jobs" seeks to modernise labour markets and empower people by developing their skills throughout the life cycle, The aim is to increase labour-force participation and improve the match between labour supply and demand, including through occupational and geographical mobility.
>
> "European platform against poverty" seeks to ensure social and territorial cohesion, such that the benefits of growth and jobs are shared widely and that people experiencing poverty and social exclusion can live in dignity and participate fully in society.
>
> Other flagship programmes have an indirect relation to student mobility:
>
> "Innovation Union" aims at improving framework conditions and access to finance for research and innovation so that innovative ideas can be turned into products and

[17] Ministers responsible for higher education from the 46 Bologna Process countries meeting in Leuven, Louvain-la-Neuve in April 2009

[18] "Making learning mobility an opportunity for all" 2008

[19] *Ibid*.

services that create growth and jobs.
"A digital agenda for Europe" seeks to accelerate the roll-out of high-speed internet and to reap the benefits for households and firms of a digital single market.
"Resource-efficient Europe" seeks to help decouple economic growth from the use of resources, support the shift towards a low-carbon economy, increase the use of renewable energy sources, modernise the transport sector and promote energy efficiency.
"An industrial policy for the globalisation era" aims to improve the business environment, notably for SMEs, and to support the development of a strong and sustainable industrial base able to compete globally.

WHAT TYPE OF STUDENT MOBILITY? For the purposes of promoting citizenship and cohesion a reasonably balanced flow of students between countries is desirable. This is a central objective of the Erasmus programme, which was designed to foster bilateral exchange, where the receiving country pays the tuition fee, while the sending country finances the major part of the scholarship to cover living costs. The aim of balanced exchanges has not been met, and countries with a positive student balance (Germany, UK, Sweden, Denmark, France, the Netherlands, etc.) meet most of the costs of the programme.

For the purposes of economic competitiveness, however, an unbalanced flow is generally optimal. Students should flow to wherever a higher education course adds most to their productivity, just as labour flows to skills and locations where it can be most productive. The Erasmus design was not intended for this type of mobility – another mechanism is needed.

Thus, the fact of limited student mobility is an opportunity because the rewards of increasing mobility are high, as indicated in the earlier discussion of the tipping-point theory.

THE GAINS FROM STUDENT MOBILITY. Student mobility:

- Increases competition among universities. International experience, e.g. in the US, UK and Australia, suggests a two-way link between mobility and the quality of higher education. Mobile students tend to gravitate towards the best universities. And, because they tend to be dynamic and vocal, mobile students create bottom-up pressures for improved quality, e.g. through transferable credits, demands for more courses in foreign languages, and better foreign language teaching.
- Facilitates the establishment of academic networks.
- Contributes to labour mobility.
- At postgraduate level, fosters research and innovation.
- Where short term, reduces brain drain. Spending some time in a foreign institution can be a viable alternative to emigration. With better mobility options and better finance, talented students can be encouraged to stay in the EU rather than go to competitor countries, notably the US.

Alongside these generic gains, student mobility also contributes significantly to the objectives in Europe 2020 set out at the start of the report:

- "Smart growth" requires (a) competition and (b) appropriate funding of the knowledge industry, and especially higher education. As discussed, student mobility has an important role in both. Moreover, mobile students typically constitute the most talented, adventurous and innovative young professionals of their generation – and often placed (or destined to be placed) at the centre of social networks: they are the engine of change.
- "Sustainable growth" requires concentrating European industry on the labour- and knowledge-intensive industries. This carries two implications for higher education: (a)

increasing the size and improving the quality of higher education in the EU is important for competitiveness; and higher education is itself a knowledge-based industry in which Europe should be specialising (as discussed in section 1.1); (b) the shift of workers from older types of manufacturing, e.g. the automobile industry, into the green industry requires developing new skills.

- "Inclusive growth" requires more jobs and more cohesion. There is robust empirical evidence that educational level and mobility are strongly correlated with income, employment and European citizenship (King, Ruiz-Gelices, 2003).

1.3 Why an EU student loan?

The arguments thus far are:

- Human capital is central to Europe's competitiveness, hence so is mass, high-quality higher education (section 1.1).
- Mobility has a core dual role in fostering cohesion and citizenship (section 1.2.2), and strengthening economic competitiveness by improving investment in and deployment of human capital (section 1.2.3).
- Student mobility is an important element in strengthening overall mobility (section 1.2.4).

This section explains how an EU-level student loan contributes to the wider EU policy agenda. The objectives of Europe 2020 assume a well-functioning higher education area. The factors that hinder EU higher education are:

- over-regulation
- lack of sufficient differentiation
- unmet demand
- under-funding[20]

The first three problems call for more competition, the fourth for more and better funding. Figure 1 depicts the system of policy objectives and the tools, illustrating in particular that student lending is a necessary condition for high-priority EU policies.

Specifically, this section establishes the considerable EU added value which a well-designed EU student loan facility can unlock, discussing in turn why student loans are necessary and desirable to improve funding (1.3.1), and why it is necessary to have an EU loan system, rather than relying on national schemes (1.3.2 and 1.3.3).

1.3.1 The gains from a student loan facility

It is important to be clear as to what is and what is not being discussed. This section argues that a student loan facility would be useful, with more detailed analysis in section 3.1. The costs faced by a student at university include living costs and perhaps also other costs, e.g. administration fees and examination fees. The need to meet such costs creates a potential financial barrier, which for many students can be met only in part, or not at all, from family resources or through paid work. Student loans therefore assist participation in two ways:

- As a device for consumption-smoothing, i.e. a mechanism that allows someone to transfer resources from his or her older (working and earning) self to his or her younger (student) self; or

[20] "Mobilising the brainpower of Europe: enabling universities to make their full contribution to the Lisbon Strategy", 2005.

- As a device to assist participation, particularly given that lack of family resources and earning opportunities are generally a more binding constraint for students from poorer backgrounds

Though the existence of tuition fees in some Member States reinforces these arguments, they also apply to countries with no tuition fees. Thus the discussion of loans and fees should be treated separately. The focus of this report is loans. The gains from a student loan facility include the following.

MORE RESOURCES FOR HIGHER EDUCATION. We have argued that a mass, high-quality higher education system is essential for European competitiveness (section 1.1) and that such a system cannot be financed entirely by the taxpayer (Box 1). Thus public finance needs to be supplemented by private finance.

As discussed in detail in section 3.1.3, the only way to bring in private finance on a large scale and in a socially equitable way is to have a well-designed student loan system. Without private finance, the quality and size of the European higher education sector will suffer; and unless a large component of private finance is a good loan scheme, access will suffer. [S-16]

IMPROVED QUALITY. Anticipating the discussion in section 3.1.1, competition between universities is important to improving quality. Loans strengthen quality in two ways:

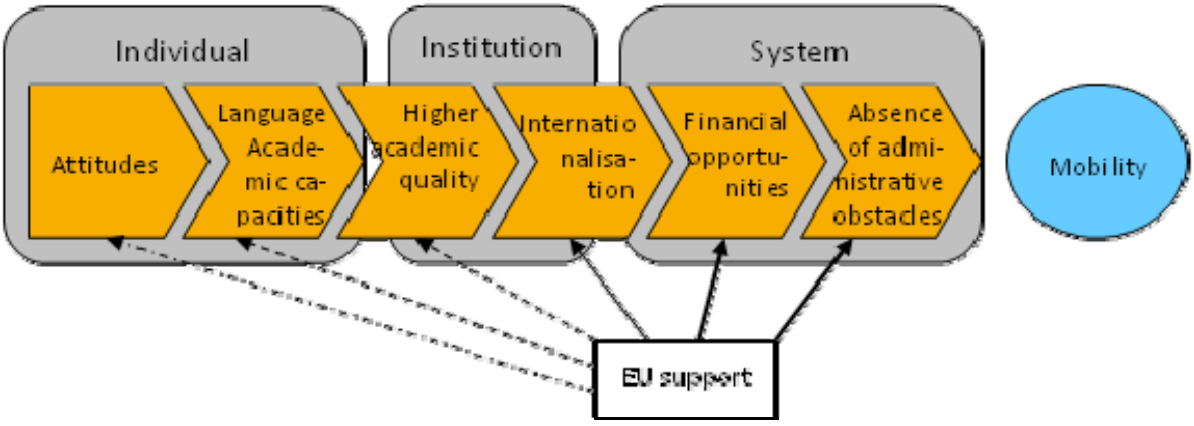
- By providing more resources
- By boosting student demand, thus strengthening competitive pressures

Box 2. Are loans the right tool to improve student mobility?

The 20% mobility target established in EU policies is inseparable from the quality of mobility, but it is equally important that access is substantially expanded. What the EU can do to increase mobility in absolute numbers is to remove various barriers. Desk research (see section 4.3.1) and interviews with key stakeholders (Appendix 1) showed a range of significant barriers encompassing individuals, institutions and education systems (see Figure 1). Measures that focus on the system (removing administrative and financial barriers) can have the most direct effects. The Bologna process addressed administrative obstacles. Now it is necessary to alleviate financial barriers. These policies can be strengthened by complementary measures targeting less straightforward impediments, such as institutional problems and individual capabilities and behaviour.

Based on previous surveys, many students find mobility abroad financially challenging. Limited funding for education in general leaves them with the option of working during their studies (see the Eurostudent survey), and hence discourages mobility (due to the risk associated with leaving a job in one's home country and finding new employment in a country where the language may be different). In addition, our case studies suggest that students move where they can maximise value for money, looking for either the lowest costs for desired skills, or the highest expected returns to their education. Loans would allow more choice for the first group of students and help to fill the financial gap for the second group. Borrowers would not have to work or rely as much on family support during their studies, thus enabling previously non-mobile students to study abroad. As a consequence, students who are not eligible for means-tested or merit-based support, or national loans (which are mostly not universal) would be able to benefit from mobility. In addition, loans would optimise the financial flows to students who would benefit from mobility, since grants could be targeted more tightly on the brightest and the neediest students.

Figure 1. Prerequisites for mobility at individual, institution and system levels



GREATER MOBILITY. Student loans are an important element in improving student mobility. Bologna addresses mobility on the delivery side. Student loans help to address finance-side impediments to mobility across different systems of higher education finance, and across Member States, and are part of a finance-side Bologna, with two sets of gains:

- Direct effects improving mobility
- Indirect benefits because mobility helps to strengthen competition between universities, not least because mobile students tend to be the best and the most demanding

IMPROVED EQUITY AND ACCESS. As foreshadowed in Box 1, over-reliance on taxpayer finance is regressive – the taxes of poorer people finance the university education of a group that come mainly from better-off families. This is not just an accident. Some people argue that higher education should be treated as a tax-financed social good that a civilised country should offer. This is a beguiling vision – and one which was possible when higher education was consumed by a small number of people. But those times have gone. There are three steps in the argument. [21]

- Technological advances mean that mass higher education is essential for national economic performance
- We live in a free society in which citizens can both choose how hard they wish to work and whether they wish to emigrate. Both facts impose limits on taxation, and those limits are reinforced by international capital mobility
- Mass higher education, which is expensive, plus limited taxation, lead to rationing of places and finance. In any such rationed system, middle-class families are likely to do better, leading to disproportionate middle-class use. Thus – systemically and predictably – excessive reliance on tax finance is regressive and harms access

In addition, taxpayer finance crowds out the policies that widen participation discussed in section 3.1.4.

A loan system addresses both the regressivity issue and the crowding-out issue and, if well designed, will not harm access. But why is it necessary to have an EU loan facility to unlock these large gains? There are two parts to the argument: the inadequacies of national loan

[21] Barr (2004*a*, Ch. 14).

schemes (section 1.3.2), and the gains that can come only from an EU-wide facility or that are more pronounced with such a facility in place (1.3.3).

1.3.2 Why an EU loan facility: problems with national schemes

National loan systems face two potential sets of problems: they may be inadequate even as national systems; and even where that is not the case, they are designed for domestic, non-mobile students, for covering (part of) the costs of higher education in a given country, i.e. the size of the loan is related to the domestic costs and income levels.

MANY NATIONAL LOAN SCHEMES ARE INADEQUATE EVEN FOR NON-MOBILE STUDENTS. [S-25-28-29-30] If we examine the current practice in student lending across the EU and the candidate countries, we see the following (see the fuller discussion in section 4.1.1):

- There are some large-scale and robust student loan systems, for example, in the UK, Sweden, the Netherlands, Hungary etc.

However:

- In some countries student loans are not available at all
- Where loans exist, they may be limited in scope, number and size
- Existing national schemes are often not portable
- Where they are portable, the size of the loan (e.g. in the newer Member States) is too small to cover tuition, living and travel expenses in another country
- Take-up rates, especially by students from lower socio-economic backgrounds, are small, most likely because of market interest rates and the absence of targeted subsidies. The problem particularly limits mobility of students from low-income countries to high-income countries
- Information about student lending is scarce and often available only in the national language
- Over the last few years, many countries have recognised the importance of student loans, and various attempts have been made (e.g. in Slovakia and Bulgaria), but they have failed to introduce a reliable system. Reform of an existing student loan system or the introduction of a new system is a current issue in most European countries

On the face of it, the solution to the mobility problem is to apply the single market principle and require national schemes to remove legal and illegal barriers to portability of loans (and grants). This thinking is reflected in many policy papers:

> "National grants/loans should be fully portable within the EU. Full portability of pension rights coupled with the removal of other obstacles to professional, international or inter-sectoral mobility is needed to foster staff and researcher mobility and hence innovation."[22]

Such a strategy, however, tackles a symptom rather than the cause. The problems just outlined are not accidental. There are good reasons, to which we now turn, why national schemes will fail to foster mobility sufficiently. [S-27-31-32]

[22] Communication from the Commission to the Council and the European Parliament, "Delivering the modernisation agenda for universities: education, research and innovation", 2006.

CONFLICTING INTERESTS arise between the Member State and the wider EU. Even within a country, assessment of student mobility by different stakeholders can be very different. The main concerns include:

- A brain drain on the educational or the labour market (negative)
- A burden on the national student loan schemes (negative)
- Knowledge transfer and brain gain (positive)
- Improved access and labour force (positive)
- More opportunity for students and a multicultural environment (positive)

Given both positive and negative effects, the student lending strategy of a Member State is hard to predict; the outcome depends on local preferences and political forces. It should be noted that stakeholders frequently do not have problems with student loans per se, but with top-down policies such as competition, cost-sharing and mobility (protectionist attitudes were noted earlier). Since mobility by its very nature raises the issue of EU competence, the potential for conflicting interests is clear.

FINANCIAL AND ADMINISTRATIVE PROBLEMS WITH MAKING NATIONAL SCHEMES PORTABLE. National student loan systems are not the right instrument for fostering international student mobility. Requiring national schemes to make loans internationally portable creates potential problems of coverage, administrative difficulty and financial leakage.

Lack of coverage. Not all schemes are large, national-level, government-controlled and universally accessible. Loans may be provided by private banks using risk-assessment techniques. Private lenders are likely to refuse to lend for activities they regard as particularly risky.

Administrative problems include verifying eligibility (for example: has the student enrolled in the higher education institution?), maintaining contact with the borrower across changes of address or of name, and especially collecting repayments (verification of incomes, etc.). These problems increase administrative costs and defaults, jeopardising the stability of national schemes.

Financial problems. Portable national loans risk under- or over-financing. Under-financing leads to welfare losses, since students are not able to finance their studies abroad; over-financing creates situations where borrowers cannot safely repay, as discussed in Box 5. Another potential problem arises where the loan system includes a general or targeted subsidy or state guarantee. A generous national system could lead to an influx of foreign students, causing an “explosion” of the education budget designed for a domestic scale of operation.

For such reasons, even a large, well-designed loan scheme in a country with a properly functioning higher education system and successfully applied European strategic ideas may collapse financially and administratively if mobility reaches a critical level. This explains why developed and less developed countries are reluctant to create their own, universal, large and open student loan system, even if they would profit from the increased competition, cost-sharing and mobility.

1.3.3 Gains from an EU student loan facility

Analytical discussion of the appropriate level of government to organise a loan scheme for mobile students can be rooted in the literature on fiscal federalism. This section focuses on the practical arguments. Discussion starts with a series of specific gains.

FINANCE. A system with EU-wide funding makes it possible to offer loans for mobile students from all countries. In contrast, with national schemes, richer Member States can finance large-scale loans, but not poorer Member States.

MOBILITY AND EU ECONOMIC DEVELOPMENT. Mobility benefits the individuals who are mobile. Studying abroad reinforces economic benefits – see for example, Erasmus Valera study, REFLEX study data used by J. G Mora, who demonstrate a net increase in earnings of €200 per month (other factors controlled for); and Parey and Waldinger, who find that studying abroad increases an individual's probability of working in a foreign country by about 15 percentage points.

Mobility to poorer Member States is particularly important, contributing to their economic development, and thus bringing their living standards closer to those of the richer Member States. An EU loan facility is an important ingredient in fostering such mobility.

Additionally, as noted earlier, though mobility that is broadly balanced across countries fosters cohesion, economic development requires unbalanced mobility: students should flow to wherever a higher education course best suits their needs and talents, just as labour flows to skills and locations where it is most productive.

The point is more general than economic efficiency. A larger number of educated people across the region gains benefits in terms of:

- Reduced conflict and better governance, because there is a larger pool of well-qualified candidates to fill various positions (and a better-educated electorate)
- Better all-round education (because learning creates learning)

EQUITY GAINS. Since unbalanced mobility occurs largely through flows from poorer to richer Member States, the poorer countries are likely to benefit most in the long run, provided that a significant number of their mobile graduates eventually return. Thus mobility has particular benefits for low-income countries.

An EU loan facility makes unbalanced mobility possible, as a result of:

SPILLOVER EFFECTS. Alongside the spillover effects of national schemes, an EU-wide loan facility creates wider gains by making unbalanced mobility possible. In contrast, if a Member State creates its own comprehensive, portable loan scheme, other countries will profit from the mobility and enhanced competition without spending public money or guaranteeing student lending, and without high administrative costs and default risk. Thus countries without portable loans benefit by free-riding on the schemes of others. Though mobility is in the interests of all Member States, each Member State has an interest in limiting its student lending, an outcome that is clearly suboptimal. Thus it is mistaken to expect Member States to solve the problem on their own. A common policy is needed. Appendix 6 goes into further detail on the possible spillover effects of a national student loan scheme.

ADMINISTRATION AND COLLECTION OF REPAYMENTS. Many national schemes are open only to residents, and residency is often defined very strictly.

In addition, as already noted, even richer Member States may have difficulty collecting repayments for national loans from large numbers of mobile students: a notable example is that of the difficulties faced by the UK Student Loans Company in collecting loan repayments from students from other EU countries who study in England and then work elsewhere. The key for any scheme lies in tracking individual borrowers and effectively collecting repayments. Pursuing mobility by attempting to make national schemes portable

would lead to 27 (or more) different schemes, each with its own mechanism for collecting repayments from borrowers in 27 (or more) countries.

Fixing that problem through an EU collection system for national schemes would be problematic, not least because a wide array of national schemes, with different design features, some public and some private, would need to communicate on a common basis with the EU collection entity. This line of argument suggests a role for an EU-level student loan to facilitate international student mobility, if such mobility is to be large scale.

The EU has an informational advantage over individual Member States in mobile lending. The necessary information on preferences, opportunities, financing needs, riskiness and income perspectives of mobile students and workers are much more easily accessible at community level. More generally, an EU-level mobility loan facility could collect and disseminate comprehensive information on mobility opportunities and the corresponding financial support.

Another informational gain concerns data on migration, which are generally lacking or notoriously unreliable. An EU-level mobility loan could fill this gap and provide policy makers with information about mobility trends. Moreover "implementation would make available a wealth of data on the economic return of studies". [S-39]

SCALE EFFECTS arise in a number of ways. An EU-wide loan:

- Provides a wider risk cohort and better diversification; [S-23]
- Facilitates more efficient financing and risk management, due to better market position; [S-23-33]
- Assists efficient collection, with lower administrative costs, especially for mobile students; [40]
- Is more resistant to political, financial and social crises;
- Spreads the costs of design and implementation (set-up costs, consultancy etc.) over larger numbers of prospective borrowers.

BENEFITS FOR NATIONAL LOAN SYSTEMS. Addressing student mobility at EU level would greatly simplify the task of introducing or expanding national loan schemes designed to support non-mobile borrowers.

IN SUM, improving national schemes is important. But only an EU scheme can (a) provide mobility on a large scale for all Member States including poorer ones, and (b) can collect repayments effectively from internationally mobile students. Thus, alongside the specific gains just discussed, an EU-wide loan facility is an essential complement to national schemes in contributing to the wider gains discussed in section 1.3.1:

- A greater volume of resources for investment in human capital;
- Greater student mobility, which contributes to greater mobility generally, with benefits in terms of EU cohesion and EU economic competitiveness;
- Improved production of human capital through the effects of vocal mobile students in increasing competitive pressures on university, and hence their quality;
- Improved equity and wider access.

1.3.4 Summary of EU added value

The EU added value of an EU-level student loan scheme rests on four sets of arguments: student loans are necessary for higher-level EU policies; national loan schemes are not the right instruments; national student loan schemes will never be the right instruments; and the potential gains from an EU-level student loan scheme are high.

STUDENT LOANS ARE NECESSARY FOR HIGHER-LEVEL EU POLICIES.

- Human capital, and especially the higher sector, plays a crucial role in the European strategy: "smart, sustainable and inclusive growth" (Europe 2020).
- Size, quality and access can be improved by strengthening competition and improving funding.
- "Captive" national higher education markets are a major bottleneck.
- Student mobility is less than 5%. The target for 2020 is 20%
- Increased student mobility is important not only for the efficiency of higher education, but is also a basic human right. It can strengthen EU citizenship and cohesion, and enhances labour mobility (both geographical and occupational), thus increasing the competitiveness of the labour market.
- The Bologna process addressed the administrative barriers to mobility. Research experiments suggest that financing is a major remaining barrier.
- The lack of financing, which is also true for the immobile students, makes the EU less competitive globally. Given obvious budget constraints, finance can be increased only by involving private financing, if only to assist with living costs. Addressing liquidity constraints in this way assists participation, especially for people from disadvantaged backgrounds.

NATIONAL LOAN SCHEMES ARE NOT THE RIGHT INSTRUMENT.

We surveyed national student loan schemes across the EU and candidate countries, and found the following:

- There are some large-scale, robust systems, for example, in the UK, Sweden, the Netherlands, and Hungary. However,
- Some countries have no student loans.
- Where loans exist, they may be limited in scope, number and/or size.
- Existing national schemes are mostly not portable.
- Where they are portable:
    - The size of the loan (e.g. in the newer Member States) is too small adequately to cover all expenses, including travel.
    - They are too few to affect student mobility significantly.
- Take-up rates, especially by students from lower socio-economic backgrounds are small, most likely because of market interest rates and the absence of targeted subsidies. The problem particularly limits the mobility of students from low-income countries to high-income countries.
- Information about student lending is scarce and often available only in the national language.
- In recent years, many countries have recognised the importance of student loans, and various attempts have been made (e.g. in Slovakia and Bulgaria), but they have failed to introduce a reliable system. Reform of an existing student loan system or the introduction of a new system is a current issue in most European countries.

NATIONAL STUDENT LOAN SCHEMES WILL NEVER BE THE RIGHT INSTRUMENT.

- Conflicts of interests (related especially to brain drain and social dumping) impede national governments from implementing a universal, open and robust scheme. Stakeholders frequently have problems not with student loans per se, but with top-down policies such as competition, cost-sharing and mobility.
- If a Member State creates its own comprehensive, portable loan scheme, other countries will profit from the resulting mobility and enhanced competition without spending public money or guaranteeing student lending, and without high administrative costs and default risk. Thus countries without portable loans benefit by

free-riding on the schemes of others. Though mobility is in the interests of all Member States, each individual Member State has an interest in limiting its student lending, an outcome that is clearly suboptimal. Thus it is mistaken to expect Member States to solve the problem on their own. A common policy is needed.

- National student loan systems are not the right instrument to foster international student mobility. Requiring national schemes to make loans internationally portable creates potential problems of:
    - Lack of coverage: not all schemes are large, national-level, government-controlled and universally accessible. Loans may be provided by private banks using risk-assessment techniques. Private lenders are likely to refuse to lend for activities they regard as particularly risky.
    - Administrative problems include verifying eligibility (has the student enrolled in the higher education institution), maintaining contact with the borrower across changes of address or of name, and especially collecting repayments. These problems increase administrative costs and defaults, jeopardising the stability of national schemes.
    - Financial problems: portable national loans risk under- or over-financing. Under-financing leads to welfare losses, since students are not able to finance their studies abroad; over-financing creates situations where borrowers cannot repay reliably, as discussed in Box 4. Another potential problem arises where the loan system includes a general or targeted subsidy or state guarantee; a generous national system could lead to an influx of foreign students, causing an "explosion" of the education budget designed for a domestic scale of operation.

For these reasons, even a large, well-designed loan scheme in a country with a properly functioning higher education system and successfully applied European strategic ideas may collapse in a financial and administrative sense if mobility reaches a critical level. This explains why countries are reluctant to create their own, universal, large and open student loan system, even if they would profit from the resulting increased competition, cost-sharing and mobility.

THE POTENTIAL GAINS FROM AN EU-LEVEL STUDENT LOAN SCHEME ARE HIGH.

- Contribution to EU-level policies: a stable human capital institution is needed for the EU – especially to support student mobility.
- Positive scale effects arise in a number of ways. An EU-wide loan:
    - Provides a wider risk cohort and better diversification;
    - Facilitates more efficient financing and risk management, due to better market position;
    - Assists efficient collection, with lower administrative costs than a national scheme trying to collect from internationally mobile graduates;
    - Is more resistant to political, financial and social crises;
    - Spreads the costs of design and implementation (set-up costs, consultancy) etc. over larger numbers of prospective borrowers.
- The EU has an informational advantage in mobile lending. The necessary information on preferences, opportunities, financing needs, riskiness and income perspectives of mobile students and workers are more easily accessible at community level. More generally, an EU-level mobility loan facility could collect and disseminate comprehensive information on mobility opportunities and the corresponding financial support. Another informational gain concerns data on migration, which are generally lacking or notoriously unreliable. An EU-level mobility loan would help to fill this gap and provide policy makers with information about mobility trends.

Benefits for national schemes (no free-rider problem any more): addressing student mobility

at EU level would simplify the task of introducing or expanding national loan schemes designed to support non-mobile borrowers.

2. The Approach

2.1 Research principles

1. "This Study should carry out original research, while taking into account existing reports and studies." (ToR, Annex1, 2.2.) In doing so, the research and our recommendations are based on the following principles.

2. Simple: the starting point is a simple model that is financially, politically and administratively as simple as possible and therefore robust.

3. Evolutionary: the proposals are constructed so as to offer evolutionary pathways that allow for a natural evolution into more wide-ranging schemes.

4. A long game, since these are institutions that:
- Are long lived for the individual (consumption smoothing over the life cycle, like pensions);
- Are not easy to administer (it is easy to give out the money, hard to get it back);
- Have political implications given the existence of national loan schemes and the possibility of conflicts of interests with different stakeholders.

5. A holistic view: removing financial impediments to mobility is helpful, but there are other impediments to consider, e.g. differences in language, culture, administration (which Bologna is addressing). Loans are an important instrument but it is also necessary to be aware of broader aspects such as grants and impediments to information.

2.2 Methodology

2.2.1 First phase

In the first part of the research project our methodology consisted of three elements:
- Literature review
- Interviews
- Survey

LITERATURE REVIEW. We drew on the following basic literature:
- Barr N. (2004*a*) *The Economics of the Welfare State*, Oxford University Press, 4th Edition
- Baldwin R. and Wyplosz C. (2009) *The Economics of the European Integration*, McGraw-Hill, 3rd Edition
- Higher Education Information System (HIS) 2008. "Social and Economic Conditions of Student Life in Europe: Synopsis of indicators / Final report of Eurostudent III 2005–2008"
- Summary report of the Peer Learning Activity on "Ways to increase mobility: funding models examined" (Cluster), 2009
- Slides of the "International Policy Conference on Student Loans" (2009) organised by the European Investment Bank in co-operation with the European Commission
- Europe 2020 A European strategy for smart, sustainable and inclusive growth
- Databases: Eurostat and Eurydice

INTERVIEWS. In order to get an insight of the opinions of different stakeholders, we carried out a series of structured interviews. We gathered arguments in favour of and against an EU-wide student loan facility, including new ideas from a wide range of people with diverse backgrounds. We listed selected concerns, supporting statements and brainstorming ideas, which we have then addressed in Section 2 (EU added value) using cross-references.

SURVEY. In order to obtain up-to-date information on the current student loan practices we also conducted a survey of national loan schemes. This survey was a useful supplement to the literature review in describing the major characteristics of existing loan schemes in Europe, with special emphasis on the issues of portability. Surveys with loan scheme managers have been carried out in 33 countries – 27 EU Member States, plus EFTA/EEA (Iceland, Liechtenstein, Norway) and candidate countries (Croatia, FYROM, Turkey, Iceland).

Some of the constraints faced by the initial phase and early responses are summarised in Appendix 1.

PROJECT MANAGEMENT. In order to enhance and foster collaboration within the research team, we set up an interactive webpage, which served as a hub for communication and a knowledge repository. At a later stage, and with the approval of the contractor, selected elements of this site could be shared with a group of experts involved in the Delphi method or with the wider public as a key reference point about student support and mobility opportunities.

2.2.2 Second phase

SPECIFIC OBJECTIVE OF THE SECOND PHASE OF THE PROJECT (ToR, Annex1, 2.2.)

"Where added value is demonstrated, to investigate the feasibility for the establishment of a student lending facility at EU/EEA level. This should include, as a minimum, detailed reflection upon the following:

a. Target group (cycle, background, participants in existing mobility programmes or free-movers)
b. Nature of loan (living/maintenance costs, tuition fees or administration costs, top-up to other grant/loan, eligibility conditions)
c. How to handle differences in living costs between different countries (e.g. loan taken for mobility period in a high cost country, and repayment period spent in a country where income levels are lower)
d. Interest rate: fixed-variable-subsidised; risk premium
e. Repayment terms (mortgage, income contingent, collected through taxation/national insurance contribution systems or by the lender directly)
f. Management of a potential scheme: institutional structure to allocate loans, EU/EEA or national/regional level; independent body; banking sector
g. Costs of a potential scheme (impact on the EU budget), including costs associated with scheme management
h. Provision for default and non-payment (death, permanent disability, etc), and risk-sharing options (e.g. fund at European level)
i. Potential for leverage of additional funding for the establishment of a scheme
j. Potential for using mutual guarantee schemes
k. Impact of Community and national legal framework and regulations

Based upon the findings of the research, formulate proposals for the establishment of a student loan facility/scheme at European level, including the presentation of three options. For each option, case studies of how this might be implemented in a representative sample of countries (at least five) should be included.

A testing seminar should be organised with representatives of the main stakeholders and experts in the field to present the conclusions and proposals and receive feedback.

METHODOLOGY. The Delphi method generates alternatives and multi-criteria scoring. For the Delphi method we involved 6-8 international experts based on the following selection criteria:

1. High-level experts, mainly for the problem framing and approach
2. Diversity of areas of expertises, but
3. Relevant enough for the key questions to be answered

The basic idea is that at this stage the EU added value and the need for an EU loan scheme will not be reiterated. Our questions were mainly about the how rather than the why. We chose a team of Delphi experts who understood and supported this policy direction.

Based on the findings of the interim report, the Delphi expert panel were asked two questions:

1. Starting point: the key issues of the interim report were highlighted and we asked for their opinion, approval or their suggestions for issues to be raised.
2. Main point: we asked the direction of the concrete solution, especially in the area of managing widely diverse graduate incomes and the resulting default risk.

Based on the answers of these two questions the core research team summarised the common points and developed potential working alternatives (7-8), on which they briefly commented. The second stage was to send the findings back to the Delphi expert panel for a second round of comments on questions 1 and 2. Upon the conclusion of the second round, the core team narrowed down the alternatives into three working models.

The three proposed models of the EU student loan scheme were then sent to the Delphi expert panel for their comments and observations.

Based on the two Delphi rounds, the core research team prepared a Multi-criteria Scoring Model (MCSM) and detailed case studies for each of the three alternatives. This process included structuring criteria and assessment alternatives, taking into account the key facts and arguments.

Finally, the Delphi rounds and the MCSM are summarised, highlighting the three working alternatives and pointing out the one that is considered the best by the experts and by the analysis of the core team.

3 Analytical framework

This section summarises key elements in the literature on student loans. However, one of the central reasons for discussing loans is to improve human capital in Europe. This means that a proper analysis requires additional discussion of the competitiveness of universities in Member States and also of tuition fees. Analysis of the determinants of access is also needed. Discussion in this section covers all these aspects.

3.1 Lessons from economic theory for higher education finance[23]

Section 1.1 sets out three central objectives of higher education policy: size, quality and access. A strategy for achieving these should be rooted in economic theory. Section 3.1 sets out the analytical core of the recommendations in this report and, for that reason, all the analytical arguments are brought together. Sections 3.2 and 3.3 apply the conclusions to efficiency and equity aspects of higher education in the EU.

This section sets out four strategic lessons:

- Competition between universities is beneficial.
- Graduates should contribute to the cost of their degree.
- Well-designed student loans have core characteristics.
- The policies that widen participation are well known but politically difficult.

3.1.1 Competition between universities assists quality

In most countries, higher education is largely centrally planned. The argument against central planning of universities is not ideological, but rooted in the economics of information, which argues that competition is useful where consumers are well informed – thus we have competition between supermarkets, but less between hospitals or schools.[24] In the case of higher education, the model of the well-informed consumer broadly holds. Thus competition, with suitable regulation, benefits students, both by promoting quality and because well-informed students are better able than planners to make choices that are aligned with their interests and those of the economy. Though that proposition is largely correct for many students, there is an important exception: people from poorer backgrounds might not be fully informed, with implications for access that are discussed in section 3.1.4.

On the supply side, central planning – whether or not it was ever desirable – is no longer feasible. As noted, technological change has led to greater numbers of universities and students, and much greater diversity of subjects taught. The myth that all universities are the same and should be funded equally is no longer credible. In principle, differential funding could be implemented by an all-knowing central planner, but the problem is too complex for complete reliance on that mechanism: mass higher education needs to be financed in a way that allows institutions to charge different prices to reflect their different costs and objectives. Such competition needs to be supported by an effective system of quality control.

For all these reasons, students are more capable than central planners of making choices that answer their own needs and those of the economy. In contrast, attempts at

[23] This discussion draws heavily on Barr (2004*b*).
[24] See Barr, 2004*a*, Chs 12-14 on health care, schools, and universities, respectively.

manpower planning are even more likely than hitherto to be wrong because of the increasing complexity of post-industrial society.

> "Mobilising all Europe's brain power and applying it in the economy and society will require much more diversity than hitherto with respect to target groups, teaching modes, entry and exit points, the mix of disciplines and competencies in curricula, etc. Outstanding quality can only emerge from a terrain with an across-the-board 'culture of excellence'. Excellence is never a permanent achievement: it always needs to be challenged. It can exist in a few entire universities, but much more widely in individual faculties or teams within institutions or networks."[25]

It is worth reinforcing a point made earlier: competition is beneficial whether or not the system of higher education has tuition fees. A system with no fees can include competition *inter alia* through the publication of "league tables" of quality and / or through mechanisms whereby the finance a university receives is affected, at least at the margin, by measures of quality.

Thus the argument is that competition is beneficial, and that student choice is an important driver of competition. A student loan facility assists competition by relaxing liquidity constraints, thus empowering student choice.

3.1.2 Graduates should contribute to the cost of their degree

Higher education creates benefits to society beyond those to the individual. Though difficult to quantify, they include (a) Production benefits: well-educated people make people with whom they work more productive; (b) Cultural benefits: well-educated people bring other people into contact and foster shared attitudes; (c) Civic benefits: there is a strong relationship between education and civic engagement. Broader social benefits include the transmission of values and the development of knowledge for its own sake. These social benefits all justify taxpayer subsidies as a permanent part of the landscape.

However, there are also substantial and well-documented private benefits.

> "Very high private returns suggest that education may need to be expanded by increasing access and by making loans more readily available to individuals, rather than by lowering the costs of education." (OECD, 2010, p.136)

As a result:

> "At the tertiary level, high private returns... suggest that a greater contribution by individuals and other private entities to the costs of tertiary education may be justified so long as there are ways to ensure that funding is available to students irrespective of their economic background." (ibid., p. 228; see also Psacharopoulos, 2009)

Private benefits arise not only in terms of higher earnings and a lower probability of being unemployed, but also in the form of greater job satisfaction (a huge benefit) and / or greater enjoyment of leisure. [S-18-20] Given large private benefits on average, it is both efficient and fair that the beneficiaries should bear some of the costs. However, students are financially constrained, and most cannot afford to pay tuition fees or living costs. Thus beneficiaries should contribute to the cost of their degree when they can afford to do so – as graduates – not when they are students. This leads to the third set of lessons.

[25] Communication from the Commission "Mobilising the brainpower of Europe: enabling universities to make their full contribution to the Lisbon Strategy", 2005

3.1.3 Well-designed student loans have core characteristics

A well-designed student loan system should assist investment in human capital in ways that are both efficient and support social justice. To those ends, the system should be (a) attractive for the students and (b) financially sustainable. [S-34]

Is borrowing a good idea?
Before addressing those issue, however, it is necessary to consider a prior question: is borrowing a good idea? Economic theory argues that people seek to maximise their wellbeing not at a single point but over time. Students sit in class not because they cannot think of anything more enjoyable to do, but because they hope that what they learn will contribute to their future earning capacity, job satisfaction and quality of life. Athletes rarely train out of sheer enjoyment of the training process, but because of the resulting boost to their performance. People try to lose weight not because they enjoy dieting, but because they recognise the potential health benefits.

Saving and borrowing raise identical issues. Someone who saves does so not because the consumption she gives up today has no value, but because she places a higher value on the resulting extra consumption in the future. A teenager who saves for an airline ticket is making a judgement call that he will get more enjoyment from the trip than from spending the money now. Similarly, someone who takes out a student loan is making a judgement that the returns of a degree (financial and non-financial) will exceed the cost of the loan. In doing so, he redistributes from himself when working to himself when a student. Similarly, most people hope to live long enough to be able to retire. They save to that end, in effect redistributing income from their younger to their older self. The idea of saving and borrowing in this way – consumption smoothing – is that people can thereby increase their wellbeing. Thus people tend to borrow when young, to finance part of the cost of their education and to buy a house, and to save during prime earning years to finance consumption in retirement.

It need hardly be said that borrowing too much is suboptimal. But given the potential gains in wellbeing, it is important to make the point that too little borrowing is also suboptimal. The ability to borrow from a well-designed student loan system raises the potential welfare of young people.

Why not leave loans to private provision?

A conventional loan, say to buy a house, makes a useful benchmark. The loan will have a fixed duration, and monthly repayments are entirely determined by three variables: the size of the loan, its duration and the interest rate. Apart from adjustments reflecting changes in the interest rate, the monthly repayment is fixed.

Buying a house is a relatively low-risk activity.

1. The buyer generally knows what he is buying, having lived in a house all his life.
2. The house is unlikely to fall down.
3. The value of the house will increase, at least in the long run.
4. If income falls, making repayments problematic, he has the option to sell the house.
5. Because the house acts as security for the loan, he can get a loan on good terms.

For these reasons, the private market provides home loans. The contrast with lending to finance investment in human capital, e.g. a university degree, is sharp. The central difference is that there is no physical collateral for lending which finances investment in human capital.

Risk-facing borrowers Borrowing to finance human capital is risky to the borrower because (2), (3), and (4), though true for housing, are less true for investment in skills. A qualification can "fall down", because a borrower may fail his exams. He still has to make loan repayments, but without the qualification that would have led to the increased earnings from which to make those repayments. A second source of risk is that though the average private return to investment in human capital is positive, there is considerable variation about that average. Finally (element (4)), someone who has borrowed to acquire a qualification, but then has low earnings and high repayments, does not have the option to sell the qualification, which further increases his exposure to risk. For all these reasons, borrowing to finance investment in human capital exposes the borrower to more risk and uncertainty than borrowing to buy a house. The problem arises for all borrowers, and most acutely for those from poorer backgrounds. As a result, borrowing to finance investment in human capital will be inefficiently low.

Risk-facing lenders. Lenders also face risk and uncertainty. If I borrow to buy a house, the house acts as security. If I am unable to repay, the lender can repossess the house, sell it and take what he is owed. And since the lender cannot hide the house or run away with it, deliberate default is not a problem. Thus the private sector provides loans on good terms. The contrast with human capital is clear. Lenders have no security. They face uncertainty about the riskiness of an applicant – whether the person will acquire the qualification and whether their subsequent earnings will allow him or her to repay – and therefore charge a risk premium. Since lenders are not well informed about the riskiness of an applicant, they face incentives to cherry-pick, i.e. to find ways of lending only to the best risks, analogous to private medical insurance. An obvious way to do this is to lend only to students who can provide security, e.g. a home-owning parent. The resulting lending, once more, will be inefficiently low.

Thus conventional loans lead to inefficiently low borrowing and lending. They are also inequitable. The various efficiency problems impact most on people from poor backgrounds, women, and ethnic minorities, who may be less well informed about the benefits of a qualification and therefore less prepared to risk a loan. In addition, these groups are less likely to be attractive to cherry-picking institutions.

Characteristics of a good student loan scheme

Discussion thus far has sought to make two points. First, the analysis points to a graduate contribution because:

- It is efficient in microeconomic terms because of the private benefits of a degree.
- It is necessary for fiscal reasons, given the high cost of mass higher education and competing fiscal pressures such as population ageing and combating social exclusion.
- It improves equity by reducing the regressivity of taxpayer finance.

Second, conventional loans are inefficient and inequitable.

The two sets of arguments underpin the position that graduate contributions should be based on student loans which are least partly income-contingent repayments; are ideally large enough to cover tuition charges and realistic living costs; and are universal, self-sustaining, and potentially capable of being privately financed.

INCOME-CONTINGENT. Income-contingent repayments – that is, repayments calculated as *x*% of the borrower's subsequent earnings, collected alongside income tax[26] [S-43-44-45] – are designed specifically to address the problems of conventional loans. In efficiency terms, they are designed explicitly to protect borrowers from excessive risk. In equity terms, they assist access because they have built-in insurance against inability to repay. Though proposals for income-contingent repayments are old, more recent arguments draw on lessons from the economics of information and behavioural economics. Income-contingent repayments build in insurance against inability to repay, thereby increasing efficiency by protecting borrowers from excessive risk. For the same reason, they also protect access. Note that what is being discussed is not a tax, which goes on forever, but a genuine loan, where repayments stop once the loan has been repaid.

In a pure income-contingent system, a graduate's monthly repayments are a fraction of her income, deducted at source alongside income tax, as in Australia, New Zealand and the UK. It is also possible to have what might be regarded as a hybrid, with income-contingent repayments at lower earnings and fixed monthly repayments for higher earnings. In section 5 we discuss this approach in more detail, paying particular attention to schemes where the income-contingent element is only at low levels of income, which minimises administrative burdens but offers the possibility over time of raising the level of income below which repayments are income-contingent.

SUFFICIENTLY LARGE. Ideally, the loan should be large enough to cover fees and living costs, resolving student poverty and promoting access by making higher education free at the point of use.

UNIVERSAL. Access to a loan should not require a parental guarantee or collateral. A loan scheme that is self-sustaining faces less need to restrict the size of loans for fiscal reasons. This makes it possible to offer loans without an income test. Since loans are intended to smooth consumption, the absence of an income test is desirable.

SELF-SUSTAINING. Loans should be as self-sustaining as possible, not least to make it possible to extend loans to as many different types of student (undergraduate, postgraduate, full-time and part-time) as possible. To that end, loans should not have blanket interest subsidies; they should charge an interest rate related to the government's cost of borrowing with targeted interest subsidies for low earners and perhaps a slightly higher rate of interest for higher earners. Many countries, including the UK, offer loans at a zero real interest rate, that is, with a blanket interest subsidy. The high cost and bad targeting of interest subsidies is shown internationally by Shen and Ziderman (2009). In a system like that in the UK, with (a) income-contingent repayments and (b) forgiveness of any loan that has not been repaid after (say) 25 years, interest subsidies are particularly pernicious.

- The subsidy is enormously expensive. In the UK, nearly one-third of all lending to students never comes back simply because of the interest subsidy.
- Because of the resulting fiscal pressures, loans are too small, harming access.
- The subsidies also crowd out university income, putting quality at risk, and more recently putting size at risk – in England in 2010 there was a severe shortage of university places.
- The subsidies are deeply regressive. They do not help students (graduates make repayments, not students). They help low-earning graduates only slightly: graduates

[26] For fuller discussion, see Barr, 2001, Ch. 12.

with low monthly earnings are protected by income-contingency, and those with low lifetime earnings by forgiveness after 25 years. They do not help high-earning graduates early in their careers: with income-contingent loans, monthly repayments depend only on earnings; interest rates only affect the duration of the loan. Thus the major beneficiaries are successful professionals in mid-career, whose loan repayments are switched off earlier because of the subsidy than would otherwise be the case. A move to a somewhat higher interest rate would be progressive.

CAPABLE OF BEING PRIVATELY FINANCED. Even high-income countries (e.g. the UK) are facing difficulties in financing the cash-flow costs of student loans from public sources. If fiscal constraints make it difficult for taxpayers to finance the cash-flow costs of the loan there are advantages if the detailed design of the loan allows it to be classified as private under Eurostat rules. [S-52] (see section 6.4.5).

Of current schemes, the Hungarian loan comes closest (other than on the size of loan available to each student). Hungary illustrates the benefits of a simple, robust scheme.

3.1.4 The policies that widen participation are well known but politically difficult

A fourth set of lessons concerns the determinants of access. The goal of improving participation is enormously important: for efficiency reasons (countries cannot afford to waste talent); for widely supported equity reasons; and for political reasons. But discussion of policy is bedevilled by the widely held view that free higher education is necessary for access reasons, and that fees and loans harm access. That argument is intuitively plausible, but profoundly mistaken.

CAUSES OF FAILURE: THE RIGHT DIAGNOSIS. Failure to participate in higher education is much less of an 18+ problem than a 0-18 problem, frequently with roots in early childhood. There are two strategic constraints on participation: a prior-attainment constraint (the 0-18 problem), and a liquidity constraint (the 18+ problem).

Prior-attainment constraint. The role of a person's attainment in school stands out as the single most important determinant of participation. As noted in Box 1, in the UK in 2002 the participation rate for children from professional backgrounds was 81%, and that from manual backgrounds, 15%. Yet restricting the sample to young people with good high school graduate grades, the figure was roughly 90% for both groups. The reason is simple – pupils from lower socioeconomic backgrounds have lower school-achievement rates. If someone achieves well in secondary education, the problem of participation in higher education is largely solved.

Liquidity constraints. The second impediment to participation is liquidity constraint. As noted earlier, students are generally poor so that, without assistance, only young people with well-off parents would be able to afford to go to university. However, the evidence suggests that for the great bulk of students, well-designed loans are as effective as grants at addressing liquidity constraints.

It is often argued that students from disadvantaged backgrounds are debt-averse. The problem is real, particularly where people are badly informed about higher education and how the loan system operates and, as discussed below, policy needs to address this aspect. However, many studies of debt aversion are flawed. They are mostly based on survey evidence, hence on what people say not on what they do. Second, they fail to control for critical differences in the characteristics of potential university applicants, notably the

extent of their information and the level of their attainment. The second flaw is fatal.

- The flawed argument is that people from poor backgrounds do not go to university because they are debt-averse, thus money intended to widen participation should be spent on grants and bursaries.
- The argument that the evidence supports is that people from poor backgrounds do not go to university mainly because of low attainment, and that if that problem is fixed are just as likely to go to university as people from better-off backgrounds. Thus money intended to widen participation should be spent mainly on raising grades in school and on improving information.

THE RIGHT PRESCRIPTION. What does this imply for policy that really starts to improve participation? Poor attainment in school can be argued to stem from four causes: lack of education, lack of information about university, lack of aspirations and lack of money. A well-designed strategy should address all of these.

- Raising attainment: access fails when someone leaves school at 16, usually for reasons that started much earlier. There is ample evidence of the huge importance of early child development. A central element in widening participation is to strengthen pre-university education, from nursery school onwards
- Increasing information
- Raising aspirations

A series of policies address both information and aspirations: mentoring of schoolchildren by university students, visit days, Saturday schools, summer schools, winter schools, and the like. The major purpose of such activities is to demystify university, to give schoolchildren sources of information that are authoritative (university teachers) and credible with young people (student mentors).

- More money: the right policies include financial support to encourage people to complete high school. In important respects grants at this stage are more important than at university. That does not rule out grants for university students but, at least as regards participation, it is important to be clear that grants are the tail; it is attainment that is the dog.

Though the evidence is clear, the political problem is the continuing widespread belief that grants are the major instrument to widen participation, together with robust defence by middle-class families of a system of which they are the main beneficiaries.

3.2 Economic efficiency ("The most competitive, knowledge-based… with full employment…")

3.2.1. Efficiency at the EU level

The analysis in section 1 focused on the competitiveness of the EU by strengthening human capital and promoting mobility. We now turn to mechanisms to achieve those objectives.

High-quality and large-scale higher education requires:

- More resources. Since these cannot come on a sufficient scale from the taxpayer (Box 1), they come through tuition fees that students can finance through loans (section 3.1.3, and further in section 3.2.2).
- Efficient use of those resources. Incentives to efficiency, including responsiveness to the demands of students and employers, comes through a competitive regime (section 3.1.1). Variable fees are part of that incentive structure.

Mobility requires:

- Good information about opportunities, both within a student's home country and elsewhere. Section 3.1.4. notes the critical role of information.
- Addressing liquidity constraints, notably through a loan system that is portable internationally. The reasons why national loan systems are the wrong instrument for internationally mobile students were set out in section 1.3.2.

None of these policies alone is sufficient, but the combination offers a strategy to raise skills, improve employability and increase labour mobility, thereby improving the EU's competitiveness.

3.2.2 Efficiency at the country and individual level

WHY PRIVATE FINANCE? Relying mainly on taxpayer finance is no longer feasible, given the imperative of mass, high-quality higher education; nor is the approach desirable, in that it redistributes from poorer to better-off families. Box 1 explained why relying on public finance fails to achieve the core objectives of size, quality and access.

WHY LOANS, NOT OTHER FORMS OF PRIVATE FINANCE? There are six potential sources of private finance:[27]

1. Family resources are useful as far as they go, but do not promote access.
2. A student's earnings while a student: in most countries, with the exception of the US, these are generally small. In addition, time spent earning money competes with study time and leisure activities.
3. A student's future earnings – that is, loans.
4. Employers: it is in the interests of employers that people are trained, but it is also in the interests of each employer to try to free-ride on training financed by their competitors. This type of externality did not arise when workers tended to stay with a single employer for many years, but today's labour markets require mobility. Thus, contrary to popular belief, employer contributions are likely to be small.
5. Entrepreneurial activities by universities: the concern here is that net revenues are generally small and there is a risk of diverting scarce institutional capacity to lower-priority activities.
6. Philanthropy – e.g. charitable foundations or bequests in wills – are useful but marginal, except in the case of a small number of US universities.

Having ruled out 1, 2, 4, 5, and 6 as *major* sources of private finance, we are left with loans as the only approach with the potential to yield resources in a large-scale and equitable way. [S-13] To those ends, the design of the loan is paramount.

DESIGNING STUDENT LOANS. Section 3.1.3 sets out the theoretical arguments for loans with the following characteristics:

- Income-contingent repayments, at least at low levels of earnings, to address uncertainty on the part of borrowers and lenders;
- Large enough to cover fees and living costs, to address liquidity constraints;
- Universal, i.e. not requiring a parental guarantee, to assist participation;
- Self-sustaining, i.e. no blanket interest subsidy, to ensure that the scheme is fiscally parsimonious if publicly financed, or attractive to private lenders if privately financed.

[27] Barr (2004*a*, Ch. 14).

INCOME-CONTINGENT LOANS AS A FORM OF GRADUATE TAX. A graduate tax continues for life, or until retirement, or for (say) 25 years. Though intuitively plausible, a graduate tax of this sort is highly problematical even within a single country, and even more so in the context of internationally mobile students, for the reasons set out in Box 3. From the point of view of the individual graduate, however, income-contingent repayments collected as a payroll deduction are just like a graduate tax, except that they stop once the graduate has repaid what he or she borrowed.

Box 3: What is wrong with a graduate tax?

A pure graduate tax for (say) 25 years is problematical for at least five reasons.

1) It is public money. The revenue from a tax is public finance, ruling out net private finance until cumulative repayments by graduates outweigh the cumulative upfront outgoings.

2) Funding is closed-ended. With a graduate tax, the ministry of finance (or equivalent) controls the funding envelope. Funding is a zero-sum game: world-famous universities and local universities compete for the same pot of money.

3) Incentives to quality are muted. Public finance plus closed-ended funding restores central planning, muting the competitive incentives facing universities, and hence creating concerns about quality. As explained in section 3.1.1, competition is an important ingredient in quality.

4) A closed-economy model. Consider a graduate tax in the UK. If repayments are part of a person's income tax liability, they apply only to people with UK taxable earnings, thus exempting students from other EU countries who study in the UK but then work elsewhere, and UK graduates who work abroad. Unless the graduate tax is small (in which case it is not a powerful instrument in promoting quality) it will create incentives to emigrate.

5) Politically problematical. Though it sounds like a good idea, a graduate tax would be politically difficult. If the tax is compulsory, it causes what might be called "the Mick Jagger problem". In a graduate tax regime, Mick Jagger, once a university student, would finance a good part of UK higher education. Compulsion, as well as encouraging emigration, will come under political attack from the right, as violating individual freedom, risking the long-term stability of the system. On the other hand, if the tax is voluntary, the problem is one of adverse selection – the rich would pay upfront, reducing the redistributive capacity of the system. This tendency would provoke attack from the political Left.

Income-contingent repayments can also be regarded as analogous to a social insurance contribution: as noted earlier, pensions redistribute from a person's middle years to her older self, student loans from her middle years to her younger self. The analogy with social insurance is particularly appropriate of a loan scheme like that in Hungary, with a cohort risk premium, so that within a cohort higher-earning graduates subsidise lower-earning graduates.

WHY LOANS, NOT ONLY GRANTS. This topic was discussed in Box 1 in terms of the objectives of size, quality and access. The main argument is that a system that relies mainly on taxpayer finance cannot achieve all of them and may achieve none. We can now reinforce those conclusions by drawing on the economic theory section 3.1.

Efficiency arguments:

- Tax funding on its own is inefficient, given the private benefits discussed in section 3.1.2. [S-19-20]
- Tax funding is unaffordable [S-14-15-16-17] given the conflict between (a) the imperative for a large, high-quality tertiary sector in the interests of national economic performance and (b) fiscal constraints arising from competing long-run demands on scarce public funds.

Equity arguments:

- Tax funding is unfair. As discussed in Box 1, children from the top socio-economic backgrounds are over-represented in higher education, therefore relying on taxpayer finance is regressive. Note that over-representation of students from better-off backgrounds is even more significant among mobile students. [S-19]
- This is all the more the case given the large private returns to higher education.
- Even worse, excessive reliance on tax funding diverts to students from wealthier backgrounds the resources that should be used to finance the wide-ranging activities needed to improve access discussed in section 3.1.4.

Separately, there are concerns about the methods available for allocating grants. Grants can be allocated (a) equally, (b) by profession, (c) on academic merit, or (d) on the basis of need.

- Grants allocated equally tend to be too small to have a significant impact on access.
- Grant allocated by professions reintroduce implicit manpower planning.
- Merit-based grants tend to benefit students from better-off backgrounds since, as an empirical matter, academic merit is highly correlated with family wealth.
- Targeting grants on the basis of need, though desirable, is not easy. The financial situation of the family and that of the student can be very different, reliable means testing is expensive, and income may be a bad yardstick of deprivation.

Listing those concerns is not intended as an attack on grants; nor is the emphasis on prior attainment in section 3.1.4. But, as noted earlier, if the objective is to widen participation, grants are not the most powerful instrument.

EFFICIENCY CONCERNS. It is sometimes argued that we are over-educating the population, with the risk of wasting public resources, leading to inflation of diplomas and the crowding out of less-qualified people from the labour market. Those arguments should be recognised but not exaggerated.

- If the supply of graduates increases then, other things being equal, the financial return to degrees will decline. But that will not happen if increases in supply are broadly matched by the increasing demand for skills discussed in section 1.1. It can be argued that that is exactly what has happened. Though higher education has expanded throughout Europe, the advantages of a degree, including the graduate premium, have remained broadly constant.
- A second counter-argument concerns the relative costs of over-investing and under-investing, the latter in the long run reducing Europe's competitiveness. Given the high spending on human capital in competing countries, including the US, Japan and South Korea, there is an insurance element to spending on higher education as well as an investment element.
- The argument about over-investment is less acute when we talk about loans rather than grants.

A second concern is that the approach suggested here will reintroduce central planning in the form of manpower planning. To address that concern it is useful to summarise earlier arguments by discussing the role of government in higher education.

WHAT ROLE FOR GOVERNMENT? Earlier discussion favoured competition. That is not an argument for free markets but for regulated markets, nor is it an attack on taxpayer support.

Government has an important and continuing role:

- To provide taxpayer support to higher education to reflect external benefits, to assist

access and to finance research.

- To regulate the system through some measure of price control on fees and by ensuring that there is effective quality assurance.
- To set incentives by offering larger subsidies for subjects the government wishes to favour and by offering larger subsidies for some students. Thus the role of government changes from that of central planner to that of setter of incentives.
- To redistribute within higher education, for example, with more taxpayer support for universities in a less favourable market position in terms of the fees they can charge.
- To ensure that there is a good loan scheme;
- To adopt, encourage and mandate policies to widen participation, through policies to improve information, by allocating grants to students from poor backgrounds – particularly where this addresses debt aversion, – and by adopting policies to improve the quality of school education. [S-21]

"To strengthen both efficiency and equity, Member States should create appropriate conditions and incentives to generate higher investment from public and private sources, including, where appropriate, through tuition fees combined with accompanying financial measures for the disadvantaged. Specific actions at school level are also needed."[28]

All these policies operate at a national level. Some, including loans, also have important EU dimensions.

3.3 Social justice ("…and higher social cohesion …")

3.3.1 Equity at the individual and national level

DISTRIBUTIONAL GAINS. Student loans bring about significant distributional gains.

- They reduce the regressivity of over-reliance on taxpayer finance (Box 1), which results because students come disproportionately from better-off backgrounds, and internationally mobile students even more so.
- They free resources that can be used to finance the policies with the greatest impact on improving participation, notably wide-ranging action at earlier ages (section 3.1.4). In contrast, over-reliance on taxpayer support actively crowds out those policies. Given the evidence that the main constraint on participation is prior achievement, it is no surprise that tax finance per se is not a powerful determinant of participation.

PERSONAL DEVELOPMENT. The private benefits of higher education were discussed in section 3.1.2. They include higher earnings and lower rates of unemployment. These far from exhaust the total number of gains from higher education, which include greater job satisfaction and greater enjoyment of leisure. Though harder to quantify, they can also improve self-confidence. To the extent that a system of loans frees resources to raise the participation of students from poorer backgrounds, these gains can be shared more widely.

GENDER EQUITY. As discussed more fully in Box 4, gender equality is increasingly important both for its own sake and because of the importance of women in the labour market.

ACCESS TO INTERNATIONAL HIGHER EDUCATION. Studying abroad reinforces economic benefits (see, for example, Janson et al, (2009)) as well as fostering personal development. And since internationally mobile students are even more likely than non-mobile students to come

[28] "Efficiency and equity in European education and training systems", 2006.

from better-off backgrounds, the effect of sharing these gains more widely is even stronger.

OVER-BORROWING. As discussed in section 3.1.3, too little borrowing is suboptimal (for example, people would have to save into middle age before they could afford to buy a house), but so, clearly, is too much borrowing. Policy design therefore needs to ensure that the amount that a student can borrow makes sense given his or her future earnings prospects on average, with income-contingency offering insurance against inability to repay for graduates whose long-term earnings turn out to be low. Making sure that loans are large enough to foster investment in human capital, but not too large, is partly an efficiency issue but also has an equity dimension: without access to loans, highly qualified students from poorer backgrounds face a more acute liquidity constraint than students from better-off backgrounds and, once more, the point has particular force for internationally mobile students.

Box 4. Equal opportunities

The EU has prioritised equal opportunities since the Treaty of Amsterdam. In 2000 the Commission proposed a new strategy[29] that provides for inclusion of gender equality in all EU policies and activities, complemented by specific actions for disadvantaged groups. Non-discrimination on the grounds of ethnicity/race, religion/belief, age, disability and sexual orientation, were subsequently added[30].

When introducing new policy instruments, it is recommended to assess the differences in "rights, resources, participation, values and norms"[31] among different groups, and whether European policies can help to eliminate existing inequalities. For student loans specifically, the following observations are relevant:

- Education in the EU is segregated both horizontally and vertically. Women make up 66% of students in the humanities and arts, but only 24% in engineering (Eurostat, 2006).
- 6% of women and 4% of men aged 20-34 across the EU (Eurostat, 2007) are unemployed three or more years after graduating from tertiary education.
- Although comparable data are scarce, the gender pay gap in some countries was as large as 21% in public administration (SK), 28% in business (CY) and real estate (PT), 33% in healthcare and social work (PT), 36% in ICT (CZ), and 49% in the finance sector (CZ) (Eurostat).
- The unequal distribution of household duties reduces labour market opportunities.[32]

Current loan schemes do not necessarily have built-in incentives for under-represented groups to take up loans, or preferential treatment in repaying them. Yet some notable examples are:

- Prodigy Finance Ltd., a private lender consulted for this study, already offers repayment freezes in case of parental leave.
- In the Dutch national scheme the borrower may request repayment to be postponed in case of parental leave.

[29] Commission Communication of 7 June 2000: "Towards a Community framework strategy on gender equality (2001-2005)" (COM(2000) 335 final).
[30] Racial Equality Directive 2000/43/EC of 29 June 2000 and Employment Framework Directive 2000/78/EC of 27 November 2000.
[31] European Commission, Equal Opportunities Unit DG 5 (1998), *A Guide to Gender Impact Assessment*, p. 4.
[32] Fagan, C., (2010): Analysis note: Men and Gender Equality – tackling gender segregated family roles and social care jobs. EGGE – European Network of Experts on Employment and Gender Equality. Study on behalf of the European Commission, DG Employment, Social Affairs and Equal Opportunities.

- The UK scheme has automatic adjustment for parental leave in that, if earnings are low or zero, loan repayments are zero.

Although the situation of various under-represented groups in education is difficult to compare across the EU, the loan scheme should address the main equality issues in the Member States. The proposed loan scheme should address equal opportunities in the following stages:

- *Information*: targeted campaigns, websites, FAQs designed for under-represented groups (including in minority languages). Information on requesting a means test should be made very clear to students from disadvantaged groups.
- *Access*: ensuring equal opportunities to access the loan for all residents (including refugees, asylum seekers, migrants and children thereof, or groups like non-citizen ethnic minorities in Latvia and Estonia).
- *Repayment*: mobilising other EU and national instruments to provide help with repayments for disadvantaged groups or persons in professions atypical for their gender; repayment freezes during parental leave; repayment reductions for persons with demanding family responsibilities (such as taking care of a disabled child); creating the borrower's repayment plan solely on the basis of individual income (not family or partner's – it should not be taken for granted that parents or partner will financially support the borrower).

3.3.2 Equity: cross-country aspects

EU CITIZENSHIP/EUROPEAN IDENTITY. Loans for internationally mobile students foster mobility, with the gains in terms of EU citizenship and EU identity discussed in section 1.2. Though broadly balanced mobility may be appropriate for promoting citizenship and identity, the discussion in section 1.2.4 suggests that the pursuit of international competitiveness requires unbalanced mobility, where students flow to whichever higher education course best suits his interests and abilities and workers move to jobs in which they are most productive. As discussed in section 1.3, national loan schemes are not the right instrument for large-scale international mobility, and particularly not for large-scale unbalanced mobility.

CROSS-BORDER SOLIDARITY. This point follows directly from the previous one. The net flow of students will tend to be from poorer to richer Member States. This highlights further problems with national loan schemes as an instrument for international student mobility. To illustrate, consider a poorer Member State with lower costs of living, lower earnings and lower tuition fees than a richer Member State.

- The poorer country will generally face tighter fiscal constraints even in terms of financing a loan scheme for non-mobile students.
- The problem is more acute for internationally mobile students, whose loan requirements will be higher (a) because studying abroad has extra costs even in two similar countries and (b) because costs will generally be higher in a richer country.
- If the student then stays abroad (i.e. there is brain drain), the potential cost to the poorer country is generally larger if the poorer country has financed a large loan; and if there is a perceived (though not necessarily real) brain drain there could be political repercussions.
- If the student returns to the poorer country, his earnings are likely to be low relative to earnings in the richer country, so that he might not be able to repay his loan fully.

An EU loan scheme can avoid the worst of these problems. Implicit in the idea is a notion of cross-border solidarity, i.e. that the mobile graduates of richer Member States will generally subsidise those from poorer Member States. The extent of such redistribution involves balancing economic efficiency (e.g. the gains from mobility) and distributional

concerns, both of which give reasons for more redistribution, and political considerations, which point towards caution.

CONCERNS. The issue of the brain drain was discussed in section 1.2.3 in the context of EU competitiveness. There are two sets of responses. First, as noted, the problem of brain drain can be exaggerated.

- Much migration is temporary, including mobile students.
- Emigrants, whether temporary or permanent, can be of particular benefit to their country of origin, with international experience and international networks.
- Through remittances, emigration can yield an income flow to the sending country.

A second response is to note that some policies raise inescapable conflicts of interest between Member States collectively (i.e. the EU) and individual Member States. Thus international mobility creates all the benefits discussed in section 1.2. From the viewpoint of an individual Member State, however, though there are generally gains, there are also losses, and it may be that the gains are less visible (and hence less politically helpful) than the losses. The conclusion is the mobility is beneficial and should be encouraged, but it is necessary also to take account of the particular position of individual Member States.

A different concern is that student mobility could erode domestic higher education, if the best students study abroad, and particularly if they proceed to academic positions abroad. If an EU-wide loan scheme has that effect, again there is a potential conflict of interest between the EU as a whole and individual Member States. This observation need not be an argument against mobility, but suggests that policy makers might consider mechanisms to attract mobile students to return.[33]

[33] As an example, Fulbright Scholars who study in the US receive the appropriate US visa. At the end of the course of study the visa can be extended by one year for practical experience. At that stage, at the latest, the visa is cancelled and the individual is not eligible for another visa for two years. This mechanism does not force the student to return to his home country, but certainly changes the likelihood that he will do so.

4. International experience

This section summarises international experience. Section 4.1 reviews systems of student financial support in different countries, with particular emphasis on portability. Section 4.2 sets out some of facts about mobility, and section 4.3 assesses the costs of mobility, given the lack of finance as a major barrier.

The section has benefited extensively from interviews with a number of different stakeholders. Interviewees included representatives of international organisations, financial institutions and academia. The main contributions are summarised in Appendix 1, which sets out the supporting statements and concerns of the interviewees against the same set of categories (Target of mobility of 20%; Are loans the right tool to foster access and mobility?; Barriers to mobility; Grants versus loans (cost-sharing); Brain drain versus brain circulation; Cross-border solidarity; EU added value; Task-sharing between the EU and Member States; Income contingent repayments; Financing of the scheme; Default risk; Political problems, Conflicts of interests). Appendix 1 also includes a number of interesting ideas that emerged from the interviews, as well as the full list of interviewees.

Additionally, section 4.1 has built on the forthcoming Cedefop study "The role of loans in financing vocational education and training in Europe", especially section 4.1.1 which offers a review of loan schemes across Europe.

4.1. Review of student financial support – with special emphasis on portability

4.1.1. Loans

LOAN SYSTEMS. In the framework of the project "The role of loans in financing vocational education and training", surveys of loan scheme managers have been carried out in 33 countries – 27 EU Member States, plus EFTA/EEA (Iceland, Liechtenstein, Norway) and candidate countries (Croatia, the Former Yugoslav Republic of Macedonia, Turkey, Iceland).[34] Appendix 9 presents loan schemes that were reported by loan scheme managers at ISCED 5A-6 level in 33 selected countries. The results show that almost all European countries have at least one loan scheme for higher education (i.e. a scheme available for students at ISCED 5A-6 level). There are only three countries that do not have any loan schemes available: Czech Republic, Ireland and Romania (the latter, however, plans to introduce a loan scheme in 2011). However loan schemes are very different in terms of the number of borrowers. Some of them are marginal (e.g. in Austria, Bulgaria, France, private loans in the Netherlands, Poland, Professional and Career Development Loans in the UK), while others are large (e.g. in Finland, Hungary, public loans in the Netherlands, Sweden, student loans in the UK). This is most often related either to the use of student fees in the country (schemes are usually larger in countries where fees are applied) and / or the overall duration of the loan scheme (schemes are usually larger in countries where they are applied for a longer period). Unfortunately, information on the size

[34] In the framework of the project "The role of loans in financing vocational education and training in Europe" commissioned by Cedefop, the contractor – Public Policy and Management Institute – during the period of June – September 2010 has carried out two main surveys of loan scheme managers in 33 countries: Detailed survey of loan scheme managers in the eight selected countries (Austria, Finland, France, Hungary, the Netherlands, Poland, Sweden and the United Kingdom) and General Survey of loan scheme managers in the remaining countries.

of the loan schemes is not available for all countries. Information for some countries may be found in Appendix 12.

LACK OF INFORMATION. Student loan schemes are not always transparent. Only a few provide detailed information on their websites about the loan conditions. Those countries that do provide detailed information include Finland, the Netherlands, Norway, Spain (only for loans for postgraduate students in Catalonia) and the UK. Lack of information can be a substantial technical barrier for foreign students. Appendix 17 describes student loan schemes in light of this problem.

PUBLIC OR PRIVATE INSTITUTIONS. The tables include both wholly public schemes (e.g. in Sweden) and schemes financed from private sources (e.g. in Austria). They do not include all possible variations of private loan mechanisms. In fact, they concentrate mainly on loan schemes where the state has at least some role (e.g. it provides loans, loan guarantees, subsidises the interest rate, etc.). Thus some private schemes may not fully be reflected in the tables, though in terms of overall coverage the omission is small.

ACCESS. Appendix 10 demonstrates that none of the 32 loan schemes are universal – schemes apply at least one eligibility or risk-assessment criteria. The most common criteria are related to nationality, residence and age requirements. About one-third of all schemes also check parental or learner income / assets and / or whether the applicant has any outstanding debts. Meanwhile approximately half of the schemes also apply other eligibility / risk-assessment criteria. For example, loans are sometimes only available for registered students enrolled in full-time studies, for programmes approved by authorities and / or those provided by accredited higher education institutions. Some schemes (e.g. the German loan, the maintenance loan component in the UK student loan scheme) have a means test. Most loan schemes do not require a certain academic standard, while some (e.g. Italian, public Dutch and Swedish loan schemes) have a merit-based component.

LOAN AMOUNT. Loan amounts are highly correlated with the domestic living standards and costs. For example, in the newer Member States and Candidate Countries this amount is usually up to €300 per month (except Cyprus, Malta and Slovenia), while in the older EU Member States and EEA members it usually equals €300-€1,100 per month (except the French-speaking community in Belgium, Italy, the private loans in the Netherlands, Spain and Professional and Career Development loans in the UK, which provide smaller amounts and Iceland, which provides unlimited loans). See Appendix 12 for further details.

INCOME-CONTINGENT OR MORTGAGE-TYPE REPAYMENT. Conventional (or traditional, mortgage-type) loan schemes for higher education are more widespread in Europe than income-contingent schemes or schemes with income-contingent elements. Only eight out of 33 European countries (i.e. Belgium, Hungary, Iceland, Liechtenstein, Luxembourg, Malta, the Netherlands, Sweden and the UK) have income-contingent educational loan schemes or schemes with income-contingent elements in place, while the conventional loans are present in 24 countries. The UK is the only country that has both types of loan schemes in which government plays at least some financial role.

STATE SUBSIDY. Student loan schemes are heavily subsidised by the state. Appendix 13 provides information on the types of state subsidies. It shows that governments usually provide a grace period, a subsidy to compensate for the costs of loan forgiveness, and an interest rate subsidy. The latter can be either universal, as in the UK, or targeted at certain groups, for example, borrowers who are caring for small children (Hungary) or graduates with low earnings (Finland). In some countries, individual loans are guaranteed by government (e.g. in France up to 70% of the principal is guaranteed by the state for 10 years), or by the institution that manages the loan system (e.g. Hungary). In rare cases,

governments allow for tax deduction to be used in order to recover part of the payments made (Finland) or to subsidise savings by the borrower (Austria).

ADMINISTRATIVE COSTS. The administrative costs of loans vary greatly, depending on factors such as the loan mechanism or whether it is government or retail banks providing the loans. The information on administrative costs in Europe is very limited. One way to compare the administrative costs of different loan schemes is to measure them as a percentage of total outstanding loans, although this statistic is only available for a few countries. Over the past three academic years, average administrative costs in Poland form 0.03% of total outstanding loans, in Hungary 1.3%, in Sweden 0.17% and in Finland (data only for 2009) 0.2%.

RECOVERY RATIOS. When evaluating the operation of some 70 student loan systems all over the world, Shen and Ziderman (2008) emphasise financial sustainability, and they identify three key measures:

- Size of built-in subsidy (hidden grant)
- Expected default losses
- Administration costs

They define the so-called recovery rate at the present value of estimated net repayment cash flow (that equals the scheduled cash-flow minus expected and minus administration costs) divided by the present value of the initiated loan. Recovery ratios for some European loan schemes are shown in Table 1.

Table 1. Recovery rates in selected European countries

Country	Recovery ratios
Hungary*	100
Netherlands	98,45
Finland	90,33
Belgium - French-speaking	69,75
Denmark	64,76
Sweden	64,63
Norway	56,61
Estonia	47,76
Germany	38,23
Latvia	24,63

Source: Shen and Ziderman (2008), p. 321
** It is a core design feature of the Hungarian arrangements that the loan scheme is self-sustaining.*

TAKE-UP RATES. As Appendix 16 suggests, loan take-up rates differ throughout the sample. In the case of Austria, although exact take-up rates are not known, these rates are very low; take-up in England and Wales was over 80% of eligible students. The other countries with younger loan systems (Hungary and Poland) had take-up rates of between 10% and 25%; the Scandinavian countries (Sweden and Finland) with longer-established schemes had take-up rates of between 40% and 50%.

PARTICIPATION. Section 3.1.4 argued that the major impediment to participation is lack of attainment in school. Although comparable data are nearly non-existent, this section attempts to cross-check information about the participation of disadvantaged learners. Primary evidence on the participation of different socio-economic groups shows that: 1) female learners usually make up a larger share (except the Netherlands), 2) the loans were mostly used to finance full-time studies and 3) loans are given to persons aged 34 and less. Very scarce primary evidence can be supported by previous studies. A recent study shows that on average, in nine EU15 countries, persons from working-class families were two times less represented among students than among the general population.[35] For example, only 8% of all Dutch students come from ethnic minority backgrounds, and 9% from the lowest income quartile families.[36] A comprehensive economic model and empirical research, carried out on Dutch students in 2005, also showed that risk aversion, predictably, is more notable among students from lower socio-economic backgrounds. However, the author predicted that low-income groups would be under-represented in high-cost study programmes even if they were compensated for the difference between high- and low-cost programmes and received grants. Enrolling in shorter, less expensive study programmes is often a risk-management choice of poor students.[37] In addition, poorer students tend to work part-time in order to minimise their debt.[38] The same study found that although students from low socio-economic backgrounds tend to be debt-averse[39] (even if student loan repayments were favourable) and expect lower future earnings (and hence returns of their education) they often take loans out of necessity.[40] For example, Dutch students with low debt-acceptance rate borrowed more than others, in order to make ends meet.[41] It has been also documented that the participation of women and students from disadvantaged backgrounds grew in the Netherlands as loans were introduced.[42] According to another study similar to the Dutch one, many of the former were nonetheless willing to borrow (although since the study is rather old, its findings should be taken with some reservations).[43]

4.1.2. Grants

FINANCIAL SUPPORT. Financial supports for students in tertiary education may take several forms, principally: grants, loans, exemption from and reduction of administrative and tuition fees, and financial support for parents through family allowances and tax relief. Grants can be dedicated to living costs, administrative fees, tuition fees[44], and / or accommodation. Besides, in five countries grants are also available for young parents studying in HE, specifically: Austria, Bulgaria, Denmark, Slovakia and the UK (Scotland).

GRANTS IN EUROPE. In order to help students to cover the cost of living, nearly all countries under discussion employ grants either alone or combined with loans – the only exceptions

[35] Vossensteyn, (2009) p. 41.
[36] Vossensteyn, (2009) p. 41.
[37] Vossensteyn, (2005) p. 93-94.
[38] Vossensteyn, (2005), p. 95.
[39] Another example is the UK, where 48% students from the lowest socio-economic classes expressed concerns about borrowing, compared to 34% of students from higher social classes. See: (Debande. 2004) 161-190.
[40] Vossensteyn, (2005), p. 96, 162.
[41] Vossensteyn, (2005), p. 96.
[42] Guille, (2000) p. 12.
[43] Johnes, (1994.)

[44] In Norway, Sweden, Denmark, Ireland, Hungary, Malta and the UK (Scotland), students do not have to contribute financially to tuition fees or administrative costs, provided that they managed to gain a state-subsidised place; therefore it follows logically that the grants are designed to go towards the cost of living or accommodation.

being Latvia (in the case of students without a subsidised place) and Iceland. Applying grants in the form of loan alleviations is not widely used: only two countries (Austria and Spain) award grants to help students to pay back their loan, while Luxembourg offers grants and loans in combination.

MEANS-TESTING. In a concern for equity, grants can be means tested with respect to personal student income or parental income. In the case of undergraduate programmes, this condition for the award of support exists in all countries with the exception of Latvia (for students with subsidised places) and Malta. Grants are linked in two ways to income: first, the amount of the grant can be the negative function of income as it is in Belgium, France, Italy, Poland, Portugal, Slovenia, Spain and the United Kingdom. The second possible formula involves a specific grant threshold, with grants awarded only to those below a specific income level, as they are in Bulgaria, Czech Republic, Lithuania, Romania and Sweden. This income level may be very high, like in Sweden.[45]

SIZE OF THE GRANTS. In many countries the size of a grant is determined by a decentralised authority. The grant / cost ratio varies widely even within a country: 0 to 20 (in the Flemish Community of Belgium), or 1 to 39 (in Germany). The nominal value of the grants can be very different too: in Bulgaria and the Czech Republic grants are less then €1,000 a year[46], while in Austria and Luxembourg they can be as much as €7,000. Appendix 12 shows the minimum and maximum amount of grants in different countries.

4.1.3. Portability

PORTABILITY OF LOANS FOR NATIONAL CITIZENS STUDYING ABROAD. Loans for nationals who leave their country to study abroad are available in 26 out of the 32 countries surveyed (the exceptions being Bulgaria, the Former Yugoslav Republic of Macedonia, Poland, Turkey and the UK). There is a framework to provide loans for nationals studying abroad without limitations in seven schemes (that fact does not automatically imply that the loans are easily accessible and there are no *de facto* limitations). The remaining schemes have built-in restrictions, e.g. loans are given only for partial studies (Erasmus – Italy, France, Lithuania, Poland), studies of a particular length (Germany, Iceland), studies which cannot be undertaken in a country of residence (Belgium, Professional and Career Development loans in the UK), studies approved by national agencies (Denmark, Latvia, Norway, Portugal), studies corresponding to national curricula (Finland), etc. Finland is the only country that does not restrict its national loans to citizens, but also provides them for foreign nationals undertaking study programmes abroad. See Appendix 14 for more details.

As discussed in section 1.3.2, national loan systems face two potential sets of problems: they may be inadequate even as national systems; and even where that is not the case, they are designed for non-mobile students, covering (part of) the costs of higher education in a given country, i.e. the size of the loan is related to domestic costs and income levels.

AVAILABILITY OF NATIONAL LOANS FOR FOREIGN STUDENTS. Foreign students who study in European countries are less likely to get a loan. At first glance, Table 3 suggests that in 25 out of the 32 loan schemes identified during the survey, foreign students are eligible for a loan. However, more detailed analysis shows that only schemes in Bulgaria and Denmark

[45] Key Data on Higher Education in Europe, 2007 Edition.

[46] Converted by means of "Purchasing Power Parity".

impose no restrictions on foreign citizens. The remaining loan schemes all impose technical barriers such as: (1) a residency requirement; (2) limitation of loans only to studies in national education institutions (e.g. Austria, Poland, Spain and the UK); or (3) a request for additional collateral (Portugal, Spain). Often these technical barriers are substantial, and limit participation of foreign students in a particular loan scheme. For example, to obtain a residence permit the person has to live and/or work in a country for a number of years, gather a number of documents and go through assorted processes. As a result, loans in these countries are taken mainly by foreign nationals who have been living in the country for some time, often for purposes other than studying. Thus, although portability of national loans for foreign students exists *de jure*, in practice it is limited if not impossible.
Results of surveys of loan scheme managers suggest that portability of loans is limited mostly to citizens, while students who are foreign nationals are considerably less likely to get a loan.

PORTABILITY OUTSIDE THE EU. Loans for non-EU and / or non-EFTA citizens are available in most of the loan schemes (in 22 out of 32). In six of the countries surveyed, loans for foreign nationals have residence requirements. Six EFTA and candidate countries (except for Former Yugoslav Republic of Macedonia and Turkey) provide loans for their citizens who undertake a study programme (or part of it) abroad.

*Table 2. Portability of loans across European countries**

Countries	**Loan is available for foreign nationals coming to a country**	**Loan is available for nationals studying abroad**
Austria	Yes, but needs to have a permanent residence and use loan for training / education in Austria	Yes, no limitations
Belgium (French-speaking community)	Yes, but only for children of foreign nationals resident in the region if they learn / study in French	Yes, if the course is in the French language and not available in the French community
Bulgaria	Yes, for EU citizens only	**No**
Croatia (Međimurje county)	**No**	Yes, no limitations
Cyprus	**No**	Yes, for parents residing in country whose child(ren) study abroad
Denmark	Yes, no limitations	Yes, but approval of school / university is required
Estonia	Yes, but only those with long-term residence permit or permanent right of residence	Yes, no limitations
Finland	Yes, but need to have a residence permit (which is given after four years of living in a country) and you live for a purpose other than studying	Yes, but studies should correspond to Finnish studies or form a part of a Finnish degree programme
France	Yes, for EU/EEA citizens living in a country for five years	Yes, but only for partial studies (e.g. Erasmus)
FYROM	**No**	**No**
Germany	Yes, for EU nationals and non-EU citizens with certain residence permit – no minimum residence requirement; for others – five years' residence (or three years' parents residence)	Yes, unlimited in EU, but maximum 1 year elsewhere
Greece	Yes, but there may be some restrictions applied by the bank	Yes, but there may be some restrictions applied by the

Countries	Loan is available for foreign nationals coming to a country	Loan is available for nationals studying abroad
		bank
Hungary	Yes, for EU/EEA citizens with residence permit and living for a purpose other than studying	Yes, no limitations
Iceland	**No**	Yes, but there are limits to the size of loan for school fees and the number of years person can receive a loan
Italy	Yes, only residents of Italy, aged between 18-35 and complying with the set merit criteria	Yes, but only for partial studies (e.g. Erasmus)
Latvia	Yes, for EU and other citizens with valid residence permit	Yes, but only for universities accredited in a foreign country
Liechtenstein	Yes, but only for persons with at least three years of uninterrupted residence or five years' regular residence or having a parent with regular residence (five years' residence during the last 10 years)	Yes, but only if they have five years' regular residence during last 10 years and do not receive support from country of their current residence
Lithuania	Yes, EU nationals or non-EU nationals with residence permit	Yes, but only for partial studies (e.g. Erasmus)
Luxembourg	Yes, but only for those working in Luxembourg, family of a person working in Luxembourg, or resident in a country for five years	Yes, no limitations
Malta	**No**	Yes, only portable loans exist (they must be brought abroad or used for distance courses based abroad)
Netherlands1 – public loan	Yes, for EU/EEA/Switzerland living in a country for five years without interruption or, if the period is shorter, they (or they parent(s)) have to work minimum 32 hours per week. Citizens of other countries are eligible with certain residence permits. If person has a study permit then s/he is not eligible	Yes, but only for registered full-time students in a country and for training / studies which are part of Dutch training/studies
Netherlands2 – private loan	Yes, but only if foreign nationals get public loan	Yes, but only if learner / student continued receiving public loan
Norway	Yes, special quota for students from developing countries; EU/EEA/EFTA nationals are eligible if they reside for family reasons or if they were working two years continuously before starting an education	Yes, but only for programmes approved by Norwegian Agency for Quality Assurance in Education)
Poland - The student loan and credit scheme	Yes, for EU nationals working / living or whose members of family work / live in Poland and who are studying in Polish HE institutions	Yes, but only for registered students in a country and only for partial studies (e.g. Erasmus)
Portugal	Yes, no limitations, however additional collateral may be requested by banks	Yes, but only in programmes approved by Portuguese Ministry of Higher Education
Slovakia	**No**	Yes, no limitations
Slovenia	Yes, only residents of Slovenia	Yes, no limitations

Countries	Loan is available for foreign nationals coming to a country	Loan is available for nationals studying abroad
Spain (Catalonia)	Yes, only for studies in Catalonia, additional collateral may be requested by banks	Yes, only for Catalan residents
Sweden	Yes, for EU citizens (and equals) having residence permit or living or working in Sweden for two years or family members of Swedish citizens / residents and who did not come to Sweden for the purpose of studying. Other nationals with a residence permit are also eligible	Yes, but for those who lived in a country for at least two years and for training / studies provided by institutions approved by authorities
Turkey	**No**	**No**
UK1 – UK student loan	Yes, for EU nationals residing in a country for 3 years and attending a full-time course at a UK university	**No**
UK2 – Professional and Career Development loan	Yes, but foreigner has to be settled in the UK and have a residence permit	Yes, but only if the course is not available in the UK
'Yes' answers / all 'yes' and 'no' answers	25/32	26/32

**In this table only the formal* (de jure) *conditions of loan portability are considered (survey did not examine how / if they are applied in practice* (de facto).

Source: Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

PORTABILITY OF GRANTS. Eurydice report (2009) found that most Member States had some mechanisms to support mobility, most notably in the form of grants or loans.[47] Unfortunately, Eurydice does not differ between financial support mechanisms; therefore we are not able to clearly separate them. Although national student support mechanisms (grants or loans) were portable, at least for certain types of programmes, in most countries (except Italy, Latvia, Poland, Romania and Turkey), only five countries (the German-speaking Community of Belgium, Iceland, Liechtenstein, Luxembourg and the Netherlands) offered unconditional portability.

GENERAL RESTRICTIONS ON PORTABILITY. Where portability is allowed, Member States applied various restrictions. The most common were linked to (a) the particular study programme (21 countries), (b) the length of time abroad (19 countries), (c) student progress (18 countries), (d) the host country (15 countries), and (e) the host institution (14 countries). Generally, students stood a better chance for portability of their national student support if their study abroad was fully integrated into studies at home (e.g. part of a study programme, or providing a qualification lacking in the home country) or when a particular programme did not exist in their home country.[48]

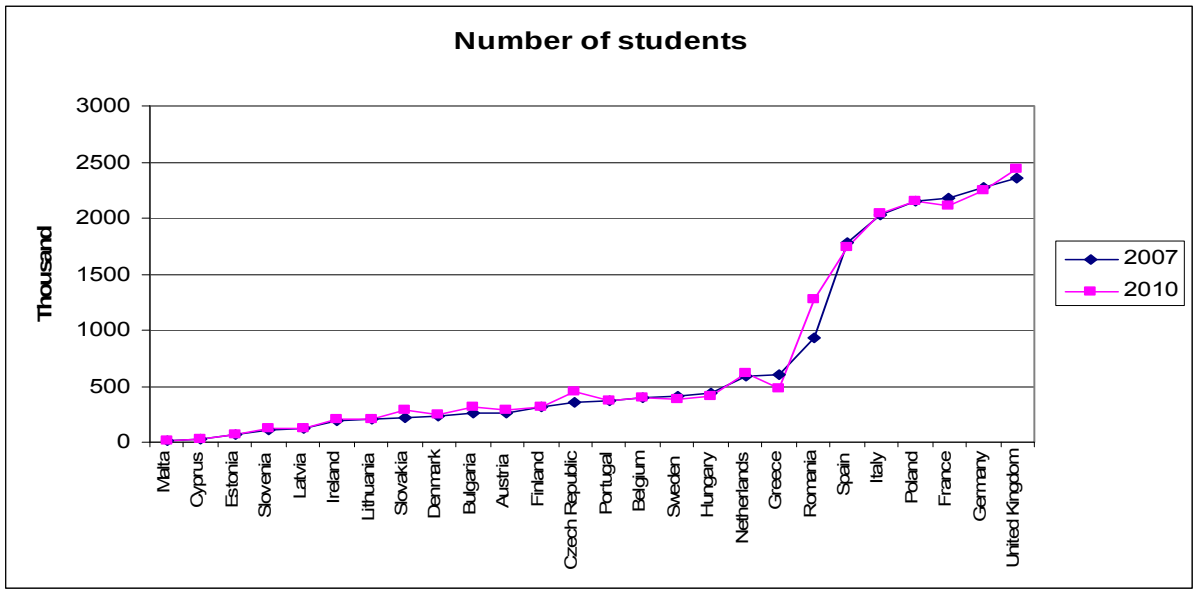
[47] Education, Audiovisual and Culture Executive Agency. P9 Eurydice. 2009. "Higher Education in Europe 2009: Developments in the Bologna Process." Brussels, p. 51. Unfortunately, Eurydice does not differ between financial support mechanisms. Therefore we are not able to provide information on portability beyond that for loans.

[48] Eurydice, p. 55-56.

4.2. Facts on mobility

NUMBER OF STUDENTS IN HIGHER EDUCATION. National demographic structures influence the number of participates in education. Due to the decline in numbers of young people in the last decade the number of pupils and students has decreased by 5%. (This ratio is between 15% and 25% in the EU.) There is a high level of education participation in the 3-19 age groups in all European countries. A comparison of participation rates for young people in the 3-19 and 3-29 age groups shows a sharp decline in enrolment (the average rates are 92% and 64%).[49]Using data for ISCED 5-6 students for 2004-2007, projections were made to estimate numbers of students in 2010.

Figure 2. Number of ISCED 5-6 students by countries (facts and estimations)



Source: Eurostat and authors' estimates

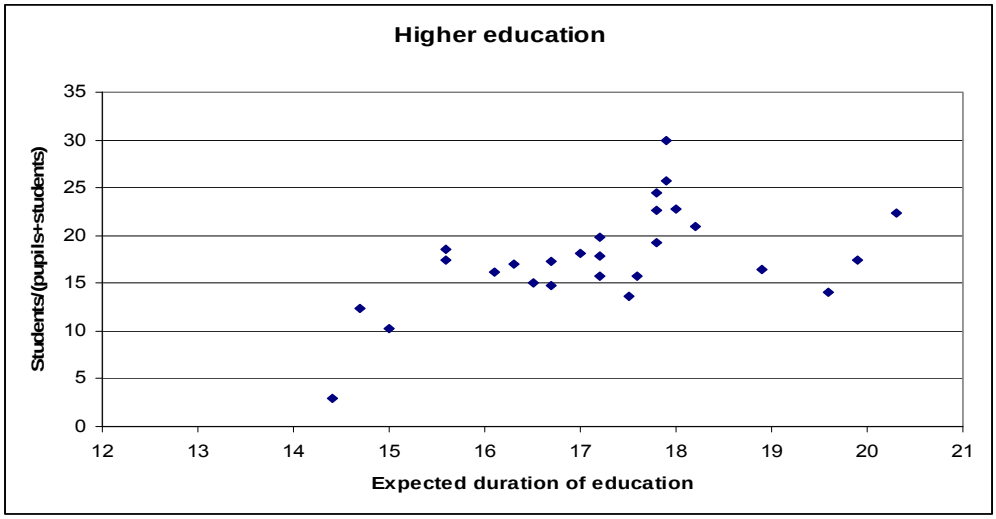
EDUCATION DURATION AND AGE DISTRIBUTION. The expected duration of education for a 5-year-old child in Europe is more than 17 years. This can be used to predict the future enrolment patterns of higher education.[50] In some countries the expected duration increased by more than one year during the last five years (Bulgaria, Cyprus, Finland, Hungary, Iceland, Latvia, Lithuania and Slovakia). The typical (median) age is 21.4 years for a student of ISCED 5-6. The share of older students has increased in most countries. The median age of Danish students is the highest: 25 years.[51]

[49] EACEA P9 Eurydice, Key Data on Education in Europe 2009, p. 92.

[50] Data between 14 and 15 are misleading for Cyprus, Luxembourg and Malta, because tertiary students studying abroad are not included but the majority of students in these countries study abroad.

[51] Source: Eurostat, Education indicators – non-finance (educ_itertp) Tertiary education participation http://epp.eurostat.ec.europa.eu/portal/page/portal/data/database

Figure 3. Expected duration of education at age 5 in Europe



Source: Eurostat

PREDICTIONS OF STUDENT NUMBERS. In the longer run three factors will influence the overall number of students studying in the EU:

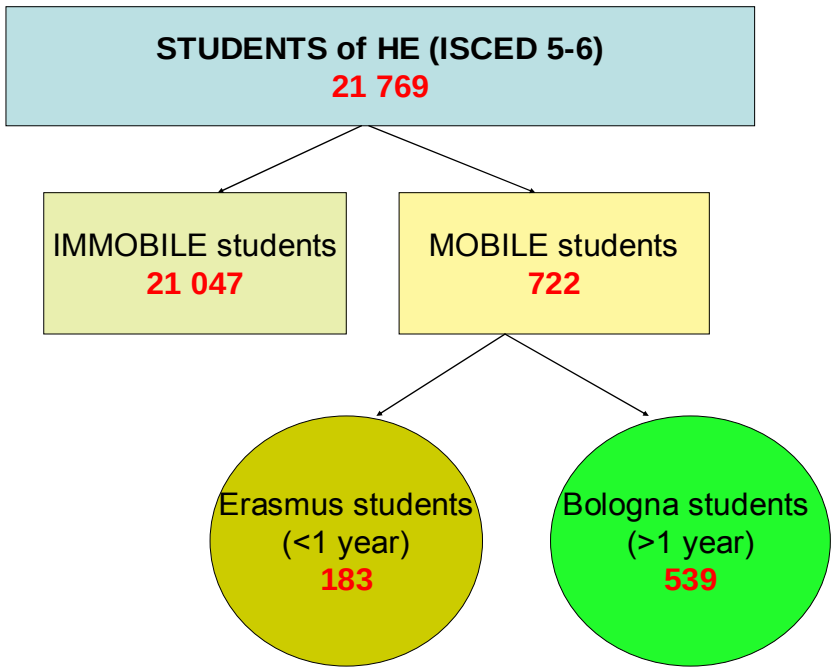
- Demographic decrease of young people in the EU (-)[52]
- Increasing participation rates in the HE (+)
- In- / outflow of international students outside the EU (+/-)

The first factor tends to decrease and is easy to forecast, the factor will probably increase according to the present trends, and the third factor is hard to foresee and is strongly related to the performance of the higher education industry in Europe.

NUMBER OF MOBILE STUDENTS. At any given moment, students in higher education in the EU can be divided into two: (1) immobile students (studying in their home country) (2) mobile students (studying in another Member State). We have to recall here that mobile students are categorised as (1) Full-cycle (Bologna) students (studying abroad for a whole degree); and (2) Credit (Erasmus) students (studying abroad for a sorter period as part of an exchange programme during their home studies) – in section 2.3.3. Available statistical data on student mobility are often differentiated according to the duration of the study. Full-cycle students typically spend at least one year abroad, while Erasmus programmes last 5-6 months. For the sake of simplicity we will identify full-cycle (Bologna) students as spending one year or more abroad while Credit (Erasmus) students as spending less than one year abroad. Figure 5 shows the basic categories and the corresponding student numbers in thousands for EU27 plus Iceland, Liechtenstein, Norway and Turkey (Eurostat 2010).

[52] Turkey is an exception.

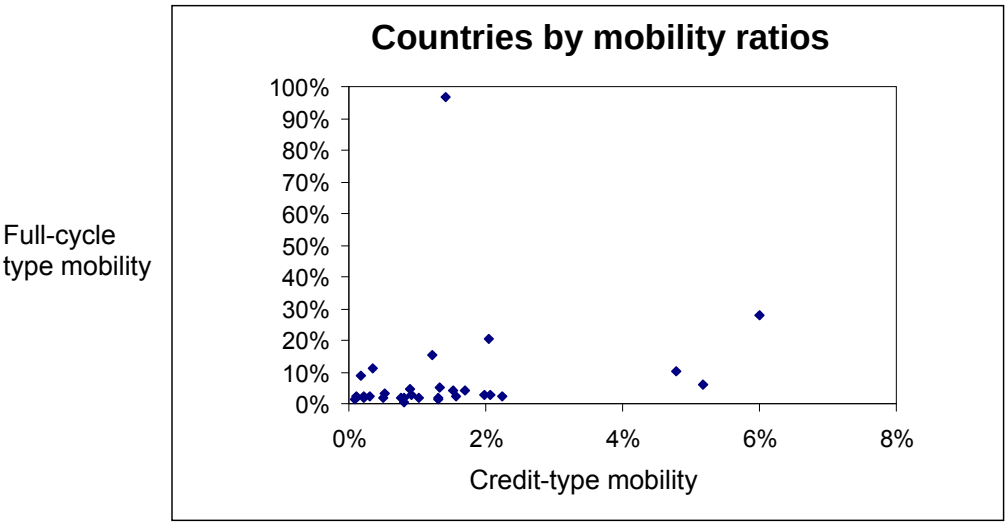
Figure 4. Number of mobile students 2007, EU+EFTA+candidates, in thousands



Source: the authors

CREDIT-MOBILITY AND FULL-CYCLE MOBILITY PATTERNS. Credit-mobility balance is expected to be close to zero, while in the case of full-cycle mobile students, unbalanced flows are not limited by any mechanism. The participation of different countries in the two types of mobility is very different. Credit mobility ranges between 1%-2% with an average of 0.84%, and there are only four outliers with significantly higher mobility: Liechtenstein (6%), Greece (5%) and Malta (5%). Full-cycle mobility shows much more diversity with an average of 2.48%. Cyprus is an extreme case, with a ratio of 97% (almost all the students learn in Greece), followed by Liechtenstein (28%), Iceland (21%), Ireland (15%) and Slovakia (11%). (Luxemburg is not plotted on the graph because 100% of the students study abroad as full-cycle mobile students, hence ratios cannot be calculated.) If we consider the sum of the two types of mobility, then the less mobile countries are the U.K (1.3%), Turkey (1.6%), Poland (2%), Hungary (2.2%) and Romania (2.3%). Approximately half of all mobile students in Europe go to the U.K or Germany to study. Figure 5 shows the sending countries in the space of their two mobility ratios (national students studying abroad / total number of students enrolled in the home HE).

Figure 5. Credit-mobility and full-cycle mobility ratios, EU27+EFTA+candidates



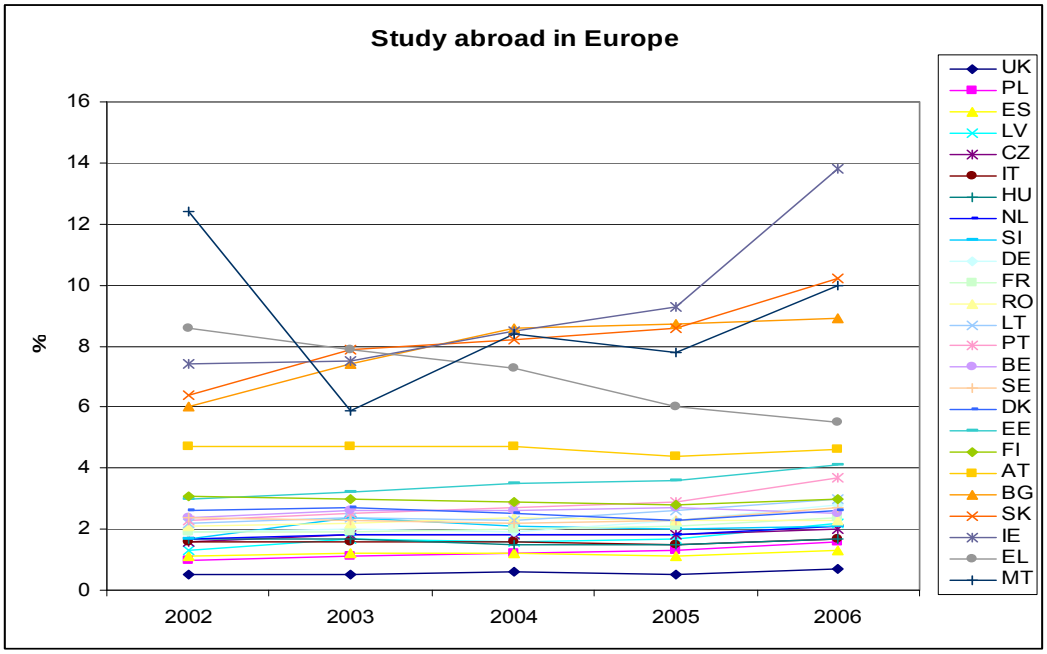
Source: Eurostat

DIPLOMA MOBILITY IN DIFFERENT COUNTRIES. EU member countries can be classified into three groups according to their diploma-mobility ratio in the last decade. It is interesting to note that *low income countries* and **high income countries** are equally represented in each category, thus the income of the country does not seem to have explanatory effect on student mobility. (Eurostat 2010)

1. Low mobility
   Ratio of mobile students below 2%: nine countries
   (*CZ, HU, LV, PL* and **ES, IT, NL, SI, UK)**
2. Average mobility
   Ratio of mobile students 2%-4%: 10 countries
   (*EE, LT, RO* and **DE, FR, PT, BE, SE, DK, FI**)
3. High mobility
   Ratio of mobile students over 4%: eight countries.
   (*BG, SK* and **AT, IE, EL, MT, CY, LU**)

CHANGES IN DIPLOMA MOBILITY. Figure 6 shows how mobility ratios evolved over time in different countries. Outliers (Cyprus and Luxembourg) were excluded from this analysis. Student mobility increased the most in Ireland, Slovakia, Poland and Latvia during 2002-2006. It can be concluded that low-mobility countries show stability over time. High mobility countries can be much more volatile.

Figure 6. Mobility ratios by countries



Source: Eurydice - Key Data on Education in Europe 2009, p. 120

MOBILITY IN OLD AND NEW MEMBER STATES. We compared total mobility ratios of the old and new Member States in the period 2002-2006 and EU27,[53] and we got the following results:

- Surprisingly, there were no significant differences in mobility according to the *t*-test in the investigated period.
- However, students from new EU member countries become slightly more mobile after the accession dates. In contrast, labour mobility from the new Member States declined after accession. See 2.3.3. / Labour mobility in the EU.

Table 3. Percentage of all mobile students

	2002	2003	2004	2005	2006
Mean (new Member States)	2.81	3.27	3.46	3.57	4.00
Mean (old Members States)	3.52	3.16	3.31	3.24	3.84

Source: Estimated by the authors

CYCLES OF EDUCATION. The purpose of the Bologna Process (or Bologna Accords) is to create the European Higher Education Area by making academic degree standards and quality assurance standards more comparable and compatible throughout Europe. The cycles are defined in terms of qualification and European Credit Transfer and Accumulation System (ECTS) credits:

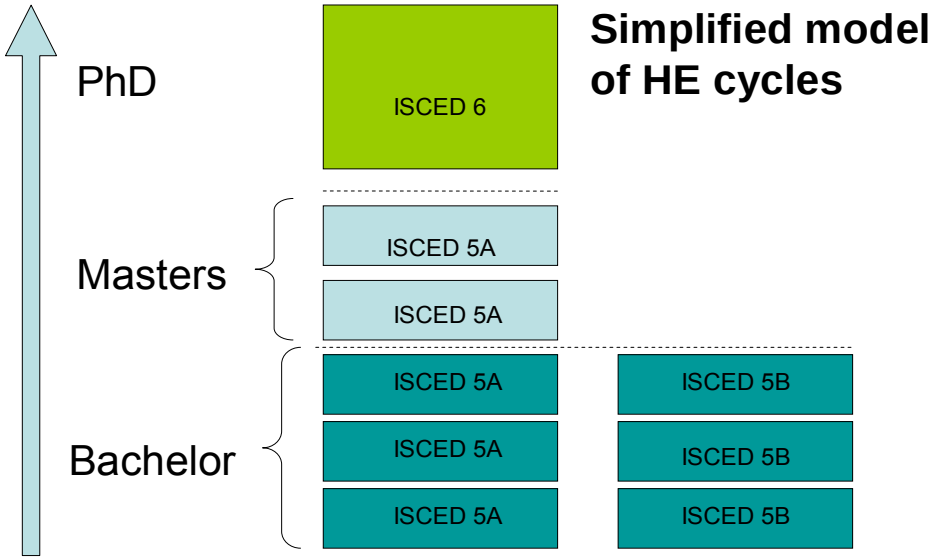
- First cycle: typically 180-240 ECTS credits, usually awarding a bachelor degree
- Second cycle: typically 90-120 ECTS credits, usually awarding a master's degree
- Third cycle: doctoral degree. No ECTS range is given

In most cases, these will take three, two, and three years respectively to complete. Figure 7 presents how cycles of education and ISCED classification relate to each other in a simplified model of the tertiary education after the Bologna process. The International

[53] Eurydice, Key Data on Education in Europe 2009, p. 120.

Standard Classification of Education (ISCED) was designed by UNESCO in the early 1970s to serve as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally.

Figure 7. A simplified model of tertiary education after the Bologna process



Source: the authors

LIMITATIONS OF THE MODEL. Figure 7 does not reflect the real world structures for several reasons:

- In many cases bachelor and master's cycles are not introduced to university curricula (e.g. in fields of medicine, art etc.).
- In most countries the traditional systems also prevail for some years.
- The duration of the cycles may vary by countries, by institutions and by students (not always 3+2+3 years).
- There exist shorter term professional training programmes as well, which are part of the tertiary education.

STUDENT NUMBERS. All available data on HE are categorised according to the ISCED classification. Tables 4a and 4b show the total number and the percentage of the students by ISCED levels in 2007.

Table 4a. Number of students by ISCED levels, EU27+EFTA+candidates, 2007

	Total number	Diploma mobile students
ISCED 5A	18,027	440
ISCED 5B	3,200	59
ISCED 6	541	36
Total	21,769	534

Table 4b. Percentage of students by ISCED levels, EU27+EFTA+candidates, 2007

	Total %	Diploma mobile students%
ISCED 5A	83%	82%
ISCED 5B	15%	11%
ISCED 6	2%	7%
Total	100%	100%

Source: Eurostat

LACK OF DATA. We could not find reliable information on the number of immobile / mobile students in bachelor, master's and PhD programmes across the EU, and therefore had to estimate numbers (in EU27+EFTA+candidates countries) based on available information and some simplifying assumptions. Putting the elements together, Table 5 shows estimates of student numbers in different cycles.

Table 5. Estimated student numbers by cycles of education, 2007

Thousands of students	Total (Immobile+Mobile)	Immobile	Mobile (Diploma+Credit)	Diploma mobile	Credit mobile
Bachelor	16,721	16,189	531	389	142
Master's	4,507	4,357	150	110	40
PhD	541	506	36	36	-
Total	21,769	21,052	717	534	183

Source: the authors

ASSUMPTIONS. Table 5 is based on the following assumptions:

- ISCED 5B is equivalent to bachelor programmes (and incorporate shorter term tertiary training), with an average duration of three years.
- ISCED 6 is equivalent to PhD programmes, with an average duration of three years.
- ISCED 5A refers partly to bachelor programmes (first three years) and partly to master's programmes (the fourth and fifth years).
- The number of master's students was estimated as 50% of bachelors students who enrolled in an ISCED 5A programme (students in ISCED 5B programmes will not continue their studies after graduation). This simplifying assumption takes into consideration also the possible drop-outs during bachelors programmes. Since the Bologna process has not finished in many countries, retention and completion rates have not stabilised and are not readily available. However, retention is the critical factor when estimating students' distribution across cycles. Our assumption of 50% was based on expert estimation. If more reliable factual data are available the calculations can be refined.

• For the sake of simplicity we excluded the possibility of drop-outs during a master's programme, though it is known that there are some, albeit not significant numbers.
• The relative weights of the different ISCED levels are the same in the Erasmus programme (except for PhD students).

Student mobility can be measured by at least two different methods. Let us define the following measures:

1. "Year-based mobility measure": the ratio of the mobile students' number to the total student number within a year.
2. "Degree-based mobility measure": the ratio of graduates with international experience during their previous studies.

It is easy to see that the two measures are not the same. The latter always gives higher numbers because degrees typically last more than one year. For example, in 2007 the overall year-based mobility measure was 717 / 21,769 = 3.3%, while the corresponding overall degree-based mobility measure was around 5.1%. The next table shows the degree-based mobility measures in more detail.

Table 6. Degree-based mobility measures, in 2007

Graduates (%)	Credit	Diploma	Credit+Diploma
Bachelor	1.7%	2.3%	4.0%
Master's	3.5%	4.8%	8.2%
PhD	-	13.7%	13.7%
Total	2.1%	3.6%	**5.1%**

Source: the authors

When estimating the degree-based mobility measures in Table 6 we supposed that

• Credit-mobility is only possible in the 2nd and 3rd year of the bachelor programme and in the 1st and 2nd year of the master's programme.

• Students participate only once in a credit-mobility programme (Erasmus) during their studies.

• Mobility experience during the bachelor programme is independent of the adherence to the master's programme, and the same is true for the PhD programmes.

• Graduates of the master's programmes might have mobility experience during the bachelor programme and the same is true for the PhD programme.

• Full-cycle mobile student stay abroad for the whole programme.

THE TARGET OF 20% MOBILE STUDENTS. Ministers of Education in the EU set a degree-based mobility target in 2010: "In 2020, at least 20% of those graduating in the European Higher Education Area should have had a study or training period abroad."

Let us suppose that the total number of the students and the relative weights of bachelor-master's-PhD programmes and the relative weights of credit / diploma mobility remain the same, and the only change will be that some immobile students become mobile. The number of mobile students in a year will therefore be *X* times more. Calculations show that in order to achieve the 20% target of the policy makers, *X* should be 3.89 – see the next table.

Table 7. Actual mobility and target mobility

	2007 (actual)	2020 (target)
Year-based mobility	3.30%	12.80%
Degree-based mobility	5.10%	20.0%

Source: the authors

Tables 8 and 9 show these numbers in more detail.

Table 8. Degree-based mobility measures corresponding to the 20% target for 2020

Graduates (%)	Credit	Diploma	Credit+Diploma
Bachelor	6.6%	9.0%	15.7%
Master's	13.5%	18.5%	32.1%
PhD	-	53.5%	53.5%
Total	8.1%	14.0%	**20.0%**

Source: the authors

Table 9. Number of new mobile students per year corresponding to the 20% target for 2020

Thousands	Credit	Diploma	Credit+Diploma
Bachelor	410	1,124	1,535
Master's	116	318	434
PhD	-	104	104
Total	526	1,546	**2,072**

Source: the authors

CONCLUSION. If the target of 20% mobile students is to be met, the total number of students studying abroad needs to be almost four times higher in 2020 than in 2007, i.e. slightly more than two million students per year must become mobile.

FINANCING INCREASING MOBILITY. Let us make the following suppositions about financing policies:

- The financing needs of all kinds of credit mobility (526,000 new mobile students per year) will be covered by increasing grants and from the national student loans, which can be made portable for this purpose.
- Diploma mobility at bachelor and PhD-level (1,124,000 and 104,000 new mobile students per year respectively) will be financed from grants, from student earnings, from family support and from other sources.
- Diploma mobility at the master's level (318,000 new mobile students per year) will be financed from the EU-level student loan scheme. For justification, see section 5.1.

THE NUMBER OF BORROWERS. If we suppose that the composition of mobile students in 2007 remains broadly unchanged, i.e. mobility increases proportionally in all the segments, and the EU-level student loan scheme focuses only on the credit-mobile master's students, the outcome is approximately **318,000 potential new borrowers per year.**

LIMITATIONS OF THE CALCULATIONS. Given the simplifying assumptions, the major limitations are:

- The introduction of the new policy may alter the relative size of the different types of mobility. For example, if a student lending facility is available only for diploma-type master's students, this type of mobility may grow faster.
- The estimation of the actual number of mobile students may be biased.
- Student numbers in 2007 reflect a transition towards the Bologna system, so that the relative number of master's students may be slightly underestimated.
- Take-up rates depend on many factors and are difficult to estimate. We estimated the number of new mobile students needed to achieve the policy target of 20% for 2020. If that target is too ambitious, our estimates are correspondingly too large.

4.3. Costs of mobility

4.3.1. Student surveys

EUROSTUDENT SURVEY (2008). The latest available results of the Eurostudent survey show that one of the most important obstacles to student mobility is the differences in students' purchasing power across Europe – it is considerably lower in the eastern and southern parts of Europe.[54] Students from countries with high national income (e.g. Finland, Sweden and the UK) have much greater choice than students from low-income countries (e.g. most of newer EU Member States).[55] Although, in many cases, the share of state support for mobile students is considerably higher than that for the average national student.[56]

ESU STUDY (2010). A study by the European Students' Union called portability of student grants and loans "the only concrete ministerial commitment in the field of financing mobility". According to the study, the countries where almost none of the mobile students faced problems meeting their living expenses from their grant or loan were Norway, Sweden and Hungary. Few students from Finland and Luxembourg reported having problems in meeting their living expenses from their grant or loan while abroad. However, many students reported such problems in Estonia, Ireland, Poland and Portugal[57]. As many as 59% of students surveyed reported dissatisfaction with available financing for mobility.[58] Financial problems are aggravated in case of Bologna students. Student representatives suggest creating an EU-wide mobility fund rather than a loan scheme, since "uneven distribution of students across socio-economic backgrounds and insecurity about the returns of education within an unfamiliar educational system may make students even more risk-averse"[59]. Survey results show that (1) financial insecurity (57% of surveyed students stated this reason); and (2) insufficient support for mobility in home country (48%) were considered the major obstacles to participating in international mobility. Therefore, full-time or part-time jobs appear to be the only possibility for students in these countries to overcome income differentials and to remain mobile. The report also underlines the extent to which a reduction in income disparity is a major issue for achieving equal opportunities in mobility.

[54] "Social and Economic Conditions of Student Life in Europe: Synopsis of indicators / Final report of Eurostudent III 2005–2008", (2008), p. 148.
[55] "Social and Economic Conditions of Student Life in Europe: Synopsis of indicators / Final report of Eurostudent III 2005–2008", p. 148.
[56] "Social and Economic Conditions of Student Life in Europe: Synopsis of indicators / Final report of Eurostudent III 2005–2008", p. 147.
[57] "Bologna at the finish line: An account of ten years of European higher education reform." (2010), p. 17.
[58] Cradden, (2008), p. 18.
[59] "Bologna at the finish line: An account of ten years of European higher education reform" (2010), p. 18.

As most of the mobility flows in Europe are from low-income to high-income countries[60] the necessity of overcoming this substantial obstacle is quite clear.

Costs and supports of mobility are different by countries, by cycle of education (bachelor or master's), by institutions (public / private) and by mobility programmes (credit type / diploma type) as well. A typical Erasmus study abroad lasts one semester. The only cost is the living and the travel, because tuition fees are dismissed. Grants are not sufficient to cover all the costs but the remainder (€1,000-€2,000 per semester) is quite low, therefore it could be easily financed from national student loans. No EU intervention would be needed for this purpose. See Appendix 20 for more detail on the Erasmus costs and supports.

In line with our basic concept (section 5.1.2), we next calculate the average financing needs of master's study abroad.

4.3.2 Estimation of the input data

FINANCING NEEDS OF MOBILITY. The financing needs can be defined as the difference of the following cost and support elements:

- Tuition fee
- Living costs
- Other costs (books, insurance etc.)
- Travel costs
- Grants
- Loans

Parental supports, tax advantages and social benefits will be excluded from the analysis.

ESTIMATION OF THE INPUT DATA. We collected data from surveys, published papers and databases (Eurostat, Eurodyce). Many problems were encountered and solved by simplification, for example:

- Data is related to different years.
- Definitions are different study by study; we have addressed this where possible.
- Some data were not available and thus needed to be estimated.
- Where we found contradicting data we chose the most relevant ones.
- Costs and supports may vary over a wide range within a country, depending on universities, programmes and individuals. We estimated the typical value (mode).

In the event that more information become available, input data can be completed or modified.

INPUT DATA. We used our rough estimates in Table 10, below.

Table 10. Estimated costs and supports per annum of master's study abroad

Euro per year per student	Tuition fee	Other costs	Travel cost	Living cost	Grants	Loans
Austria	1,000	527	700	6,000	7,000	5,000
Belgium	700	675	443	6,750	4,000	1,200
Bulgaria	60	244	607	4,331	150	1,200
Cyprus	3,000	166	727	4,554	2,500	5,000

[60] "Social and Economic Conditions of Student Life in Europe: Synopsis of indicators / Final report of Eurostudent III 2005–2008", p. 149.

Czech Rep.	0	219	507	3,161	650	0
Denmark	0	675	464	6,805	7,000	3,500
Estonia	1,000	128	529	3,870	1,600	1,900
Finland	0	675	514	6,315	6,000	2,500
France	0	1,120	550	6,576	7,400	15,000
Germany	1,000	400	329	6,250	4,500	4,500
Greece	0	166	700	5,643	0	0
Hungary	700	244	764	5,793	0	1,700
Ireland	0	675	443	8,591	3,300	0
Italy	800	166	443	6,526	0	10,000
Latvia	2,900	21	550	4,500	2,100	1,800
Lithuania	3,400	58	764	3,453	1,300	2,000
Luxembourg	200	675	693	7,037	8,100	8,000
Malta	0	166	507	4,797	1,100	5,800
Netherlands	1,538	800	507	6,840	5,000	4,200
Poland	0	123	557	3,470	0	1,400
Portugal	500	371	668	5,397	5,000	5,000
Romania	400	215	693	4,084	0	0
Slovakia	0	166	686	3,150	380	1,400
Slovenia	600	166	586	4,107	3,000	5,000
Spain	800	675	514	6,060	0	6,000
Sweden	0	657	364	6,993	2,500	5,000
U.K.	3,600	382	700	8,623	2,900	10,800
Iceland	2,200	166	514	8,811	2,000	4,000
Liechtenstein	3,000	675	450	7,037	10,000	10,000
Norway	0	839	582	8,640	3,900	10,000
Turkey	100	272	764	4,577	700	2,000

Source: Compiled by the authors

EXCHANGE RATE CORRECTION. Eurydice and Eurostat data were reported in PPS (purchase parity standards) EUR. To quantify the real financial cost of mobility these data have to be converted simply by nominal euro exchange rates. We made the necessary corrections. Exchange rates were from the European Central Bank's homepage.

TUITION FEES. The estimation reflects typical values of tuition fees. Tuition fees at private universities can be much higher. In some countries (e.g. Hungary, Bulgaria, Romania, etc.) there are no tuition fees for a determined part of students, because they are fully state funded. The other students have to pay tuition fees. Because EU students are less likely to get a state-financed position, we applied a modest value of not-state-funded fees in these cases. Data are derived from country studies by Johnstone (2010), complemented where necessary with data from the Eurydice report on tuition fees in Europe (Eurydice 2007). See Appendix 18 for more details on the estimation of the tuition fees.

OTHER COSTS. Other costs represent book expenses, social insurance (in France) and some registration fees based on Johnstone (2010). Missing data were estimated as country-group averages. We divided the countries into three groups according to their per capita GDP: (1) high income (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Spain, Sweden, the UK, Liechtenstein, Norway), (2) medium income (Cyprus, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Iceland, Croatia), and (3) low income (Bulgaria, Romania, Turkey, former Yugoslav Republic of Macedonia).

LIVING COSTS. Moderate living costs were calculated from a foreign student's point of view. In larger cities, this makes the assumption that students will live in dormitory or other low-budget accommodation. The calculation is based on the paper of Carbonell (2007), who made a survey of Erasmus students' living costs.

TRAVEL COSTS. Travel costs are identified as the price of two one-way tickets between the two capitals. Prices were downloaded from the internet. A matrix was set up containing the price of a one-way ticket between the investigated countries at the end of August 2010. We determined the travel cost belonging to a particular country and doubled it. The highest travel costs relate to Turkey, Greece, and Lithuania. This calculation clearly over-estimates the direct cost of an air flight but it can, in addition, assist students to cover other transactional costs.

GRANTS. Because of the variety of grants and the complexity of eligibility rules, it is clearly not possible for every student to be awarded the entire grant that is potentially available. Grants to cover living costs are usually means tested, while grants to cover tuition-fees are related to the size of the fees. Since we had no information on the probability of receiving a grant, we introduced modest amounts. However, it is still possible that our calculation over-estimates the size and the impact of student grants. Data sources are (1) key data on Higher Education 2007 (Eurydice, EACEA 2008), and (2) homepages of national institutes. Erasmus supports and some specific grant are not considered; our estimation focused only on the general mobility supports. Eurydice, EACEA (2008) provides more information on the grant systems in Europe.

LOANS. Our estimations are around the highest value of student loan allowance in the given country. Usually, all mobile students are eligible for the loan, and they have the right to take the maximum amount. However, in some cases we found several schemes, e.g. in Germany, where eligibility rules and loan allowances vary by region. Data are taken from the PPMI survey, Eurydice, EACEA, Kefala (2006), and websites of national institutes.

4.3.3. Calculations

FINANCING OF MOBILE STUDENTS. For each country we have calculated the total costs and the total support costs. See Table 11. On the left-hand side, countries are ranked by the total cost of studying, while on the right-hand side countries are ranked by the total support that is available to students.

UNDER-FINANCING. Accordingly, thus, the least affordable pairs can be seen at the top of the table (and the easiest at the bottom). For example if students of Greece, Romania, Czech Republic, Bulgaria, Poland, Hungary Slovakia, Turkey etc. wish to study in the U.K. or in the Netherlands, for example, it would not be possible for them to finance their studies through utilisation of their own resources, even were all student supports of the home country to be fully portable. In contrast to this, we show in section 2.3.2. that financial supports are not available for foreign students in most of the countries due to legislation and /or financial barriers. It can be concluded that mobility relations are seriously limited by the scarcity of financial resources even when home supports are totally portable.

Table 11. Total costs versus total supports per annum of a master's study abroad, in euro

TO	Total costs	Total supports	FROM
UK	13,082	0	Greece
Ireland	11,118	0	Romania
Italy	10,609	650	Czech Rep.
Spain	7,189	1,350	Bulgaria
Poland	6,680	1,400	Poland
Lithuania	5,822	1,700	Hungary
Germany	5,729	1,780	Slovakia
Latvia	5,571	2,700	Turkey
Liechtenstein	4,125	2,900	UK
Iceland	2,880	3,300	Ireland
Netherlands	2,845	3,300	Lithuania
Portugal	2,539	3,500	Estonia
Slovenia	2,252	3,900	Latvia
Austria	2,227	5,200	Belgium
Belgium	1,818	6,000	Spain
Hungary	1,708	6,000	Iceland
France	1,670	6,900	Malta
Estonia	1,657	7,500	Cyprus
Romania	1,608	7,500	Sweden
Luxembourg	1,568	8,000	Slovenia
Norway	1,421	8,500	Finland
Finland	1,189	9,000	Germany
Denmark	1,139	9,200	Netherlands
Turkey	1,136	10,000	Italy
Sweden	1,021	10,000	Portugal
Bulgaria	911	10,500	Denmark
Cyprus	893	12,000	Austria
Greece	866	13,900	Norway
Slovakia	852	16,100	Luxembourg
Czech Rep.	726	20,000	Liechtenstein
Malta	673	22,400	France

Source: the authors

OVER-BORROWING. Box 3 shows that even if total portability were ensured by EU regulation, the problem of financing would not be solved. Let us take the metaphor of a Bulgarian studying in the UK with access to a British loan and returning to home.

Box 5: Example: The case of over-borrowing

Bulgarian students are typically very mobile, often choosing to study abroad. The UK is one of their favourite destinations. Once admitted to a British university for a bachelor degree, they become entitled to a UK fees loan, currently around £3,500 per year). Assume that most of them return to Bulgaria. Thus far, everyone has benefited, including the Bulgarian students, British universities and Bulgarian society.

This would be a triumph of a common European higher education policy.

What about loan repayments? UK student loans have income-contingent repayments where income exceeds a threshold of £15,000. This income threshold applies only to people working in the UK, and may vary by country. But whatever the threshold, if Bulgarian incomes fail to catch up with British ones quickly, it will be difficult to repay the loan. This may not disturb Bulgarians, since any debt that has not been repaid after 25 years is forgiven, and the repayment rate is only 9% of income. An annual salary of BGN6,000 – approximately £2,500 – is regarded as very good in Bulgaria, so full repayment is unlikely, even though the UK loan charges a zero real interest rate.

To put the scale of the required repayment in context, a Bulgarian with a UK fees loan for three years accrues a debt of around £10,000, equivalent to roughly four years' average salary. A student from the UK who borrows a fees and maintenance loan for three years, accrues a debt of up to £25,000, roughly equal to the UK national average annual salary.

The Bulgarian example may well stand in for case studies from Romania, Hungary, Poland, etc. An EU-level student loan scheme for mobility can address this problem rather better than a UK loan designed for British students.

It follows from this example that student mobility cannot be supported within the framework of national student loan schemes, even if they are fully portable. A holistic, EU-level strategy is needed in order to avoid extreme scenarios of insufficient financing and over-borrowing.

FINANCING NEEDS PER MOBILE STUDENT. It can be concluded from the above table that **€10,000-€12,000 per year per student** is in many cases a significant contribution. This could be the basic amount to use when tailoring an effective mobility loan scheme. Grants and national loans cannot be expected to increase either in size or in number. If mobility increases (and this is the policy aim), grants and national loans will not be able to keep up.

FINANCING NEEDS FOR NON-MOBILE STUDENTS. Input data can be also used for calculation of the funds still lacking from the home higher education sector. It is necessary to compare total costs and supports at a country level (the only difference is that it is not necessary to add in travel costs). A significant amount of funding is also still lacking from the national higher education sector for non-mobile students. Cost-sharing issues are expected to arise in many countries.

5. An EU loan scheme: Design

A well-designed loan scheme has two main attributes. It is:

- attractive for the borrowers
- financially sustainable

Meeting these conditions makes political, legal and technical solutions easier to find. We know from the literature and from international practice[61] that attractiveness can be improved by high subsidies, flexible loan conditions and effective communication and public relations strategies. Financial sustainability requires low subsidies, flexible conditions and efficient administration, collection mechanisms and finance. See Table 12.

Table 12. Core characteristics of a well-designed student loan scheme

	Loan Conditions		Management Model
Attractiveness to borrowers	High subsidy	Adapts flexibly to borrower's circumstances	Effective communication and public relations
Financial sustainability	Low subsidy	Adapts flexibly to borrower's circumstances	Efficient administration, collection mechanism and finance

The introduction of higher subsidies is double-edged: it has a positive effect on attractiveness but jeopardises financial sustainability. Thus subsidies are controversial and need to be handled carefully. Fortunately, other aspects of design and implementation of an EU-level loan scheme are more straightforward, notably the other loan conditions and the management model.

This section concentrates on the design of the loan (i.e. the product) and less on the management model (i.e. the institution), which is discussed in Section 6, since we believe that the logical way to proceed is to:

1) Establish the loan design which best serves the long term objectives of the EU
2) Find the institutional architecture which best supports this product

This section sets out the concept of an EU student loan system (section 5.1), discusses different repayment models (section 5.2), considers broader aspects of loan design (section 5.3), and concludes with three options for the design of an EU student loan which we regard as feasible and desirable, and which offer an upgrade path over the medium term.

5.1 The concept

5.1.1 Requirements

We consider the following basic requirements when formulating the concept:

- Efficiency has two aspects: (a) allocative efficiency (the right level of resources devoted to student loans and the right division of loans between different types of degree and level of student); and (b) productive efficiency (running the institutions as well as possible). This concept is the best reflected in low default rates and low administrative costs.

[61] See for example the results of the CEDEFOP project.***

- Effectiveness/impact indicates the extent to which a specific policy objective (i.e. the improvement of the higher education sector) is expected to be achieved during or after the policy intervention. Effectiveness relates to short-term effects: the number of borrowers and the size of the loan (more precisely the loan-to-costs ratio), while impact refers to longer-term effects that are difficult to measure, notably the effect on social welfare.
- Fairness requires that the loan should be accessible for students irrespective of their nationality within the EU, socio-economic status, profession, etc.
- Sustainability requires that the loan is robust in the face of economic turbulence, and is politically sustainable. A stable, long-term institution is necessary to assist investment in human capital. In order to avoid serious conflicts of interests with the Member States, brain circulation is preferable to brain drain. The relationship with national student loan schemes and other stakeholders should also be well arranged.

The efficiency requirement corresponds to the general optimization idea of not wasting the resources. It is notable that the last three requirements (effectiveness, equity and sustainability) harmonise well with the strategic objectives of the EU: smart, inclusive and sustainable growth.

However, these requirements are hard to measure, they can conflict with each other, and the trade-offs are difficult to assess. The optimal solution depends on the relative weight policy makers give to each objective, and the choice of weight is based on political considerations and value judgements.

5.1.2 Basic principles of the European student loan system

The analysis is based on a series of principles.

KISS + EVOLUTIONARY PATHWAY. Initially keep the system as simple as possible, but with an upgrade path. Thus it is best to start with a simple model that is financially, politically and administratively robust, but constructed so as to evolve into more wide-ranging and ambitious schemes in time.

ONLY MOBILE STUDENTS IN THE EU27. Only mobile students of the EU studying in the EU are eligible for the loan. According to the principle of subsidiarity, non-mobile students should rely on national loan schemes. There is no aim of making all students mobile – the official target is 20% by 2020. Thus the aim is that 20% of students should be mobile, ideally the most open-minded and risk-taking students, who show good academic performance and have the best career prospects.

INITIALLY ONLY MASTER'S PROGRAMMES WITH LIMITED SIZE OF LOAN. Initially the loan is available only for students in master's programmes, and is limited to a maximum of €10,000-€12,000, which can be taken over one or two years. Any master's student is eligible for the loan when studying abroad. The reasons for this arrangement include:

- To keep numbers small, which helps to test administration.
- To keep the total loan per borrower small, which helps to keep the scheme financially manageable.
- Master's programmes are expected to have a lower brain-drain effect than bachelor degrees and PhD programmes.
- Financial returns for master's degrees are high. The increase in earnings is higher than for bachelor degrees or PhDs. Social benefits are also high (knowledge transfer, cohesion etc.). See Appendix 21.
- Master's programmes are efficient human investments.

BOTH LIVING COSTS AND TUITION FEES should be covered. Ideally coverage should be 100% of the costs of a degree, but initially it should at least be enough to make a significant contribution. The goal that the loan should be financially sustainable has to take priority over the goal that the loan should cover all the costs of a degree. Calculations in Section 4 suggest that a loan of €10,000 per student provides a significant contribution to a master's programme, while still being financially manageable for graduates working in lower-income Member States. Once the loan scheme has been introduced, the loan amount can be increased carefully depending on economic conditions.

5.2 Repayment models: mapping the terrain

Table 12 shows that loan conditions play a crucial role because they must be attractive for students while also assisting financial sustainability. Some loan conditions belong to the disbursement (eligibility, size of loan, etc.), others to repayment. This section discusses the menu of theoretical repayment options. Section 5.3 considers broader aspects of loan design, including disbursement conditions and the question of subsidies.

When designing the loan contract it is essential for at least two reasons to ensure that the repayment of the loan adjusts flexibly to the graduate's ability to pay:

1) It makes the loan more attractive to students by reducing the amount of risk they face, thus reducing debt aversion

2) It makes the loan system more sustainable in financial terms by reducing the frequency of defaults significantly

Any student loan scheme faces three fundamental and unalterable constraints:

- There is no physical collateral, unlike with home loans.
- There is considerable risk and uncertainty about future personal incomes. See Appendix 21.
- There are wide differences in income across the EU. Table 13 shows that the highest median income (in Luxembourg) is more than 10 times that in the lowest (Bulgaria).

Table 13. Group of countries by median net income per year (EUR) of highly educated employees, 2008

Group 1	Median income	Group 2	Median income	Group 3	Median income
Luxembourg	44,320	Italy	23,772	Czech Republic	8,296
Iceland	40,145	Belgium	23,600	Latvia	7,266
Norway	38,588	Cyprus	23,204	Estonia	7,079
Ireland	33,510	France	23,117	Poland	6,705
UK	30,300	Germany	22,650	Hungary	6,262
Denmark	29,227	Spain	18,667	Slovakia	6,153
Finland	25,309	Portugal	17,595	Lithuania	6,150
Netherlands	25,232	Greece	17,207	Romania	4,326
Sweden	24,171	Slovenia	15,497	Bulgaria	3,049
Austria	24,127	Malta	14,791		
Average	31,493	*Average*	20,010	*Average*	6,143

Source: Eurostat 2010

As illustrated in Appendix 21, tertiary education is a high-risk / high-return investment, both for the individuals and for the community. In addressing the default risk due to these constraints, the design of student loans lies on a continuum between two polar cases:

Repayment in fixed instalments ⟶ Income-contingent repayments

Moving along this continuum from fixed towards income contingent:

- the default rate decreases, and
- access increases, but
- there is an increase in administrative demands

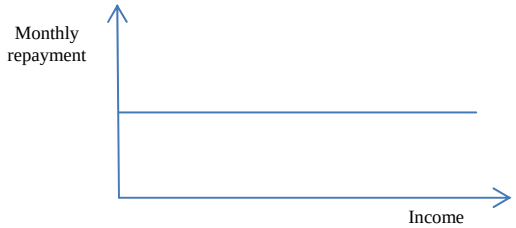
The basic problem is how to create a reliable safeguard for low-income borrowers while at the same time keeping administration simple.

Repayment rules can be ranked by the extent to which they adapt to the borrower's ability to pay:

- *Fixed monthly repayments* are not adapted to the borrower's income. This is the simplest and the most widespread form of repayment, but a typical bank loan is of fairly short duration and is collateralised (for example by a mortgage), thus reducing the risk faced by lenders and borrowers.
- It is also possible to agree on *fixed but increasing instalments*, so as to diminish the repayment burden in the first years.
- With an *indexed loan*, instalments can change according to a predefined reference variable such as average incomes in a country. This type of contract makes it possible to adjust the repayments to the ability to pay of an average borrower, even during a recession. See for example Modigliani (1976).
- With a *delayed income-contingent* loan repayments depend on the borrower's income in his or her last tax return, thus typically with a two-year lag as, for example in the Dutch and the Hungarian student loan schemes. The lag of two years can cause problems in periods of recession.
- In a *fully income-contingent* loan scheme, repayments depend on the person's current income, and take the form of a payroll deduction, similarly to personal income tax and social insurance contributions. This is the case in the British, Australian and New Zealand schemes, and in the former Swedish one.
- A final element of flexibility is to allow *voluntary early repayments*. These also help to adjust repayments to the borrower's actual circumstances in ways that may not have been reflected in the tax return.

The conclusion is that there is a continuum of mechanisms between pure mortgage loans and pure income-contingent loans, as discussed more fully in the examples below.

Model 1a A pure mortgage loan



This is the simplest possible case.

The model:

- The loan has fixed monthly repayments that can change from year to year depending on the interest rate. To ensure that repayments are affordable they have to be low (e.g. repayable by someone with typical earnings in a country like Bulgaria); to ensure that the loan is reasonably large, the duration of repayment needs to be long, e.g. 40 years. The first part of Table 14 shows yearly repayment according to the size of the loan (between €10,000 and €20,000) and the maturity of the loan (20, 30 and 40 years) assuming that the interest rate is 5% over the entire repayment period. Table 14 shows the results for a graduate with the median income of highly educated employees in Bulgaria (€3,049 per year, which is approximately half the European average).

Table 14. Annual repayments in a fixed mortgage-type scheme in euro, and the ratio to the Bulgarian median income for highly educated employees

DEBT	20 years	30 years	40 years		DEBT	20 years	30 years	40 years
10,000	802	651	583		10,000	26%	21%	19%
12,000	963	781	699		12,000	32%	26%	23%
14,000	1,123	911	816		14,000	37%	30%	27%
16,000	1,284	1,041	932		16,000	42%	34%	31%
18,000	1,444	1,171	1,049		18,000	47%	38%	34%
20,000	1,605	1,301	1,166		20,000	53%	43%	38%

Source: the authors

- It is also possible that monthly repayments rise each year in line with a variable such as average or median earnings in a country. Supposing that income growth rate equals the interest rate (the so-called “golden growth”), the results in the indexed repayment model are much more favourable, as shown in Table 15.

Table 15. Annual repayments in an indexed mortgage type scheme in euro and the ratio to the Bulgarian median income for highly educated employees

DEBT	20 years	30 years	40 years		DEBT	20 years	30 years	40 years
10,000	500	333	250		10,000	16%	11%	8%
12,000	600	400	300		12,000	20%	13%	10%
14,000	700	467	350		14,000	23%	15%	11%
16,000	800	533	400		16,000	26%	17%	13%
18,000	900	600	450		18,000	30%	20%	15%
20,000	1,000	667	500		20,000	33%	22%	16%

Source: by the authors

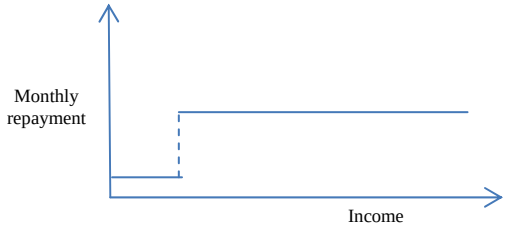
- It is noticeable that even this simple mortgage-type scheme may have two income-contingent elements:
  - The level of repayment changes in line with an aggregate income category
  - Early repayment option can be allowed

Advantage: on the face of it, this model makes the fewest administrative demands.

Disadvantages

- For borrowers working in low-income countries, the maximum loan is constrained to €10,000-€12 000, even where the time horizon is long and repayments are indexed to average income growth. Thus this method can support only small loans, since repayments have to be small. Put another way, there is little scope for expansion to a system with larger loans per student.
- In reality, some people will not be able to make even small repayments. This leads to:

Model 1b Mortgage loan with remission for low earners



The model:

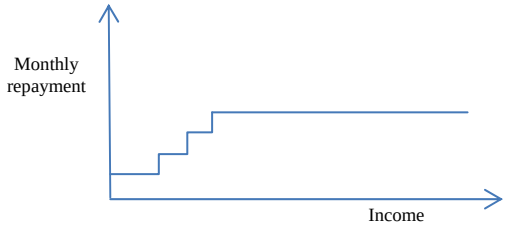
- Some people cannot afford even the low repayments in Model 1a. Model 1b therefore introduces remission for low earners (this is the only difference to Model 1a).
- In principle, people with no income could be allowed to defer their entire loan repayment. The suggestion in Model 1b is that there is a minimum monthly repayment of a token amount (e.g. €5), because this arrangement helps to maintain contact between the borrower and the loans administration.

Advantages

- If self-certification of low income is allowed, at least for a limited period, administrative demands can be low.
- The lowest earners are protected, with significant political and social policy advantages.
- If low earners have some protection it is possible to have somewhat larger loans.

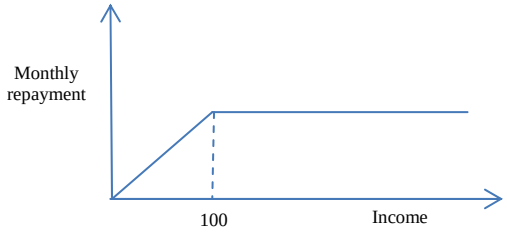
Disadvantages

- Even with protection for low earners, the size of the loan per borrower remains small.
- Even the simplest threshold requires a capacity to assess the individual income of applicants, which adds to administrative demands.
- The threshold creates a problem of implicit taxation. If, for example, the income threshold for protecting low-income earners is 100, a person whose earnings increase from 99 to 100 (a) faces adverse work incentives, and (b) increased incentives to participate in the grey economy (as more people hide their income so as not to exceed the limit). To mitigate this problem, a better design would have a series of steps.



This formulation leads naturally to Model 2.

Model 2a Hybrid model with income-contingent repayments for low earners



The model:

- Model 2a potentially has three income-contingent elements:
  - Income (in this case up to 100) is assessed on an individual basis
  - The fixed monthly repayment rises each year in line with an index such as average earnings
  - The timing and size of voluntary early repayment depends on individual income
- This model is appropriate for a fairly small loan in a country with low average income and limited administrative capacity.

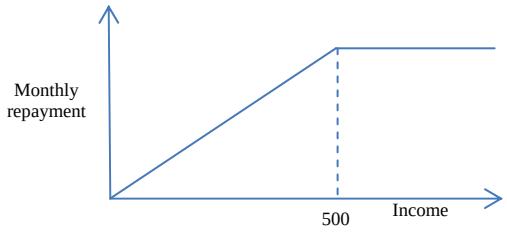
Advantages:

- The scheme offers protection to low earners (in this case people earning less than 100), assisting political sustainability.
- The fact that protection is continuous avoids the potential adverse labour market incentives of Model 1b.
- An income test is necessary only for a minority of borrowers whose income is under the threshold and who apply for income testing, significantly reducing administrative burdens.
- The choice of threshold can take account of administrative capacity; the smaller the income-contingent element (e.g. a threshold of 50), the fewer the people whose income has to be measured, hence the smaller the administrative load; however, a lower threshold also means lower monthly repayments.
- This threshold may be differentiated across countries.
- As discussed below, this model has a built-in upgrade path, in that Model 2a can morph over time into Model 2b.
- Conclusion: Model 2a has advantages over Model 1b, but is very similar in terms of administrative requirements. A key conclusion is that Model 2a dominates 1b.

Disadvantages:

- It is necessary to measure people's income, adding to administrative complexity.
- If the administrative capacity of the EU-student loans administration is low, it will be necessary to restrict income contingency to very low earnings so that only a few people need to have their income assessed. It follows that the maximum monthly repayment is constrained; thus this arrangement can support only small loans. It is unlikely that this option would allow loans large enough to pay the full cost of the most expensive master's degrees.

Model 2b Hybrid model with income-contingent repayments for low and middle-income earners



The model:

- Model 2b has a considerably larger range of income over which income-contingency applies.
- This model is appropriate for a country with high levels of income and strong administrative capacity.
- For graduates with income above 500, the loan is a mortgage loan with fixed monthly repayments and a known duration.

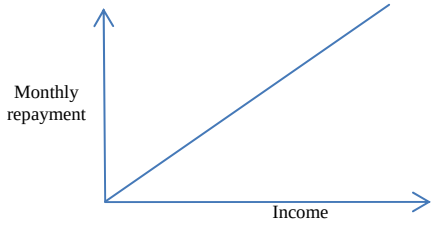
Advantages:

- Monthly repayments can be higher since low and middle-income recipients are protected by income contingency; thus this model can support larger loans, for example the full cost of an expensive master's programme.
- Protection for lower earners means that monthly repayments can be higher, and so the average duration of the loan can be shorter than for Model 2a, facilitating finance from capital markets.
- As noted, Model 2a can morph gradually into 2b by increasing the income at which income contingency ends from 100 towards 500. One way of doing this would be to increase the threshold in Model 2a each year in line with average earnings; thus in most years, the real value of the threshold would increase.

Disadvantages:

- Model 2b has significantly greater administrative requirements than 2a since it requires the capacity to measure the earnings of larger numbers of people, either through the tax system or in some other way.

Model 3 Pure income-contingent loan



The model:

- Model 3a has full income contingency across all levels of income.
- Monthly repayments can be implemented in two strategic ways:
  - In arrears, i.e. on the basis of the graduate's last completed tax return. In practice this means a lag of two years, necessitating some form of adjustment where a graduate's earnings fall substantially.
  - On a current basis: the only cost-effective way of doing this is through the tax system.

Advantages:

- This model has all the advantages of Model 2b.
- Since higher earners repay more than in 2b, the repayment flow is faster.

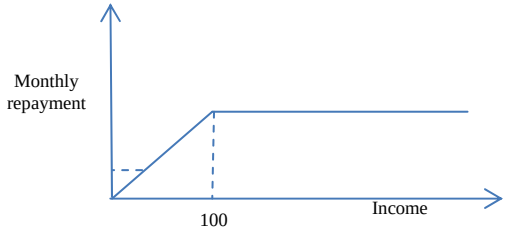
Disadvantages

- This model has the highest administrative demands, since it requires that everyone's income is assessed. If a country has a sufficiently well-developed tax system, the marginal cost of implementing loan repayments as a deduction alongside income tax is low. Where that is not the case, however, administrative costs depend to a considerable extent on the number of people whose income has to be assessed. In Model 3 everyone's income has to be assessed. In Model 2 it is necessary to assess the income only of individuals below the income-contingent threshold (e.g. 100 in Model 2a, 500 in Model 2b).

Comments

1) All models except 1a offer protection to low earners. There are two ways of providing this protection:

- Graduates should make no repayment in any year in which their earnings are low.
- All graduates, even those with the lowest earnings, make at least a small repayment. As noted earlier the purpose of such repayment is to maintain contact between the borrower and the student loans administration. The diagram below illustrates this approach for Model 2a.



2) With a positive real interest rate, the outstanding loan balance of a low earner will increase and, where earnings are very small or zero, a person's nominal debt will spiral upwards. The extent to which rising debt is politically palatable will vary from country to country. A range of mechanisms exist to address the problem:

- Targeted interest subsidies for low earners, and/or
- Forgiveness of a person's outstanding balance after (say) 30 years

3) All the models allow voluntary early repayment of part or all of a person's outstanding loan balance.

5.3 Broader aspects of loan design

The market failure in student lending (i.e. the reason why the competitive market on its own cannot provide student loans efficiently) arises mainly because the lender cannot differentiate between "good" and "bad" borrowers because of asymmetric information. The lender (principal) knows much less about the borrower's situation, motives, behaviour and future prospects than the borrower (agent). Asymmetric information creates two sets of problems: (1) moral hazard and (2) adverse selection. Depending on circumstances, either problem can lead to a complete breakdown of the market. The basic problem is how government intervention can reduce these effects to a level that is manageable.

Examples of moral hazard in this context are that borrowers may cheat during the application process, may hide their income, or may emigrate in order to avoid repayments etc. These risks can be reduced either by signalling (borrowers provide more information, certifications etc.) or monitoring (the lender follows up and imposes restrictions on the borrowers). We return to these issues in Section 6 when designing the appropriate management model (institutional architecture).

This section focuses on the adverse selection problem as the main driver when designing the loan. The problem arises where the lender cannot distinguish good risks from bad, and thus has to charge a risk premium based on the average risk. As a result, bad risks (whose risk premium is inefficiently low) borrow an inefficiently large amount and good risks (whose risk premium is inefficiently high) borrow an inefficiently small amount.

5.3.1 The adverse selection problem

In principle, loan schemes can be (a) for profit, (b) zero profit or (c) subsidised. A loan scheme operates at zero profit (self-sustaining) if in the long run the expected aggregate profit / loss is zero. This means that the aggregate repayment flow exactly covers:

- The money borrowed
- The time value of money
- The default losses and
- The administration costs.

In a self-sustaining model there is no need for external (e.g. state, EU) subsidies.

Some profitable schemes are run by private institutions (e.g. MyRichUncle), but these target a niche sub-group of borrowers (mostly the brightest students at top universities), thus they are "cherry-picking" with the help of sophisticated risk-assessment techniques. However it can be expected that profit is reduced to zero here as well if competition is high. The EU-level student loan scheme should not be profit making. Any profits should be reinvested in the scheme, e.g. by increasing the loan amount, by expanding the eligibility rules or by reducing the repayment burden etc.

Taking zero profit as the benchmark, default losses and administrative costs are financed by the overpayment of non-defaulting borrowers. Overpayment can be required in several forms:

- An interest rate risk premium (this is the most straightforward and widespread solution)
- A debt multiplier (e.g. the scheme at Yale university which failed and became an example of a badly designed student loan scheme)
- Extra repayments, which has some remarkable advantages according to actuarial calculations

- Extra years of repayment, though these are less attractive from a communication point of view

For further detail, see Appendix 7, Overpayment mechanisms.

The most usual way of requiring overpayment is by introducing an interest rate risk premium. For example, in the Hungarian scheme the self-sustaining aspect is ensured by the interest rate of the student loan which contains the following elements:

$r = f + p + o$

where

r: interest charge on the loan (8.5%)
f: financing cost (6%)
p: default risk premium (1.5%)
o: operational margin (administrative costs / value of the portfolio) (1%)[62]

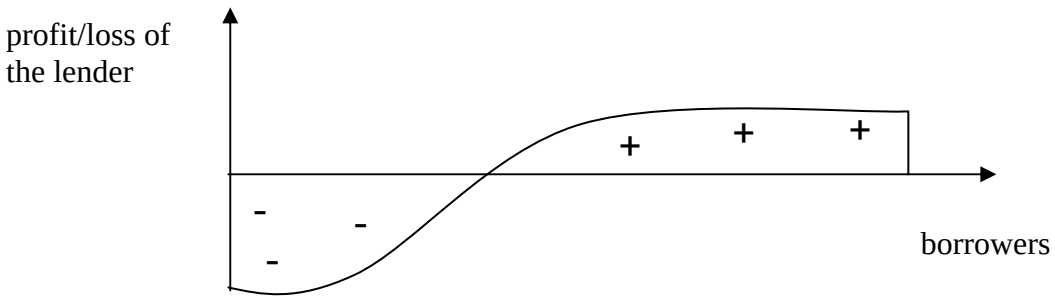
If the following conditions hold:

(1) The riskiness of the borrowers are different (income, age, debt etc.)
(2) Loan conditions are universal (i.e. the same conditions apply to all borrowers)
(3) The loan scheme is expected to operate at zero-profit level

then borrowers have to cross-subsidise each other within the risk cohort. See Figure 8.

Figure 8 shows a hypothetical loan scheme where borrowers compose a risk cohort. They are ranked by the estimated profit / loss they will cause the lender. Borrowers on the "+" side (typically younger, with smaller loans and higher income) finance the losses on the "-" side (typically older, with larger loans and lower income). In a zero-profit system, expected profits and losses sum to zero. The extent and pattern of cross-subsidy depend on the distribution of the borrowers' income, age and debt, and also on repayment rules.

Figure 8. Cross-subsidies in a zero profit loan scheme



Source: the authors

At first sight, cross-financing epitomises solidarity and integration. However, in certain conditions it can be detrimental. Provided that:

(4) Participation is voluntary
(5) Early repayment is allowed without any restrictions
(6) Risk-assessed market conditions are more favourable for the better borrowers

[62] Numbers rounded for simplicity. The values can change from year to year.

then better (i.e. lower risk) borrowers will choose not to participate, i.e. will not take out a loan, or will leave the scheme as soon as possible (i.e. use the early repayment option). As a result, high-risk borrowers will be over-represented and the composition of the loan portfolio will be worse than expected. The initial risk premium (and hence the interest rate) needs to be increased in order to keep the loan self-financing. The increased interest rate will deter some other borrowers. This phenomenon can be accelerated and can lead to a total breakdown of the scheme. This problem – adverse selection – in lending is analysed more in detail by Rothschild and Stiglitz (1976) and Tirole (2005).

The adverse selection problem can be managed in several ways:

(1) If the lender wishes to reduce the cross-subsidies within the cohort, he must keep differences in the risk profiles of the borrowers to a reasonable level. For example, he can set up strict eligibility criteria that exclude borrowers who are expected to cause large losses (typically the citizens of low-income countries, women, older students or students with poor academic results, and/or some costly programmes). However, most of these exclusions are not viable politically. The easiest way to reduce risk difference is to limit the size of the loan. If kept low, so is borrower risk – and so, also cross-subsidies.
(2) Cross-subsidies can also be reduced by giving up universality and by tailoring loan conditions to the characteristics of the borrower (e.g. real income of the student's home country or host country, age, size of loan, etc.).
(3) The third possible solution is to give up zero-profit operation and involve external subsidies to cover default losses, at least partially. In this way default losses are financed from outside and not by the risk cohort.

All three solutions help to control the cross-subsidies built into the scheme. It must be emphasised that in order to maintain financial stability, the extent of the cross-subsidies should be kept low even if politicians regard it as desirable.

Box 6: Why the loan scheme should be designed for the worst case and not for the average

The argument is based on three statements:
- High cross-subsidies within the risk cohort can lead to serious adverse selection and system breakdown.
- Cross-subsidies are necessary for the worst borrowers who are not expected to repay their loan fully (because the loan is too high relative to their income, or because they are too old, etc.).
- It is possible to reduce cross-subsidy (a) by setting differentiated loan conditions – but that makes administration difficult and expensive, or (b) via an external subsidy, e.g. from EU funds – but it is expensive.

The conclusion to which these considerations lead is that the primary design consideration is to keep the expected losses of the worst borrowers as low as possible. Thus the loan system should be designed to cover the worst case rather than the average. If all borrowers were like the average it would be easy to introduce a loan scheme. But good design needs to recognise the considerable income differences across Europe.

Once the extent of cross-subsidy is determined we can turn to the other points and the possible solutions:

(4) Participation could be mandatory in order to avoid adverse selection. On those grounds, some experts advocate a graduate tax. However, a graduate tax is neither fair nor feasible, therefore we do not consider it a usable option. For more detail see Barr (2004).
(5) In many loan schemes, early repayment is forbidden or is too expensive. This approach is counterproductive since it makes the loan less attractive for low-risk borrowers. As a result, many of them will refuse to take up the loan.
(6) In order to keep the best borrowers in the system, the loan conditions should be more favourable than those available on the free market. The right tools are tailor-made loan conditions and/or external subsidies (for example a state guarantee can significantly reduce the financing cost, thus the interest rate can be kept reasonably low).

We have ruled out options (4) and (5). The remaining possible solutions are:

- Limitations (eligibility and size of the loan)
- Differentiated (tailor-made) loan conditions
- External subsidies (direct financing of default losses and costs of administration, or guarantees)

Fortunately, we do not need radical limitations, highly differentiated loan conditions or large external subsidies. A sensible mix of measures should be enough to avoid adverse selection.

5.3.2 Eligibility and size of the loans

Section 5.1 argues that initially only mobile master's students should be eligible, only for one year, and only within the EU. This is a politically viable limitation that contributes to the financial stability of the scheme. We suggest that eligibility is based on a double test of (a) EU citizenship, (b) contribution to the aim that 20% of young people with be mobile. Thus eligibility is based on:

- Citizenship test (EU27), and
- Doing a master's degree in different country from the bachelor degree, or
- Doing a master's degree in different country from the person's citizenship

Other possible eligibility criteria include:

- Age
- Accumulated debt (for example in the national student loan system)
- Academic merit
- Financial needs (means testing)
- Special programmes and professions

The age of the borrower should be capped for financial reasons, but it is undesirable to exclude older students. Instead the problem should be tackled through the repayment conditions (see section 5.3.3).

The size of other debts is also an important risk factor. However, students should be free to take up commercial loans at any time and without limitation, not least because it is impossible to monitor and control such borrowing. Moreover, loan conditions can vary so widely that it would be complicated to sum up different situations and to assess the overall repayment burden. Such tasks would be administratively demanding, hence the suggestion to set this aspect to one side.

Academic merit and financial needs should be taken into account when allocating grants and scholarships, but the loan conditions should be invariant to such factors. It is noticeable however, that master's students face an explicit or implicit entrance examination, which implies filtering by academic merit.

Implicit manpower planning is undesirable, not least because doing so accurately is not generally feasible. The EU-level mobility loan should be the instrument of competition and market forces, not of central intervention.

Basically, the size of the loan could be:

1. Set as a maximum amount per year available for all eligible students;
2. Dependent on circumstances (home country, host country, other available support etc.); or
3. Linked to some reference points, as discussed below

The first is dangerous because it can lead to excessive borrowing, with deleterious effects on the default risk. The second is administratively complex. The third seems to be the right solution. A natural idea is to link the loan amount to the tuition fee plus the country-specific living costs but the sum cannot exceed a predetermined level (maximum loan amount).

Once eligibility is defined, it is possible to establish the maximum loan, which can be adjusted periodically according to the change in the repayment model (which in turn depends mainly on the development of administrative capacity), available state subsidies and general economic conditions (employment and income growth, and income convergence). The maximum loan is an important control parameter incorporating and reflecting these elements.

5.3.3 Differentiated loan conditions

Relative debt: a key element in financial stability

Borrowers are mainly characterised by their relative debt ratio (*R*) calculated just after the graduation at the beginning of the repayment period:

$$R = \frac{D}{\alpha \cdot I}$$

Where

- *D* is total debt at graduation in euro
- α is the repayment rate (the percentage of the gross income the borrower has to repay)
- *I* stands for the yearly gross income of the new graduate

In a pure income-contingent scheme, if certain conditions hold (i.e. the interest rate equals income growth rate and both are constant), *R* equals the expected maturity of the loan. In any case the higher *R* is, the longer the maturity. That is why it is strongly related to the riskiness of the borrowers as well. In a reasonable student loan scheme, *R* requires an upper limit to make sure that the borrower can repay the loan before retirement.

Moreover, it is not only the average value of *R* that matters, but also variation within the cohort of borrowers. Greater variation in individual values of *R* makes the loan system financially more vulnerable. This gives rise to an important conclusion:

If the variation of *R* across individuals is greater, the average value of *R* should be lower to ensure financial sustainability. The main challenge is twofold:

- To provide as much financing to students as possible (increasing the average value of *R*)
- To avoid over- or under-borrowing (reducing the variation of *R* across individuals)

Possible solution to high variation: tailored repayment conditions

Unfortunately, in a European-wide student loan system differences in *R* across individuals will be much higher than on national level because of high variation in:

a) The attractiveness of educational institutions
b) Tuition fees
c) Cost of living
d) Students' income
e) Existing student support mechanisms
f) Graduate incomes

The first five points (*a*-*e*) contribute to variation of a typical borrower's total debt (*D*) while the last (*f*) increases the variation of the denominator of *R* ratios.

The adverse effect of the large differences in these factors can be controlled only by the residual variable, namely the repayment rate (alpha). Alpha is the ratio of repayments to income. In an income-contingent scheme alphas are determined by the lender; in a mortgage-type scheme, the level of the fixed repayment is the control variable, which implies the value of alpha. The idea is that individual alphas should be set in such a way that *R* remains within a well-defined range.

Therefore we suggest introducing tailored repayment conditions for each borrower according to the following parameters:

- The borrower's total debt at graduation (*D*)
- The borrower's age at graduation (*A*)

In order to reduce the variability in *R* across individuals, the repayment ratio should be a positive function of these two factors (debt and age), so that older borrowers with larger outstanding loans should have higher repayments.

In an income-contingent scheme repayment is automatically linked to income (*I*). However, in a mortgage-type or hybrid scheme (like 2a) this direct link is missing. To make the loan more attractive and financially sustainable it is useful to connect:

- The fixed repayment (i.e. the horizontal part of Model 2a) to average or median graduate income in the country where the graduate is working; thus borrowers working in low-income countries repay less, so that repayment takes longer
- The income threshold at which repayment starts to the poverty line or the minimum wage in the country concerned

Whenever a borrower begins employment in a new country, the fixed repayment level and the threshold can be reset.

The interest rate

As we have seen the interest rate of the loan depends on:

- The cost of finance
- The risk premium
- Administrative cost
- Any subsidy

These elements may change over time, and are difficult, if not impossible, to forecast. A fixed interest rate for the entire duration of the loan would impose excessive risk on both lender and borrower. Variable interest rates are the right choice, noting that the interest rate should not be too short, since excessive volatility might also deter the borrower. The interest rate could be reset every one or two years, which would imply some time lag and smoothing as well.

The interest rate and its component parts could be:

- Universal across all member states. This, however is feasible only if all debts are denominated in euro. In a given period the same interest rate is accumulating on all debt, regardless of when the borrower contracted. The interest rate should be within a predetermined range. For more details, see Section 6
- Differentiated by countries or by generations. This approach would complicate the administration, and might also raise sensitive political issues. For more details see section 5.3.4

In conclusion, in terms of loan design it seems preferable to introduce differentiated repayment conditions but with a single, universal interest rate. But thus observation must be qualified by an awareness of the complications that may arise in terms of country-specific aspects of regulations and legal issues, for example, regulation concerning consumer rights. Such aspects need to be considered alongside the detailed design of any loan.

5.3.4 External subsidies

Who covers the cost of non-repayment?

Even in Model 1a, in which in principle everybody repays their loan, there will be some leakage. At a minimum there will be people who die young. In addition there will be some evasion, and political pressure will inevitably lead to some form of mitigation for low earners. And in Models 1b, 2 and 3, mitigation for low earners is explicit. The conclusion is that there are default losses in any system. The design question is where those costs should fall. In principle, losses could be met entirely within the loan scheme (a zero-profit scheme), entirely from outside, or from a mix of the two (subsidised schemes). The discussion below uses Germany and Bulgaria purely for illustrative purposes.

ALL LOSSES FINANCED FROM WITHIN THE LOAN SCHEME

- Case 1: An EU-wide cohort risk premium
    - Suppose that all losses could be financed by an EU-wide cohort risk premium of (say) 4% – that is, with a 4% risk premium the loan scheme would in principle be self-financing in present value terms. In this system, an average graduate from a rich Member State (e.g. Germany), as well as subsidising the loan repayments of low-earning German graduates would also subsidise the loan repayments of low-earning graduates from a poorer Member State (e.g. Bulgaria).

- The scale of cross-country redistribution in this case is potentially much larger than in-country redistribution, leading to two problems: the greater the cross-country subsidy the greater the potential political problems. Also, the greater the incentives to adverse selection (i.e. better-off Germans will opt out of the system).

Conclusion: an EU-wide cohort risk premium is not feasible.

- Case 2: Country-specific cohort risk premiums
  - In this case the German cohort risk premium covers only non-repayment by Germany graduates, and hence can be low (say 2%). However, the Bulgarian risk premium has to be very high (say 15%)
  - Such a high interest rate would, in effect, mean that the loan scheme was not available to mobile Bulgarian students

  Conclusion: it is not possible to finance all losses from within the loan scheme.

ALL LOSSES FINANCED FROM OUTSIDE THE LOAN SCHEME. The other option is that all non-repayment is financed from EU resources. This approach implies redistribution from taxpayers (rather than just loan recipients) in richer countries towards poorer countries. Such transfers could be designed in different ways, e.g. directly to the loan scheme from a special EU loan support fund, or via Member States, e.g. though structural or cohesion funds.

LOSSES FINANCED PARTLY FROM WITHIN AND PARTLY FROM OUTSIDE THE LOAN SCHEME. It is not necessary to choose between the two polar cases. In New Zealand during the 1990s, for example, government estimates suggested that in their then system a cohort risk premium of 2% would repay 100% of the loss on low earners. The system charged 1% above the government's cost of borrowing; thus the cohort of graduates covered half of the loss, taxpayers the other half.

PARTICIPATION BY UNIVERSITIES IN LOSS SHARING. In principle, it is possible to share losses with universities. In the simplest system, universities collectively agree to pay a fraction of the losses on the loan portfolio. However, that type of arrangement gives universities whose graduates' repayment performance is less good an incentive to free-ride on better repayment performance elsewhere. Beyond a small scheme of this nature, it is therefore necessary to have university-specific arrangements – in essence, each university would pay an actuarial insurance premium to cover a fraction of the losses due to non-repayment by its graduates. This type of arrangement might be an option at some stage in the future, but is both technically and politically difficult even within a single country, and even more so given the great diversity of institutions across the EU. Thus it is not an immediate option.
CONCLUSION. Given the current wide income differences across Member States, non-repayment by graduates with low earnings should come largely or wholly from EU sources.

Targeted loan forgiveness: a counter-incentive to brain drain

A potential political obstacle to an EU student loan scheme is the concern of national governments that such a scheme would contribute to a brain drain. If policy makers regard such a worry as justified, there are ways to address it.

THE INCENTIVE. Consider, as an example, a graduate from Bulgaria who takes a one-year master's degree in London. One way to encourage her to return to Bulgaria would be that for each year she spends working in Bulgaria after her return, 10% (for argument's sake) of her loan would be forgiven. Though inertia may slow a person's return home, once the person has returned home, inertia will tend to keep him or her there; thus a variant would be to offer

20% forgiveness for the first year and 10% thereafter. Forgiveness of this sort could be offered to all mobile graduates returning to poorer Member States.

This policy is controversial. As formulated by the expert panel:

- It is difficult to define what is desirable
- This type of subsidy can be regarded as interfering with the right of free movement

FINANCE. Who would meet the costs of this subsidy?

- Costs met by poorer Member States: in this case, the cost of loan forgiveness for returning Bulgarian graduates comes from Bulgarian resources. The problem is that this involves redistribution from poorer to richer Bulgarians, leaving the Bulgarian government open to the accusation that it is subsidising the best and the brightest, not spending money on (say) policies to foster early child development
- Costs from EU resources: in this model, the cost of forgiveness for graduates returning to their poorer home country would come from EU resources, thus redistributing from richer to poorer Member States

CONCLUSION. If policy makers wish to make use of this incentive mechanism, resources should come largely or wholly from EU sources.

5.3.5 The Options

THE STARTING POINT. Section 2 set out ways of organising student loan repayments:

- Model 1a: A pure mortgage loan; monthly repayments are entirely unrelated to a person's income
- Model 1b: Mortgage loan with remission for low earners
- Model 2a: A hybrid model with income-contingent repayments for low earners
- Model 2b: A hybrid model with income-contingent repayments for low and middle-income earners
- Model 3: A pure income-contingent loan

Summarising the analysis in section 2, Model 1a is not feasible; Model 2a dominates Model 1b; Models 2b and 3 are currently unfeasible because there is no effective way of implementing an up-to-date income test at EU level. Thus our chosen model is 2a, with a view to moving over time towards 2b as income levels in the poorer Member States rise and administrative capacity strengthens.

THE OPTIONS. We propose four options, all based on model 2a. The two central variations concern (a) whether the scheme is self-financing or subsidised, and (b) whether it is universal (i.e. a common repayment formula and risk premium across all Member States), or with borrower- or country-specific elements.

Table 16. Four options based on the repayment model of 2a

	Universal conditions	Differentiated conditions
Non-subsidised	1	3
Subsidised	2	4

Source: the authors

Option 1: A self-sustaining and universal loan scheme. An implication is that the loan will have to be small enough that non-repayment by graduates in poorer Member States can be financed by an EU-wide cohort risk premium. This is the least attractive solution.

Option 2: A subsidised universal scheme. If non-repayment by graduates in poorer Member States is financed mainly by transfers from EU resources, and hence mainly by richer Member States, it is possible to finance larger losses and hence to offer larger loans.

Option 3: A non-subsidised scheme, but with some differences across Member States. For example, both the level of loan repayments and their rate of change could be related to average (or median) earnings in the country and perhaps also to the age and debt of the borrower. This would improve repayment performance both in richer and poorer Member States, making larger loans possible.

Option 4: A subsidised and differentiated scheme allows for the highest loan amounts but communication and administration may become complicated.

Some other "accessories" may be included in any of these options, for example:

- Grace periods
- Targeted subsidies
- Debt forgiveness after *N* years or in given circumstances
- A minimum repayment option: as discussed in section 5.2, the loan can be designed with either a zero minimum repayment or with a small repayment irrespective of earnings to maintain contact between borrower and the student loans administration
- Early repayment option: anyone at any time should be able to make voluntary additional repayments of part or all of their loan. The only restriction is that, to keep administrative costs low, any such additional repayment should be not less than some minimum amount (e.g. €500)

6 An EU loan scheme – Implementation

We concluded in Section 5 that the loan conditions should be flexible so as to attract borrowers and to ensure financial sustainability. On the other hand, the operation should be efficient in all of the following areas:

- Communication and client service
- Administration
- Collection mechanism
- Finance

The basic paradox is how simultaneously (1) to have flexible loan conditions (2) effectively to fight against moral hazard and (3) to have simple and cheap operation. The solution requires innovative techniques.

In this section we discuss the main activities: communication and client service (section 6.1), administration (section 6.2), collecting repayments (section 6.3) and finance (section 6.4). The section then discusses the institutional architecture (section 6.5) and political implementation (section 6.6).

The loan system needs a central focus, with ultimate responsibility for the system, even if specific tasks are outsourced.[63] This responsible body is referred to as the Student Loans Administration (SLA). We start by discussing the functions that need to be carried out under the authority of the SLA, though not necessary all by the SLA.

The student loan portfolio has the potential to grow considerably as section 6.4 shows, since a new cohort of borrowers is added each year, so that careful thought is needed to automate as many of the processes as possible. This will help to contain the cost base, minimise human intervention[64], and simplify processing. The institution and the management model should be established during the initial set-up phase, and will require amendment when there are any changes to the scheme, e.g. to repayment thresholds or eligibility rules.

6.1 Communication and client service

Communication and client service are typically easy to outsource, once the overall strategy is determined by the SLA.

Students, especially those from poor backgrounds, are risk-averse. This risk aversion is due to cultural factors but also to lack of information. International context aggravates this informational problem. However, student perceptions and risk aversion can be changed through targeted communication strategies that highlight the benefits of mobility and the corresponding loan options.

The communication strategy should be based both on (1) a highly effective internet webpage where all relevant information is available; and as far as possible on (2) personalised consultancy.
One of the most important issues to be addressed is the optimal extent of borrowing.

[63] For example, the UK Department for Work and Pensions is ultimately responsible, but outsources the actual running of the system to the Contributions Agency and the Benefits Agency.

[64] The danger in leaving some, or even all, interpretation of the rules relating to (say) exception processing could lead to some borrowers receiving different and/or /more favourable treatment than others.

Because of the financial crisis, people are increasingly reluctant to borrow. The SLA must give a convincing message that explains why borrowing is a sensible strategy,

The SLA must determine the student subgroups to be targeted by the communication strategy, for example:

a) The most open-minded and least risk averse students
b) The brightest students with the highest academic performance
c) The most needy students

Clearly, these subgroups are different, and so the appropriate communication is likely to be very different.

The policy objective of the EU loan scheme is not to make all students mobile but to foster student mobility. To that end, student lending should focus on the most open-minded and least risk-averse students (subgroup a) where student lending can have the maximum impact by removing liquidity constraints. (The mobility of subgroups (b) and (c) can be supported by a well-designed grant system based on academic merit and / or means testing.)

6.2 Administration and disbursement

6.2.1 Establishing identity and eligibility

WHICH DOCUMENTS? When initially applying, students would be required to produce three forms of documentation in order to receive an eligibility certificate.

1) Identity: documentation should ideally confirm identity based on information that will never change. It is important to introduce an EU wide identity number for borrowers.

2) Nationality / citizenship: since the loan is available only to people who meet criteria of nationality (i.e. citizen or long-term resident of an EU Member State), it will be necessary also to have details of an applicant's passport or similar document. A question for policy makers is the precise definition of nationality required for eligibility; it would be desirable to use an existing, widely used and tested definition.

3) Evidence of acceptance, or conditional acceptance for a master's degree.

The loans administration would have to establish criteria for determining eligibility, e.g. that the loan related to (i) a master's degree in a different country from where the applicant did his/her first degree[65]; or (ii) nationality / citizenship is different from the country of the master's degree.

An additional benefit from collecting such detail is increased security when speaking to borrowers on the telephone, or if at some future stage any form of online functionality were introduced.

[65] Mobility will require detailed definition. A German national who does a first degree in Germany and a master's in the UK is clearly mobile. But would a German national who does a first degree in the UK be eligible for a loan to do a master's degree in Germany? A separate issue arises where someone does a first degree in two or more countries.

WHO CHECKS THE DOCUMENTS? For convenience and to avoid the risk of losing original documents, it may be that that checks are best carried out by the university or place of study. (In this way universities can also take over a great part of the communication and client service.) By the time a student seeks to apply for a loan he or she will generally have gone through the university enrolment process. Indeed, enrolment should be the first condition of eligibility.[66]

The university should also confirm that the student is in attendance prior to the release of any money – see below. In sum, students would be required:

- To verify their identity by providing the university with their birth certificate, passport and evidence of their first degree; and
- To provide evidence that they have completed enrolment

6.2.2 The application process

APPLICATION PROCESS. Application forms would be part of the eligibility certificate held by universities. The form would require completion either by the university[67] or by the student prior to submission to the loans administration. Irrespective of whether this is completed by the student or the university, the completed document would require cross-referencing to the eligibility certificate to ensure the matching of documents.

The reverse side of the application form would set out the terms and conditions of the loan, so that the applicant was fully aware of the commitment being given to the loans administration. Thus each applicant would have an explicit individual contract with the loans administration.

ONLINE APPLICATION. Many arguments support the idea of establishing a new institution based on information communication technologies (ICT):

- The EU is committed to the development of the "knowledge society"
- This is a green-field initiative, where the EU is not constrained by the status quo
- This is a flagship institution that could be a benchmark for other transnational EU institutions
- A well-developed ICT strategy also contributes to the "E-inclusion" and "E-government" initiatives of the EU by narrowing the digital divide
- This is the best way to communicate with the top students of the "millennium generation"

Using ICT is the obvious way to streamline the process, but requires extensive development, and is considerably more difficult than is often realised. The UK had a very successful paper-based system. When online applications were introduced, the system experienced significant difficulties.[68] Given the need for the loan scheme to operate across a wide range of countries with considerable differences in institutional capacities, online operations should

[66] Again, more detailed work will be needed, for example where a student is offered a place to do a master's degree conditional on performance in his or her final undergraduate examinations.
[67] This aspect would need to be verified as feasible since certain countries may regard this information being known to the university as a breach of data protection / privacy.
[68] These difficulties were at least part of the source of problems of sufficient gravity that the Chief Executive and almost the entire Board of Directors were replaced.

perhaps be considered as a downstream activity. The issues of such development should be examined in more detail involving specialised expertise.

It is very much the case that *if you get it right, nobody remembers, but if you get it wrong, nobody forgets*. Good policy should not be jeopardised by poor implementation.

6.2.3 Disbursement

The student's initial loan application would specify the amount he or she wishes to borrow (subject to a maximum) and whether the loan is for maintenance or fees or both. A loan for maintenance should be paid in (say) three tranches, for example 50% (since there are significant upfront costs at the start of the academic year), 25% and 25%. These amounts would be paid directly into the bank account nominated by the student. Any part of the loan that covers tuition fees should be paid direct to the university.

6.3 Collecting repayments

It is easy to give money away but harder to collect repayments, as illustrated by many loan schemes internationally. An efficient collection mechanism which minimises moral hazard and administrative costs is therefore crucial. This aspect is not always given the priority it deserves during initial set-up because it is viewed as a post-launch activity. Yet in many respects it determines the success of any loan scheme. Collection activity relies very much on the quality and in many respects the quantity of personal information gathered at the time of the original application, which is why borrowers must be made aware of the importance of keeping the loans administration up to date with any changes.[69]

6.3.1 Assessing monthly repayments

In Model 2a in section 5.2 borrowers repay in fixed monthly instalments, with the exception of graduates with very low earnings, who can apply for a lower repayment. Thus the system is income-contingent over a fairly small range of earnings, and income contingency is arranged on a manual basis for each graduate who applies for repayment lower than the fixed instalment. In Model 2b, the range of income over which repayments are income contingent is wider and the income contingency might be done automatically through the tax system. Here we mainly discuss Model 2a.

ADMINISTRATIVE STRUCTURE. To assist efficient collection and for the purposes of checking paperwork (e.g. where a borrower requests a lower repayment), it would be desirable if the Student Loans Administration had a branch in each Member State, and perhaps also in other OECD countries. To ensure efficient handling of repayments the loans administration would also need to establish a contractual arrangement with a banking network in each country.

INITIAL ASSESSMENT. On completion of the year of study for which the loan was awarded, the loans administration would issue letters to all borrowers advising them that they are due to begin repayments.

[69] For example, empirical literature shows that the borrower's academic performance is the most powerful predictor of repayment discipline. It is true that academic performance is not an eligibility criterion but this information should be gathered in order to help collecting repayments and establishing a differentiated client service.

The amount of repayment would be related to the graduate's country of residence or rather the so-called "taxing country" (the country where the tax return is due), i.e. lower in Bulgaria than Germany, to start from (say) 1 January of the following year. It is the graduate's responsibility to notify the loans administration about his taxing country.

The graduate has the option to apply for a lower repayment rate where earnings are below a threshold equal to *x*% of median earnings in his or her country of residence. A process would be needed for the relevant assessment to be made, for which purpose a branch of the Student Loans Administration in each country is helpful.

REMITTING REPAYMENTS. In Model 2a monthly repayments are fixed for a year but this fixed repayment level can increase each year in line with income growth in the country concerned. Repayments could be arranged in different ways:

- The borrower could obtain and complete a Direct Debit Instruction (DDI) in his or her taxing country and return the completed form to the loans administration for completion and lodgement
- The borrower could make payment direct to the loans administration via any of the major credit or debit cards
- The borrower could make payment by a whole range of options available via the internet
- It may also be possible to pay via mobile phone or other e-payment techniques

In the last three options, borrowers will probably face charges for each transaction, which in normal circumstances would dissuade them from using these as a means of payment except on a "one-off" basis. However, these methods of payment can be used very effectively as a bargaining tool when it comes to collection / default negotiations.

Borrowers who fail to return a DDI or similar document would be followed up as part of the normal collection / default process discussed below.

EARLY REPAYMENT. Borrowers should be able to make additional repayments at any time either as a single one-off payment or a series of payments, e.g. via DDI.

6.3.2 Tracking repayments

TRACKING AND CUMULATING INDIVIDUAL REPAYMENTS. The loans administration can establish contractual arrangements with the banking network in each country (or with a particular bank after a competitive tendering process) under which they would provide the loans administration with details of all payments received. The information would be formatted electronically to keep manual intervention to a minimum. The loans administration would be responsible for checking data and updating the record of each account.

ANNUAL STATEMENTS. Each year the loans administration will issue each borrower with an annual statement of account. This is perhaps best undertaken in mid-year, following a complete reconciliation of all records / payments. Statements will be issued each year from the time the loan is taken out (i.e. starting before repayments begin) and will continue until the loan has been repaid.

COMPLETING REPAYMENTS. A final statement will be issued to borrowers who have repaid in full. That statement will normally not be issued when the final payment has been received but as part of the annual statement run.

Borrowers will be regularly reminded to keep details of all payments remitted to the loans administration and so they should have a good idea when their final payment is due. They will also be supplied with full contact details if they wish to contact the loans administration.

6.3.3 Enforcement

It is sometimes said that repayers fall into two groups – those who can't pay and those who won't pay. But this is not always the case. If a borrower can't pay, for example because of low income, they will be protected by the terms of the loan. If a borrower *chooses* not to pay (moral hazard), they should be pursued under a fair but rigorous default mechanism.

There are already clearly-established and proven processes for pursuing default. What is, however, required is a mechanism by which those procedures are kept under review. The normal procedure is to issue non-payment reminders, the first of which is generally issued around 10-14 days after an instalment has not been paid. There follows a continuing series of reminders, each progressively more strongly worded than the previous one, supported by telephone contact. Each letter would remind borrowers of their obligations under the loan agreement and of the consequences of continued non-repayment.

Ultimately a notice of default/material breach would be served. At this time any in-built protection would be withdrawn and possibly the entire loan, not just the outstanding arrears, would become due for repayment. At this stage legal proceedings would be considered or, as in the Hungarian system, the tax authority could take over the whole debt, which becomes due immediately in a lump sum. In many countries tax authorities have strong enforcement powers.

It may also be considered necessary to appoint external credit-collection agencies to contact borrowers, though with consideration of, amongst other factors, the size of the outstanding balance, given that agency costs tend to be high. Alongside this process, repayment default and registration with external credit reference agencies[70] would continue, and borrowers reminded that this would not only show the growth and seriousness of their default position but would very likely inhibit their chances of obtaining credit from other sources. The SLA has a strong interest in publishing both positive and negative credit information about the borrowers (to the banking sector or if it is legally feasible to potential employers as well).

This discussion is included to illustrate how the loan scheme could evolve over time, but is brief, since Model 2b is currently realistic only in some Member States. For the most part, the processes would follow those for model 2a, the difference being that the system would be income-contingent over a wider range of income.

An alternative option is for income contingency to be implemented automatically by tax authorities as soon as a borrower's taxing country becomes known. Under this scenario, the loans administration would send a file to the tax authorities of borrowers within their own national tax system informing them of the relevant defaulters and providing information sufficient to allow deduction from salary to begin at the appropriate time. Tax authorities in the entire catchment area would already have been issued with details of the threshold above which deductions should be made, together with the rate of deduction and when

[70] This should be regarded as standard, with each agency being sent a file, normally monthly, of those borrowers in arrears with repayment. This would be a reciprocal arrangement, with each agency allowing the loans administrator access to defaulters registered by other users, and would probably be an extremely useful tool for future loan determination.

these should begin. This solution however raises technical, legal and operational problems, and is feasible only if tax systems become more integrated and harmonised.

6.4 Finance

6.4.1 The size of the scheme and the financing need

The financial needs of the system are strongly correlated with its age. In its early years, students take out loans but there are no repayments. In the second phase, students take out loans but graduates are already repaying, though the system is not yet mature. The system can be regarded as mature only when new generations enter and older generations who have repaid in full are leaving.

In order to get a picture of the potential size of the scheme we concentrate on:

- The value of the outstanding debt portfolio
- The number of the borrowers (clients)
- The financing need of the scheme per year

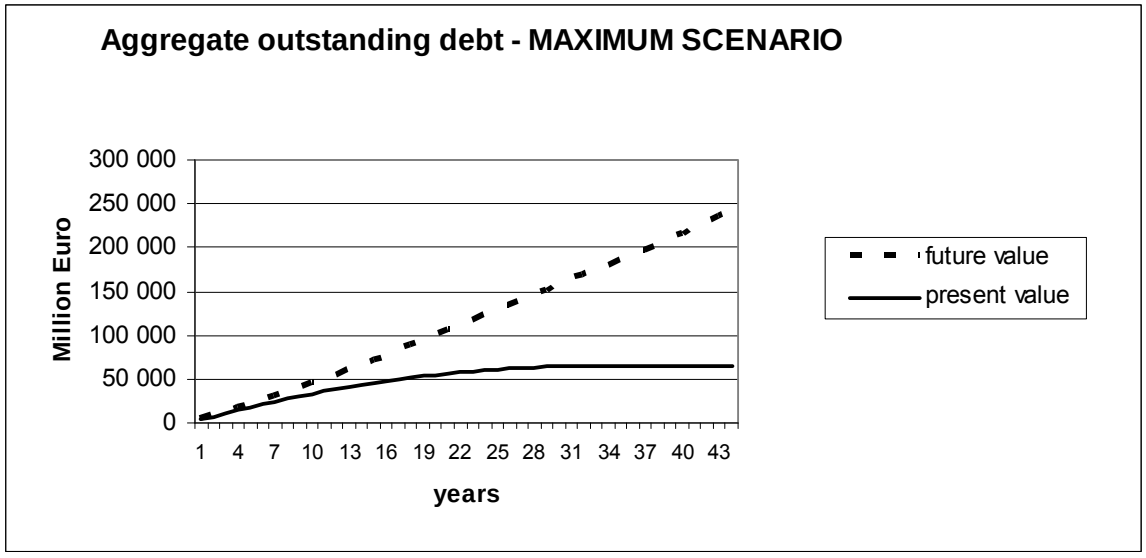
We calculate these values in the framework of three different scenarios. Firstly, we explore the outer boundary of the system, i.e. the “Maximum” case. A more likely scenario is the “Medium” or average. Finally, we present a “Minimum” scenario, i.e. a pilot project.

THE MAXIMUM SCENARIO fits the mobility target of 20%, assuming that all complementary policy measures to achieve this goal are in place. We also assume that all students (318,000 per year) will take out the loan.

Although this scenario might seem exaggerated, it is not the maximum possible. In theory all master’s students (around 4.5 million people, see Table 4a) might decide to take out the loan immediately in the first year, but for many reasons this outcome is improbable. Our Maximum scenario might be regarded as the largest size that is plausible.

Consider the case where the number of the students within each generation is constant, the size of the loan indexed to income growth, and the rate of growth of income constant and equal to the interest rate. Assume also, for simplicity, that defaults and administrative costs are financed from outside the loan system, e.g. from an EU subsidy. The aggregate outstanding debt will evolve as shown in Figure 9.

Figure 9. Aggregate outstanding debt of the EU-level student loan scheme – Maximum scenario



Source: the authors[71]

Once the system is mature, the present value of aggregate outstanding debt becomes constant. Clearly, large amounts of working capital need to be gradually introduced as the system matures. The difference between the future and the present value is due to the interest accumulating on the working capital.

We assume a repayment model like Model 2a, and for simplicity assume that loan conditions are not differentiated, there is no grace period, and no early repayment. The amount of working capital depends on the number of new borrowers per year (*G*), the initial loan amount per year (*C*), the income threshold (*T*), the fixed repayment level (*L*), and the length of the training period (*n*). In the case of the EU-level loan scheme one can use the following estimates:

- *G* = the number of targeted new mobile students in a year = 318,000 (see section 4.3).
- *C* = loan amount per year = €12,000 (see section 4.3.3 and Table 15)
- *T* = the median income of highly educated employees in Bulgaria and Romania (countries with the lowest income) = €3,600
- α = repayment burden =10%
- $L = \alpha * T$ = repayment burden * income threshold = 10% * €3,600 = €360
- *N* = length of the training period (in years) = 1

As we can see, repayment model 2a has two important control variables:

1. Income threshold (*T* = €3,600 per year)
2. Minimum repayment level (L = €360 per year)

[71] The model is available on the project's website. Parameters can be changed. The model recalculates outstanding debt, the cost of subsidy, and financial needs and its components.

The income threshold should be the lowest median income for highly-educated people in the EU, and the minimum repayment should be set at a level that does not jeopardise the borrower's standard of living. The implicit repayment burden, α = *L/T*, can be chosen according to political considerations. If the repayment burden is too high, the loan will not be attractive for borrowers; if it is too low, repayment capacity is not sufficiently exploited.

The expected length of the repayment period is given by:

$$\frac{C \cdot n}{\alpha \cdot T} = \frac{C}{L} = \frac{12000}{360} = 33.33 \ \ years$$

As Table 15 in Section 5.2 shows, this parameter setting is feasible only if the repayment level is indexed to income growth in the country concerned. In this case debts can be repaid in 30-40 years, and the level of repayment is affordable for Bulgarians and Romanian earning a median income. The losses of graduates under the income threshold are financed from outside, while the vast majority of graduates who earn more can use the early repayment option. These effects are not taken into consideration in the calculations below.

The outstanding debt of the mature system (*D*) is given by:

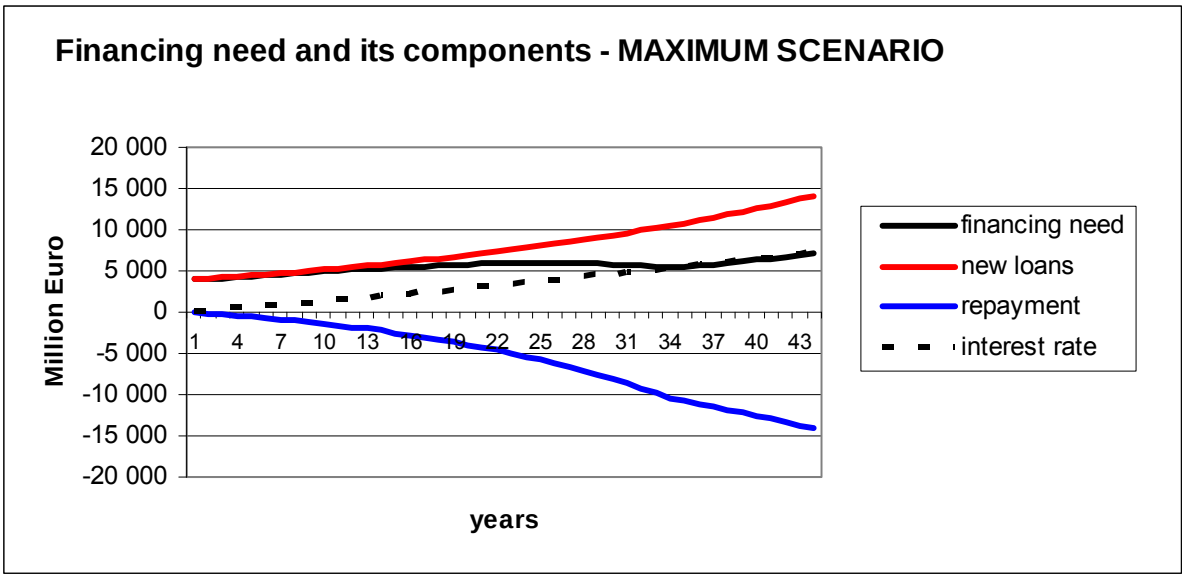
$$D = G\left(C \cdot \sum_{j=1}^{n} j + L \cdot \sum_{i=1}^{\frac{C}{L}} (i-1) \right) = 318000 \cdot (12000 \cdot 1 + 0.1 \cdot 3600 \cdot 539) = €65.52 \text{ billion}$$

The size of the mature loan portfolio in present value terms is **€65.52 billion** in the "Maximum" scenario. This is an important number, since the consequences of failure can be of this order of magnitude. The money is put into the system over the first 30 to 40 years. In this parameter setting the number of clients will increase gradually to (1+33,33) × 318 000 = **10.9 million**.

The net financing need for a given year is the change in total outstanding debt. If total debt increases, new funds are required. Assuming that refinancing loans are automatically renewed the net financing need is the sum of three components:

+ new loans to students
+ interest on refinancing debts
- repayments of graduates

Figure 10. Financing need per year and its components – Maximum scenario



Source: the authors

In this model the financing need is **around €5 billion per year**. Once the system is mature, the cash inflows of graduates' repayments offset the cash outflows of new loans.

It is important to emphasise that the net cash flow of the scheme (financing need) is not a measure of success. When the scheme is expanding (e.g. if the take-up rate and / or size of the loan increases) financing needs are higher, and vice versa. In a given year the net cash flow can be positive because regular and voluntary early repayments exceed new loans and the interest on refinancing loans. In this case the student loan scheme can repay the refinancing loans and, as a result, the invested capital decreases. Depending on circumstances, net cash flow can be positive or negative, i.e. a liquidity-management issue, provided that the lender has easy access to capital markets.

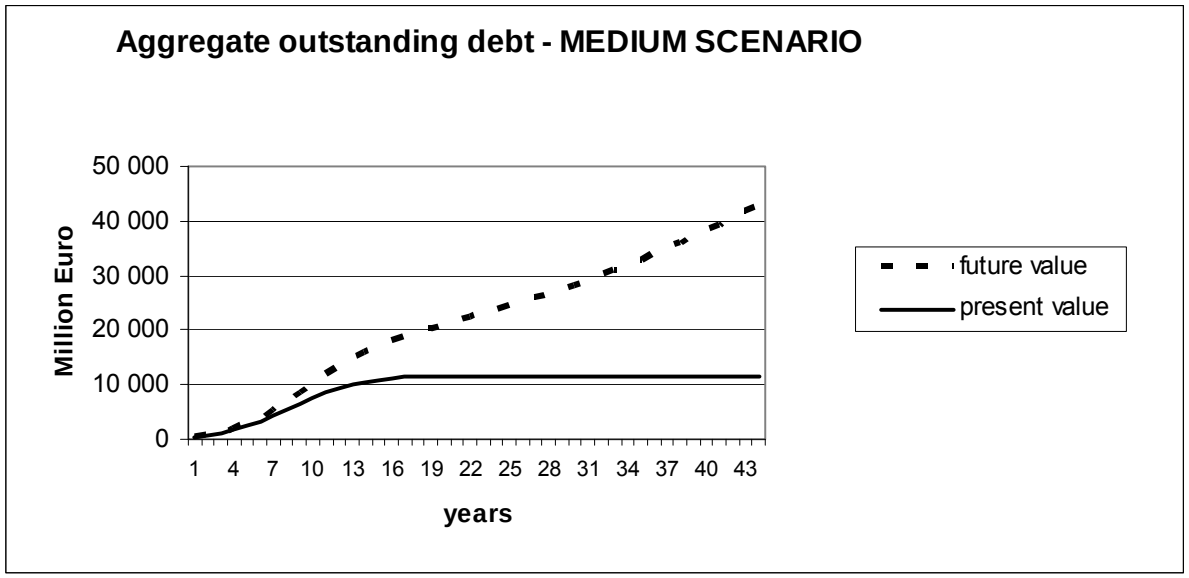
THE MEDIUM SCENARIO. In the previous scenario we overestimated the size of the scheme. Now we turn to a more realistic scenario:[72]

- The number of potential borrowers is the same (318,000 per year), but we assume that take-up rate rises gradually from 5% in the first year to 50% in the 11th year, and then stabilises at this level
- Because of the early repayment option, effective average repayment (€1,080 in the first year) is expected to be three times higher than the minimum repayment (€360 in the first year). As a result, the average maturity of the loan is much shorter (11.1 years rather than 33.3 in the Maximum scenario)[73]

Using more realistic assumptions (e.g. early repayments) the repayment period becomes shorter, the system matures earlier, hence the outstanding debt and number of clients can be significantly lower. See Figure 11.

[72] One can try other parameter settings as well with the help of the Excel model on the project's website.
[73] We made this estimation based on the Hungarian experience: in this scheme the effective repayment cash flow is almost three times higher than the required. In general, early repayments are expected to be higher if the interest rates are higher: the incomes are higher, the income differences are higher, the loan conditions are less differentiated and the scheme is less subsidised (because better-than-average borrowers are motivated to leave the risk cohort as quickly as possible).

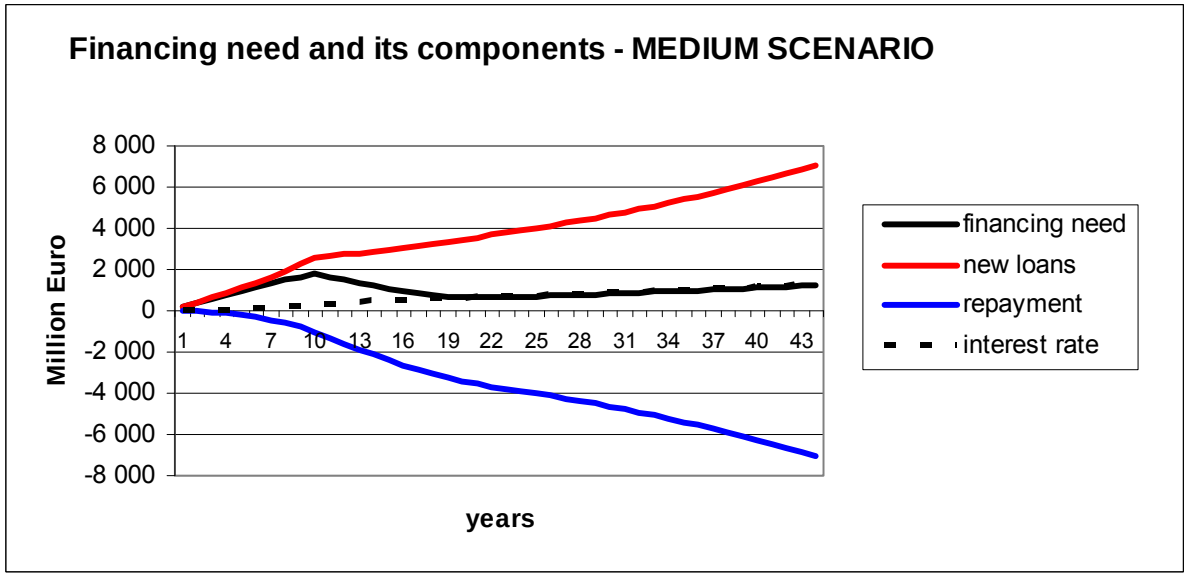
Figure 11. Aggregate outstanding debt of the EU-level student loan scheme – Medium scenario



Source: the authors

In this scenario the size of the debt portfolio stabilises at **€11.5 billion** after 21 years and the number of the borrowers in the mature system is also significantly lower: (1 + 11.11) x 0.5 x 318,000 = **1.9 million**. The financing need of the scheme is proportionally lower as well, as Figure 12 shows.

Figure 12. Financing need per year and its components in future value – Medium scenario



Source: the authors

The financing need (i.e. the amount required from capital markets) reaches its maximum in the 10th year (€1.8 billion), and averages **around €1 billion.**

MINIMUM SCENARIO (a pilot project). A pilot project would shed light on:

- The reaction of students (take-up rates in different countries)
- The behaviour of borrowers (default rates)
- Administrative problems (administrative costs)
- The reaction of investors (refinancing costs) etc
-

A pilot limits possible harmful effects, which are difficult to foresee.

On the other hand, some phenomena appear only at a large scale and over an extended time period. Furthermore, any delay may be costly in welfare terms (less mobility, less employment, less convergence), putting at risk the aims of Europe 2020.

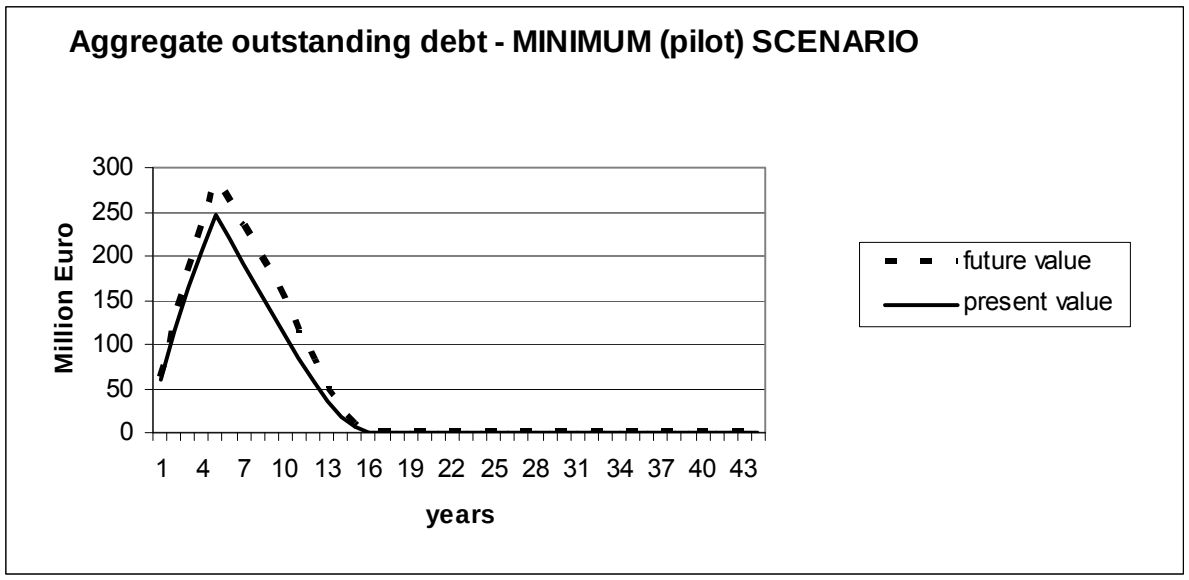
In the Minimum scenario, we apply two sets of constraints:

(i) A numbers constraint: the total annual number of new borrowers is limited to 5,000

(ii) A time constraint: loans are provided only over the first five years

Figure 13 shows the time evolution of the aggregate debt portfolio.

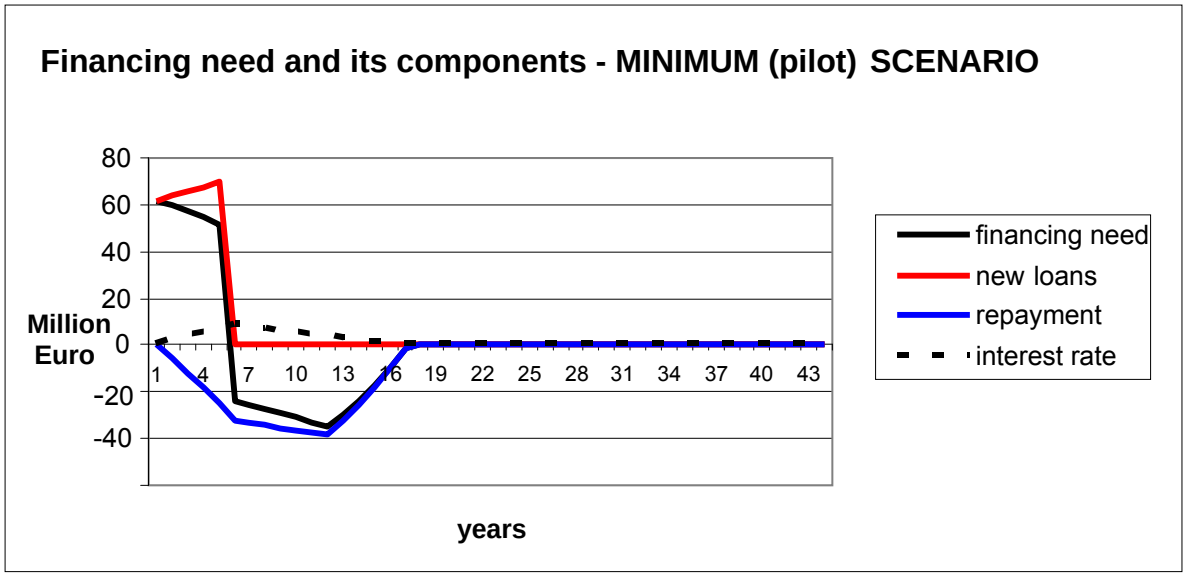
Figure 13. Aggregate outstanding debt of the EU-level student loan scheme – Minimum scenario



Source: authors

The size of the debt portfolio reaches its maximum in the fifth year (**€246 million** in present value). The scheme is expected to end in the 16th year (5 + 11.11 = 16.11 years) when the last generation fully repays its debt. The maximum number of clients is only 5 x 5,000 = **25,000**. The corresponding financial needs are depicted in Figure 14.

Figure 14. Financing need per year and its components in future value – Minimum scenario



Source: authors

In the first five years a decreasing amount of money should be involved. The financing need is maximal in the first year: **around €62 million**. From the 6th year the cash flow becomes positive when new loans are not available and all borrowers are repaying.

IN SUM. The three scenarios give very different results, summarised in Table 17.

Table 17. Comparison of the scenarios

Scenario	Maturity of the loan	Present value of the loan portfolio (billion)	Number of borrowers (million)	Financing need per year (billion)
Maximum	33.33	€65.52	10.9	~ €5 (average)
Median	11.11	€11.56	1.93	~ €1 (average)
Minimum	11.11	€0.25	0.025	~ €0.062 (max)

Source: the authors

For comparison, Table 17 shows data for the largest retail banks in Europe in terms of outstanding debt and number of clients.

Table 18. The size of the mature EU-level loan scheme compared with some big banks in Europe

	Centre	Number of clients (million)	Loans (billion)
Erste Group	Austria	17.30	€130.96
Gruppo Montepacchi	Italy	6.30	€151.00
Deutscher Postbank	Germany	14.00	€135.31
Intesa Sanpaolo	Italy	11.30	€37.80
UniCredit Group	Italy	40.00	€558.77

Source: Erste Group Loan Book

(http://www.erstegroup.com/sPortal/download?documentPath=ebgroup_en_0196_ACTIVEDownloadsFInvestor_RelationsTables_xls%2FIR_Tab_2010_enIR_Tab_H110_EG_fin_data_sheets.xls)
Erste Group Fact Sheet
(http://www.erstegroup.com/sPortal/download?documentPath=ebgroup_en_0196_ACTIVE%2FDownloads%2FPress%2FFactsheet%2Ffactsheet_eb-group_en.pdf)
GRUPPO MONTEPASCHI Financial Report, March 2010
(http://english.mps.it/NR/rdonlyres/BFE565F7-FCBE-46E4-9EB7-2AF607A5F33E/45463/1QFinancialReport1.pdf)
Postbank Group in Figures (http://www.postbank.com/-snm-0000595076-1286545948-0000002009-0000002923-1286990495-enm-pbcom_ag_home/-snm-0000595076-1286545948-0000002009-0000002923-1286990506-enm-pbcom_au_about_us/-snm-0000595076-1286545948-0000002009-0000002923-1286990517-enm-pbcom_au_postbank_profile/pbcom_au_postbank_figures.html)
Intesa Sanpaolo Profile
(http://www.group.intesasanpaolo.com/scriptIsir0/isInvestor/eng/chi_siamo/eng_profilo_intesa_sanpaolo.jsp)
Intesa Sanpaolo Financial Reports
http://www.group.intesasanpaolo.com/scriptIsir0/isInvestor/eng/investor_relations/eng_bilanci_relazioni_investor_relations.jsp)
*UniCredit Group Financial Reports (*http://www.unicreditgroup.eu/en/Investors/financial_reports.htm*)*

The potential size of the system highlights the importance of the following questions:

(i) How is it possible to reduce financing costs (the price of the money involved)?
(ii) Who will bear the risks and administrative costs?
(iii) Is this loan system part of the state budget or regarded as private debt (the classification problem)?

The next section takes up these topics.

6.4.2 Default risks and operational costs

One of the basic concepts of financial literature is that risk and return go together. If investors bear more risk then they expect a higher return. Thus financing costs can be reduced via (1) reducing risks and (2) wider and more transparent competition of the investors.

MARKET FAILURE AND ITS CONSEQUENCES. Private investors find student lending based on repayment model 2a difficult for several reasons:

1 A heterogeneous portfolio with no risk assessment; thus the risk appetite of individual borrowers varies considerably

2 No collateral

3 No fixed cash flow and no fixed maturity

4 Income verification is needed, thus the tax authority should be involved and protection of personal data is necessary

5 Debts are cancelled in cases such as retirement or disability

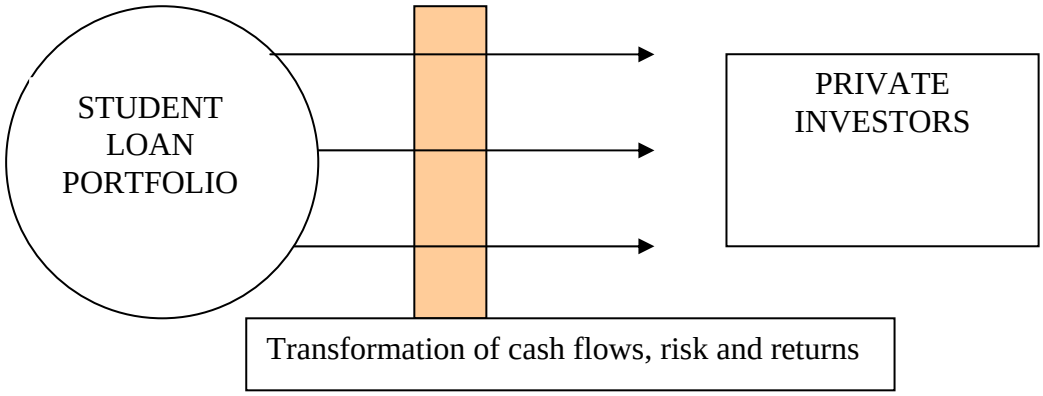
6 Debts are not inherited

7 Early repayment is possible without penalty

8 There is significant political risk: politicians may modify the model (for example, eligibility conditions, amount of loan, interest rate, grace period, etc.) in ways that may seriously harm long-run financial sustainability

Private investors are reluctant to finance a larger student loan scheme without state support, requiring state intervention to transform the cash flows and the corresponding risk-return characteristics of the loan portfolio, before passing it to the investors.

Figure 15. Transformation is needed before private funding



Source: the authors

Basically, cash flows should be transformed, because:

1 The term of the student loans are unusually long (30-40 years)
2 The cash flows are volatile and hard to forecast because of safeguards to low earners, the early repayment option etc

The necessary condition for the cash-flow transformation is access to EU funds or to liquid financial markets. Investors can also manage the liquidity risk but the price is likely to be high.

INTEREST RATE POLICY. We have seen that without state subsidy the interest rate on the student loans comprises:

interest rate = risk-free interest rate + default risk premium + operational margin

where the risk-free rate represents the cost of finance, the risk premium covers losses due to non-repayment, and the margin is to cover the operational costs. The level of the risk-free rate is an exogenous variable (LIBOR or TB rates), but the risk premium and the margin are partly endogenous because they depend not only on the risk perception and the risk aversion of investors but also on the efficiency of the loan system. In a well-designed and well-implemented scheme, all interest rate elements should be sufficiently low, since high interest rates may deter borrowers and increase the risk of moral hazard and adverse selection.

It is important to involve all stakeholders in financing the risks and costs, for example:

1 Retail banks have an interest in obtaining access to clients; in exchange they can offer client services, assist with repayment collection and /or take over some risks

2 Universities have an interest in attracting mobile students; in exchange they can help in contracting and administration as well as taking over some repayment risks

3 Member States have an interest in supporting talent circulation, therefore they might also contribute toward costs

All these elements can help to reduce the risk premium and the margin. But most importantly the EU should intervene to reduce the interest rate by taking over part of the costs. In a system where the state finances all losses resulting from non-repayment and operational costs, investors risk nothing, so would expect only the risk-free rate on their investment. In many countries, the interest subsidy is even higher, covering not only the risk premium and the margin, but also part of the risk-free rate. Badly targeted interest subsidies such as these are financially unsustainable. In addition, if the interest rate is less than the Treasury bond rate, (clever) students might be tempted to employ arbitrage tactics, drawing the loan and investing the sum in Treasury bonds. Clearly, this would be a perverse redistribution of taxpayers' money.

In conclusion, student lending cannot operate without EU subsidy, but excessive subsidy is also harmful. The right balance should be found according to these principles:

- The interest rate of student loans should not be lower than the risk-free rate (LIBOR or Treasury bond rate)
- The risk premium and the margin should be low, through a well-designed loan product and efficient management
- The risk premium and the margin should be financed in an optimal mix (students, Member States, EU).

The key purpose of the mechanism's design is to determine the optimal risk-sharing mix between the EU and students. There are two causes of non-repayment:

1 Non-systemic or idiosyncratic factors such as death, disability, emigration, temporary low income, sporadic unemployment etc.

2 Systemic factors such as macro shocks, recession, global unemployment, bad parameterisations, political changes, environment catastrophes, etc.

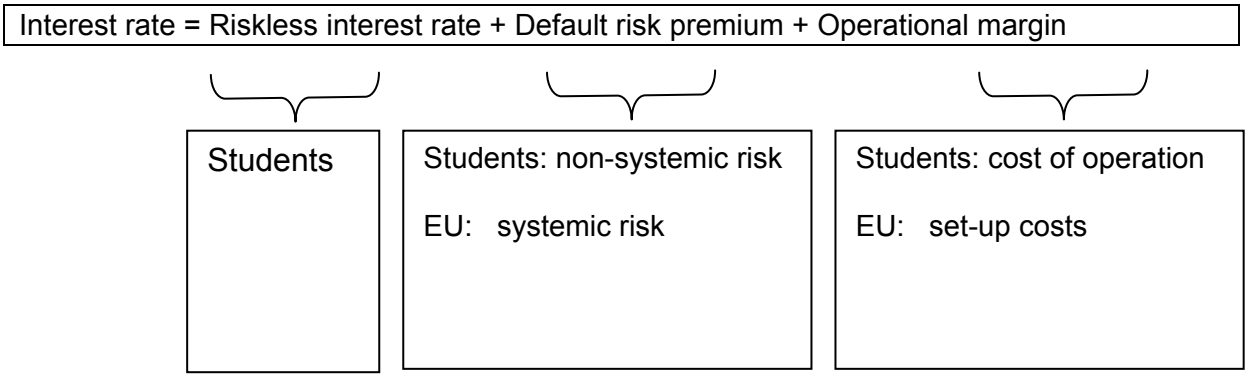
Non-systemic factors can be modelled and calculated, and can thus be managed by the traditional risk-management techniques used in the insurance and banking sectors. However, most systemic factors are uncertain, hence difficult to evaluate and hedge. A reasonable share of risks and costs is for non-systemic risks to be financed by the risk community of borrowers, and systemic risks to be financed by the EU.[74]

Operational costs could also be shared between the community of borrowers and the EU, with ongoing operating costs financed by borrowers and the set-up costs by the EU.

Figure 16 summarises a risk- and cost-sharing model based on the minimum of EU subsidy necessary for the safe operation of the scheme, similar to the subsidy system of the Hungarian student loan scheme.

[74] Of course, Member States can also participate in the financing but, as argued in Section 1-3, mobility should be supported at EU level.

Figure 16. A reasonable model of risk- and cost-sharing with the lowest possible EU subsidy



Source: the authors

This model possesses a reasonable level of EU subsidy. Of course, if more EU financing is available, it is possible to subsidise some or all of the non-systemic risk and/or the cost of operation. However, the EU subsidy should not be higher than the sum of the total default risk premium and operational margin, i.e. the interest rate paid by graduates should not be lower than the risk-free rate, for fiscal reasons, for distributional reasons, and to avoid creating arbitrage possibilities.

Students finance their share through an interest rate that may include some or all of the risk premium and margin. Both should be variable and recalculated each year in the light of actual conditions and expectations. Overpayment by "good" borrowers helps to finance the losses of "bad" borrowers. This is a kind of "joint liability" where borrowers provide a cross-guarantee for each other.[75] If, for example, incomes last year were lower, and / or repayment discipline worse than expected, the risk premium will increase. Moral hazard can be significantly reduced if borrowers who systematically do not repay (say after 6-12 months) are pursued by the relevant collection agency, which could require the whole debt to be repaid immediately, perhaps with the names of delinquent borrowers published on the interbank list of "bad borrowers".

At the same time, risks related to systemic factors can be covered by the EU through a guarantee. Thus, in the case of a macro shock when all graduates are unemployed or leave the country or die in a civil war, the EU will consolidate the system. However the EU guarantee should not be called down for individual defaults during normal operation, since these losses are foreseen and covered by the cohort risk premium.

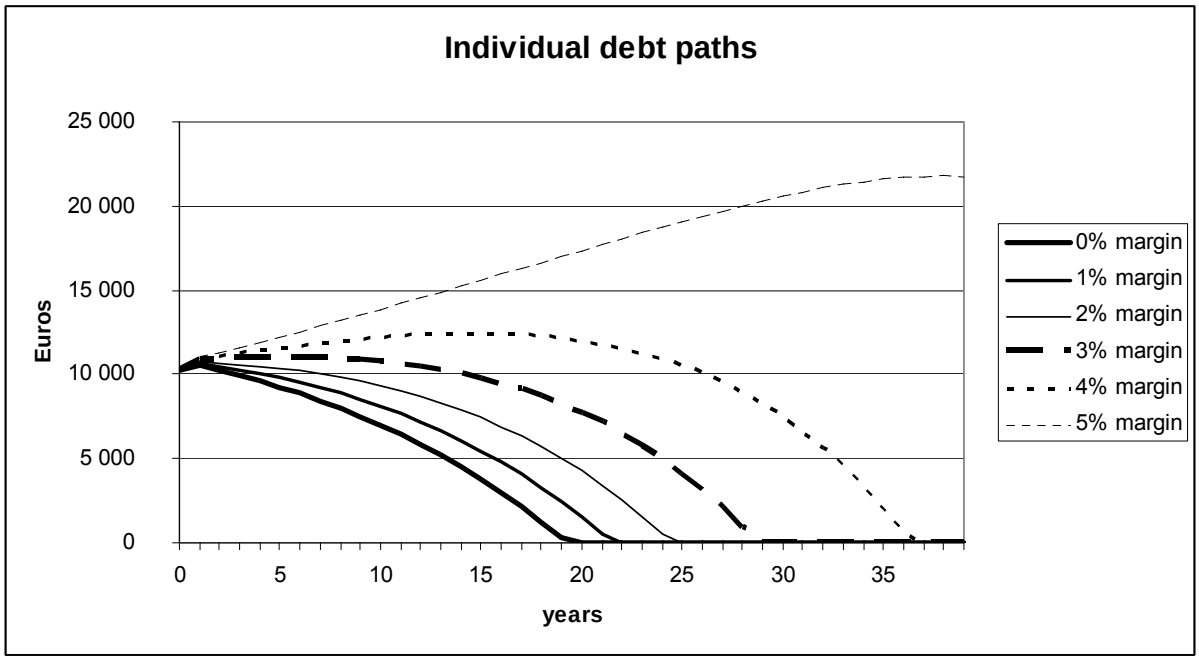
Operational costs (buildings, staff, computers, etc.) could be financed directly by the EU; alternatively, the costs could be spread over many years, which would increase the interest rate.

If a significant part of risks and operating costs are taken over by the EU through a guarantee and upfront financing of the set-up costs, the risk premium and margin paid by the students are reduced to a level that makes student loans attractive, especially in comparison with bank loans available on the free market without collateral.

[75] One possible remedy of moral hazard and adverse selection emanating from asymmetric information situation is applying joint-liability contracts, see for example Tirole 2005.

COSTS OF EU SUBSIDY. Calculations suggest that the total margin[76] should not be higher than 4%. To explain, consider the worst case of a Bulgarian, who earns €3,600 per year, borrows €10,000, starts to repay with a very high repayment burden, say 15% of net income. As before, assume that the real interest rate equals the real growth rate of the income. If the margin is 0%, he/she will be able to repay in 19 years. As the margin increases, so does the maturity of the loan. With a margin of 4%, full repayment requires 37 years. Figure 17 shows that any further increase in the margin is useless because debts are cancelled at retirement; thus the repayment cash flow remain the same.

Figure 17. The effect of different margins on the individual debt paths



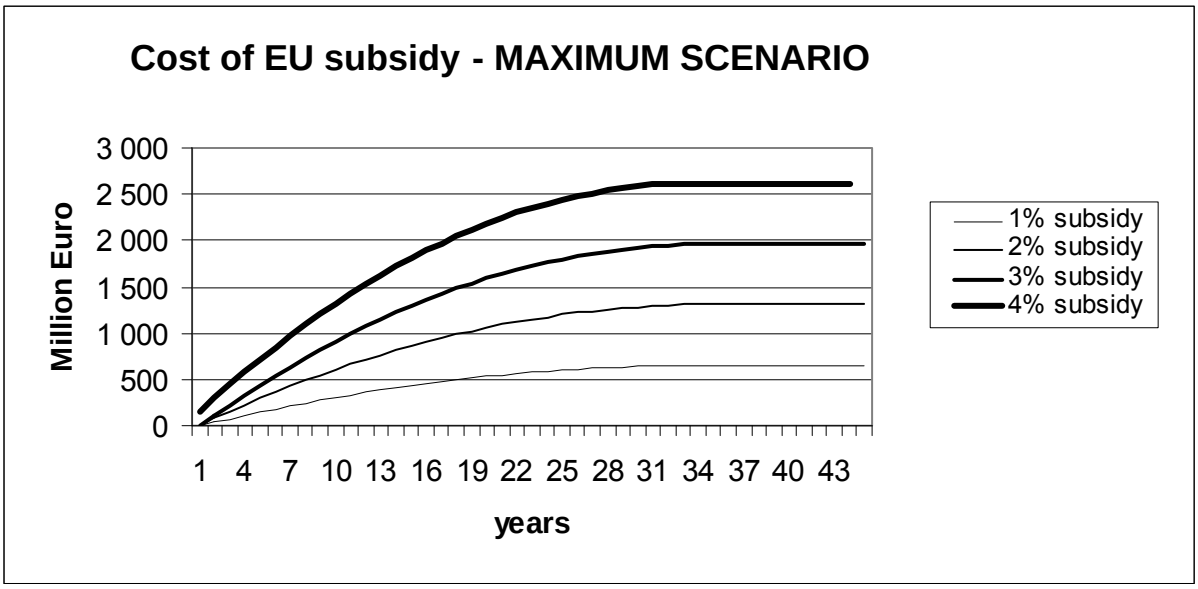
Source: authors

These considerations suggest that a well-designed scheme should operate with a total margin of **less than 4%**. As we can see in section 4.1, in the best practice national student loan schemes the operational margin is around 1%. Therefore we can set a target for the management of the EU loan scheme to keep the operational margin below 1% and the default risk premium under 3%.

This rule suggests that the EU subsidy should be somewhere between zero (no subsidy) and 4% (total subsidy). The cost of the interest subsidy can be easily calculated: a 1% interest subsidy results in EU expenditure of 1% of the total outstanding debt. Figures 18, 19 and 20 show the cost of the interest subsidy in the different scenarios and in present value terms.

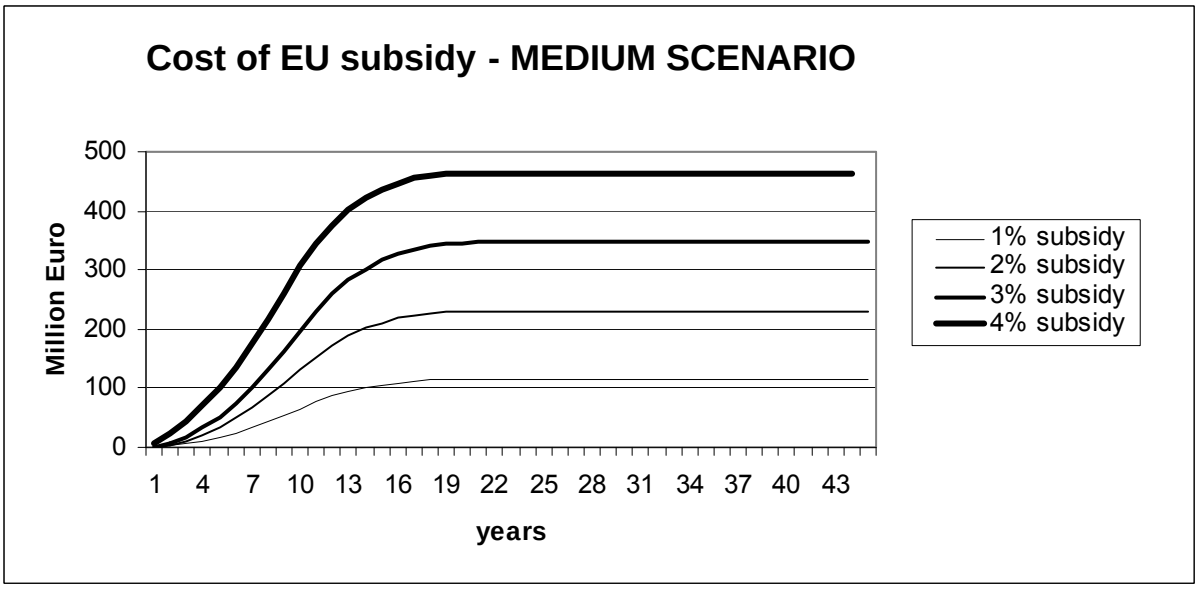
[76] The total margin is the sum of the default risk premium and the operational margin.

Figure 18. Cost of interest rate subsidy per year in present value – Maximum scenario



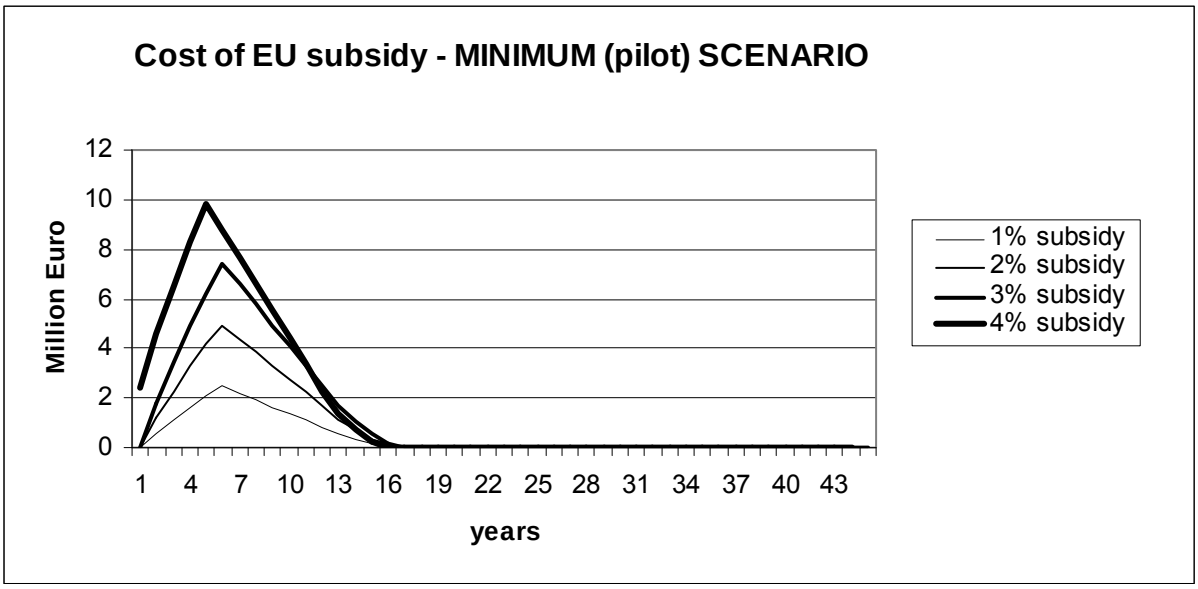
Source: the authors

Figure 19. Cost of interest rate subsidy per year in present value – Medium scenario



Source: the authors

Figure 20. Cost of interest rate subsidy per year in present value – Minimum scenario



Source: the authors

In conclusion, the cost of the EU subsidy depends on two factors:

1. The size of the scheme, which is hard to forecast
2. The extent of the interest rate subsidy, which depends on the EU

The cost (in present value) of a 1% interest rate subsidy for one borrower can be easily calculated:

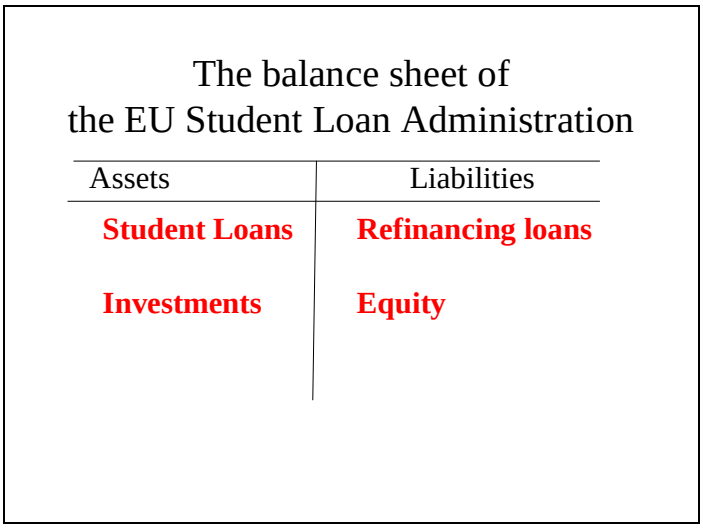
- In the Maximum scenario: €2,060 (a loan of €12,000 repaid in 33.3 years)
- In the Medium scenario: €727 (a loan of €12,000 repaid in 11.1 years)
- In the Minimum scenario: €727 (a loan of €12,000 repaid in 11.1 years)

We can also compare the costs of the subsidy with the overall budget of the structural funds. For the period from January 2007 to December 2013 it was €277 billion, i.e. about €46 billion per year.

6.4.3 Funding

If we look at the balance sheet of the student loans administration, we can see that student loans of long and indefinite maturity are on the asset side, while refinancing loans of shorter maturity are on the liability side (investments and equity is much less significant). See Figure 21.

Figure 21. Balance sheet of the SLA without securitisation



Source: the authors

Borrowing by the student loans administration transforms private funds into student loans, managing the liquidity risk (renewing the loans/bonds), the market risk (exchange rate and interest rate changes), and the credit risk (some students will not pay back the whole loan) of the whole portfolio. Note that the possibility of early repayment increases the liquidity risk (for instance if early repayment drops unexpectedly).

An EU guarantee could have two forms:

1. An asset-side guarantee lies behind each student loan: if the particular borrower does not repay, the guarantor immediately takes his place

2. A liability-side guarantee can be called down only when the SLA is not able to meet its obligations of repaying the refinancing debt on the liability side, due to risks that are not covered by the risk premium paid by the borrowers

Most student loan schemes operate with an asset-side guarantee; the only exception is the Hungarian loan scheme. An asset-side guarantee is more expensive; it also creates adverse incentives during the collection of the repayments (it is easier to call down the guarantee than to pursue the borrower). On the face of it, a liability-side guarantee system looks to be the better choice, but subject to the major caveat of the classification problem discussed in section 6.4.5.

For the sake of completeness, another possible financing model is to put some or all student loans into a pool, provide an asset-side EU guarantee, transform the cash flows and create different structured products which can be sold to the investors. This approach removes student loans from the balance sheet of the student loans administration. This type of securitisation model was used, for example, in the US for many years (Sally Mae guarantee fund), but in July 2010 the federal guarantee system was completely replaced by direct federal loans.

When involving private investors, transparent competition is desirable. Such wholesale lending can be through a mix of the following:

(i) Issuing student loan bonds on debt markets
(ii) Loan agreements or credit lines with big banks (e.g. EIB)

(iii) Direct investments from pension funds
(iv) Issuing securitised student loan obligations

Wholesale investors will be interested if the proposition makes commercial sense, in terms of:

(i) Attractive cash flows (conventional, fixed, short-term cash flows)
(ii) Acceptable risks (good portfolio, EU guarantee)
(iii) Reasonable return (corresponding to the risks investors face)

If only some preselected retail banks were involved, competition would not be wide and transparent, financing would be suboptimal, and financing costs likely to be higher than in the wholesale model.

6.4.4 Market risk management

Financial institutions face many types of risks:

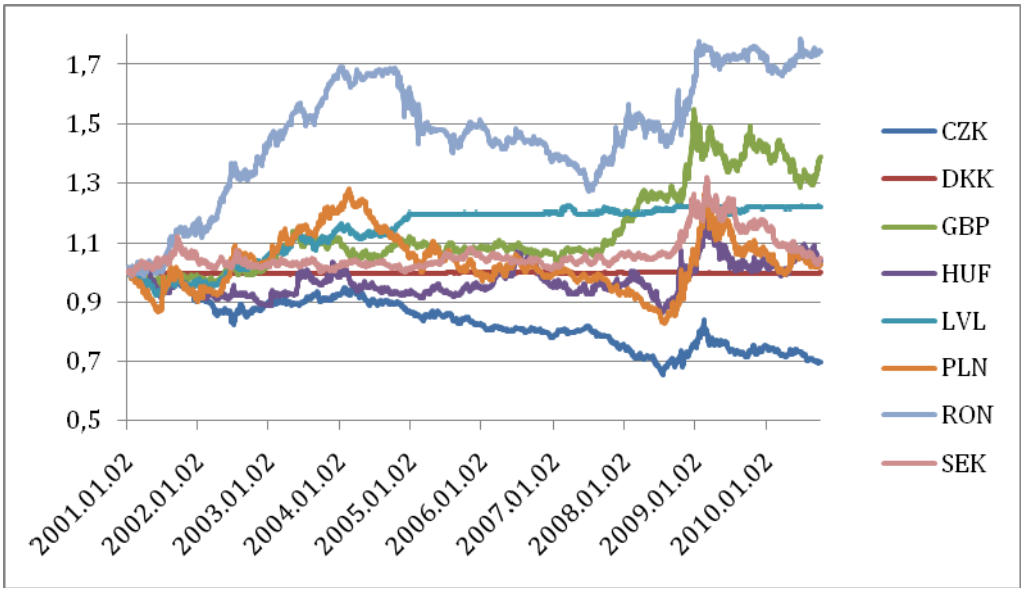
1. Default risk
2. Liquidity risk
3. Operational risk
4. Market risk etc

In the previous sections we covered the first three (especially default risk and operational risks). This section discusses market risk.

European lending for mobile students involves two sorts of market risk: foreign exchange (FX) rate risk and interest rate risk.

The exchange rate regimes of the EU Member States are not yet unified. Although under the Maastricht Treaty all EU Member States are obliged to join the single currency, the UK, Denmark and Sweden have special opt-outs. Most of the central European countries have not yet fulfilled the criteria of the Maastricht Treaty or have just joined the European Exchange Rate Mechanism (ERM-II). Accordingly 16 of the 27 EU members have already joined the euro zone, five countries have pegged their national currencies to the euro, (of which four have entered the ERM-II system), and six Member States have a floating exchange rate regime (Czech Republic, Hungary, Poland, Romania, Sweden and the UK). Figure 22 illustrates how significant exchange risk can be.

Figure 22. Foreign exchange rates against the euro 2001-2010



Source: ECB statistics
Remark: 01.01.2001 = 100%

Suppose, initially, that all students borrow in euro, debts are denominated in euro, the interest rate on the loan is denominated in euro (the euro rate of the best borrowers + a margin), and graduates have to repay in euro. Two problems arise in this simple model:

1 Mobile students studying in the Czech Republic, Hungary, Poland, Romania, Sweden or the UK face exchange rate risk since the student loan is disbursed in several instalments. For example, if the British pound strengthens relative to the euro, the real value of the loans for students in the UK will decline.

2 Graduates working in the Czech Republic, Hungary, Poland, Romania, Sweden or in the UK face exchange rate risk because the repayment obligation is in euro while their income is in a different currency

The first problem is less serious, since the bulk of the student loan is paid at the beginning of the course. In contrast, the repayment period is much longer (up to 40 years) and graduates with non-euro income face considerable exchange rate risk, potentially generating defaults and jeopardising the financial sustainability of the scheme. Moreover exchange rate risks could discourage students from taking out a loan. An additional but important problem is that periodical conversions could be expensive.

In order to reduce the foreign exchange risk and its effects, the student loans agency could offer hedging. It could

1. Offer to convert the allowance from euro to another currency during studies at a fixed rate. In this way students can plan their budget and are immune to exchange rate fluctuations
2. Offer to convert the debt from euro to the currency in which the graduate has his income. In this way graduates can significantly reduce their exposure to exchange rate risk.

In principle, students could hedge their positions on their own, but the student loans agency can do so more cost-effectively, because (a) it has a big multicurrency portfolio where

conversions may offset each other and (b) it has a better market position and can trade at lower margins.

Debt conversion raises some technical questions: what is the optimal hedging strategy, and how do you determine the interest rate in different currencies?

If a Hungarian student obtains a master's degree in France, takes out the loan in euro and then works in Hungary, he has a clear interest in hedging his exchange-rate risk and in switching his debt into Hungarian forint. The possibility of changing the currency of the loan is optional and allowed only for the purpose of matching exposure, not for speculation. But what happens if after some years the same graduate goes to work in Germany? Clearly, he should be allowed to switch the debt back into euro. But it is possible that the debt will be higher than initially because of adverse changes in exchange rates. In practice, nobody can be sure of his future career path, and so exchange-rate risks cannot be perfectly hedged.[77] At worst, the graduate repays all his active life but cannot fully repay his debt before retirement. In this case the community of borrowers and the EU pay the costs in form of a higher risk premium.

When debt is converted into another currency, the relevant interest rate should also be determined. Consider a hypothetical situation where the student's debt is denominated in euro and the interest rate determined as the riskless euro interest rate (e.g. LIBOR or the German treasury bond rate) plus a default risk premium plus an operational margin, say: 3% + 2% + 1% = 6%. The graduate returns to Hungary and converts his debt into Hungarian forint. What should the corresponding interest rate be in forint? One option is the riskless rate in forint (BUBOR or a treasury bond rate in forint) which might be much higher, say 6% plus the same default risk premium and operational margin, i.e. 6% + 2% + 1% = 9%. This formula is fair and helps to avoid arbitrage.

All three elements of the interest rate may change over time. As discussed in Section 5, a fixed interest rate over the whole repayment period would be too risky for both borrower and lender. It is preferable to have a variable interest rate with a reasonable resetting period (1-2 years) and algorithm:

- The riskless rate should be linked to a reference rate (interbank rate, TB-rate etc.)
- The default risk premium can be fixed (saying that all the rest should be financed by the EU) or can be recalculated each year depending on prevailing conditions and the performance of the loan portfolio
- The operational margin can also be fixed at a low level or recalculated each year

The student loans agency has the task of harmonising the student loans and refinancing loans in terms of their sensitivity to interest rate movements.

6.4.5 The classification problem

Devising a system where students borrow mainly from private sources but where income-contingent repayments are collected by the tax authorities is more difficult than it sounds. International guidelines on national accounting include discussion of the dividing line between public and private spending. The issue is how to ensure that loans from private sources are classified as private spending under such guidelines.[78]

[77] Theoretically hedging instruments could include option-like products, but the price of the FX options are too high, and this type of protection would multiply the costs of the loan.

[78] The EU guidelines are the European System of Integrated Economic Accounts issued by Eurostat.

To simplify a complex problem, four factors are relevant when deciding whether student loans are public or private:

- Who designs the scheme? Does the government set the rules, or the private lender?
- Who decides whether a student is eligible, e.g. can a private lender refuse to lend to bad risks?
- Where does the money come from?
- Who bears the risk of default, i.e. at the margin does the private lender bear the risk or is there a government guarantee?

If a student takes out a conventional bank loan, it is the bank's scheme (e.g. the bank can decide what interest rate to charge); the bank decides whether or not it wishes to lend to the student; the money he/she borrows comes from the bank; and the bank bears the risk that he/ she will fail to repay. Clearly this is a private scheme. In contrast, if the government designs a loan scheme, decrees that all students are eligible, provides the money that students borrow and bears the risk of default itself, the scheme is public.

Problems arise where a scheme meets some of the criteria to be classified as private, but not all. Suppose a student takes out a loan from a bank, but the government gives the bank a full guarantee. Under international guidelines, the *entire* loan will generally count as public spending. Though on the face of it paradoxical, the logic is straightforward: since the government guarantees repayment, no risk is transferred to the private lender. In taking out the loan the student is therefore acting as an agent of government, and hence the loan is government borrowing. Though the student nominally borrows from a private bank, all such lending is classified as public.

Though there is no mechanical way of assessing whether a particular scheme conforms with the classification criteria, there is increasing agreement about two aspects of any scheme: that what matters is not the letter of any arrangement but its intent, and that the critical element is risk transfer. Thus the fact that a student borrows from a private bank is not on its own sufficient to ensure that the loan is private; it is only private if the lender faces a significant fraction of the risk. It follows that an element of judgement is inescapable. Suppose the government agrees to underwrite losses of up to x% of total lending, private lenders bearing the risk of losses above that level. If other relevant criteria are met, if x = 2% there would be general agreement that the scheme was private; on the other hand, if x = 75% the scheme would almost certainly be classified as public, since risk transfer would be a fiction, not a reality. Clearly, the value of x which tips the scheme from private to public involves judgment. The issue is germane not only to private financing of student loans, but also to such areas as transport and investment in hospitals.

6.5 Institutional architecture

6.5.1 The options

We argued in previous sections that (1) an EU-level loan scheme is desirable for mobile students, (2) the loan product should be determined according to EU-level policy objectives and (3) some EU-level subsidies are needed, either through direct financing and / or guarantee.

The starting point for the institutional design is that an EU-level agency determines the loan product and provides EU subsidies. We can differentiate several models according to who is ultimately the lender institution taking the risks of the lending activity and managing the cooperation with all the other stakeholders, for example:

1. A specialised EU agency
2. Piggybacked on other, lower lever stakeholders:

    2a) National tax authorities
    2b) National student loan centres
    2c) Universities and / or
    2d) Banks

In all of the five models the following activities can be either retained by the lender institution or outsourced to other agents:

- Communication and client service
- Administration
- Collection of the repayments
- Financing and risk management

The institutional models have different advantages and disadvantages in terms of the technology, the cost of information, the scale effects, the externalities, the synergies and most importantly, the agency costs.

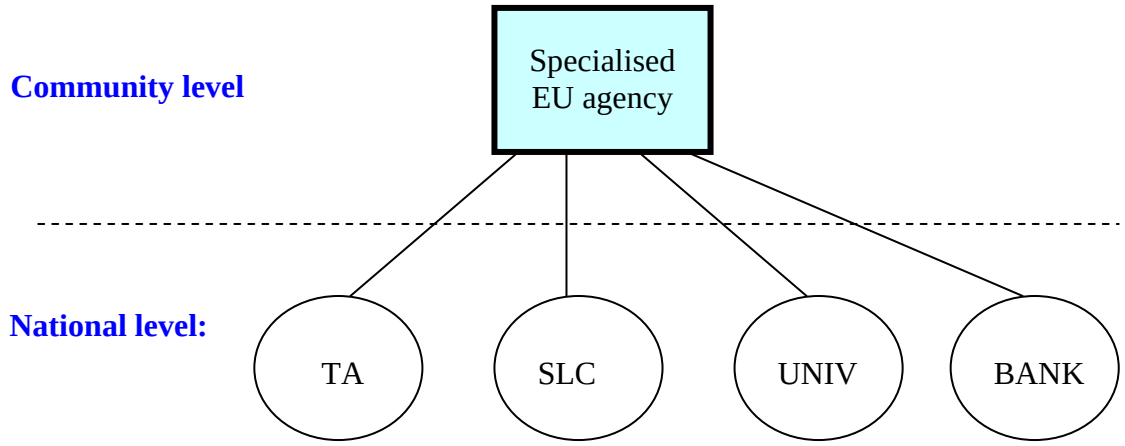
Agency cost has two main sources:

1. Costs that are inherent in using an agent (e.g., the risk that agents will use organisational resources for their own benefit and not for the achievement of EU objectives)
2. The costs of techniques to mitigate these problems (e.g., the costs of monitoring and control or the costs of incentives to motivate the agents)

In order to reduce agency costs, it is crucial to set clear targets, for example in terms of financing costs, the default rate, administrative cost (the best practice models operate at an operational margin of less than 1%), take-up rates, etc. However, for the reasons set out in section 6.4.1, the cash flows and the financing needs of the scheme are not appropriate performance measures. Nevertheless, less important, short-term measurable targets should not dominate the important, long-term hard-to-measure objectives.

The rest of this section discusses the most important attributes of the five institutional models outlined above.

Figure 23. Model 1 Specialised EU agency



The model:

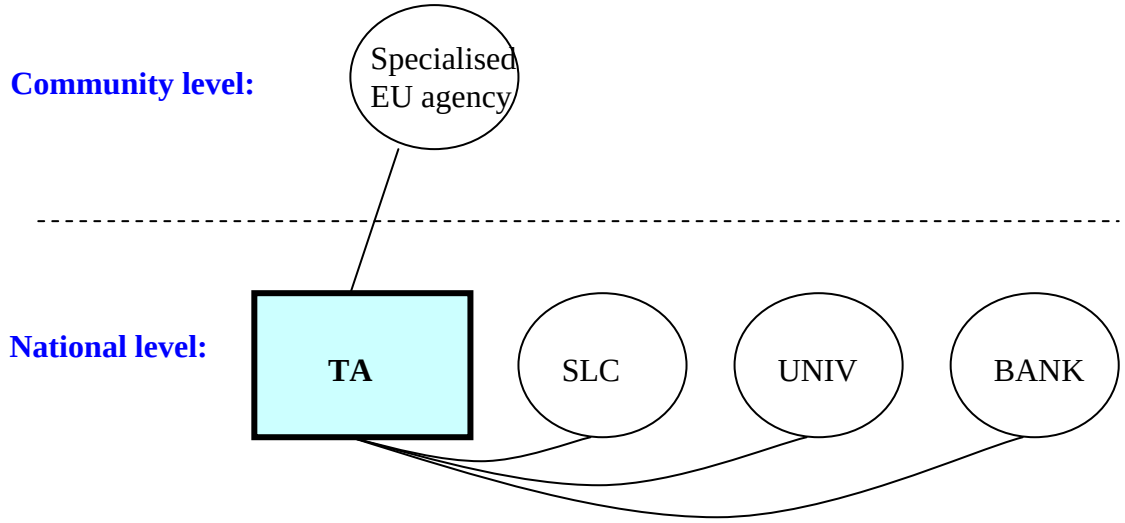
- The specialised EU agency could be a division of an existing EU organisation
- Many activities can be outsourced. Tax authorities (TA) can provide information or act as final collector. National student loan schemes (SLC), universities (UNIV) and banks (BANK) may help with client services or collecting repayments
- Member States can contribute to the success of the scheme by ensuring the assistance of the tax authorities and / or the existing student loan systems
- Universities have a considerable interest in improving student mobility. Furthermore they have natural advantage in reaching students directly, to provide personalised information, certifications and information
- Banks are interested in new clients especially the best HE students. This value added can be exploited in several ways: (i) they can provide marketing, client services, administration and financial services at a low (zero) price, (ii) take on a part of the default risk (this is less realistic), or (iii) pay a fee in line with the number of new clients
- The outsourcing strategy could be country specific

Advantages:

- The EU-level agency represents EU policy objectives. One agency – one objective – one task: the performance is transparent and achievements can be easily monitored. Different objectives and interests conflict less within a single organisation; therefore the agency cost is lower, increasing both efficiency and effectiveness. All the subtasks are delegated to the most appropriate agents.
- This new institution would help national loan schemes to collect the repayments of immobile students who become mobile graduate.
- The CEDEFOP survey on European student lending practices also highlights that specialised institutions are more successful in managing extensive loan schemes (e.g., the UK, SE, NL, HU). Moreover, administrative costs are usually lower with a specialised agency than in a retail-bank based model.
- The wholesale financing model (described in section 6.4), which ensures wide and transparent competition in financing can be easily implemented.

Disadvantages: “another EU agency”

Figure 24. Model 2a Piggybacked on the national tax authorities



The model:

- Student lending is delegated to the national tax authorities, as in Australia and New Zealand
- The tax authorities can implement repayments as a payroll deduction
- In principle, tasks can be outsourced similarly to the specialised agency model, but in practice is more difficult

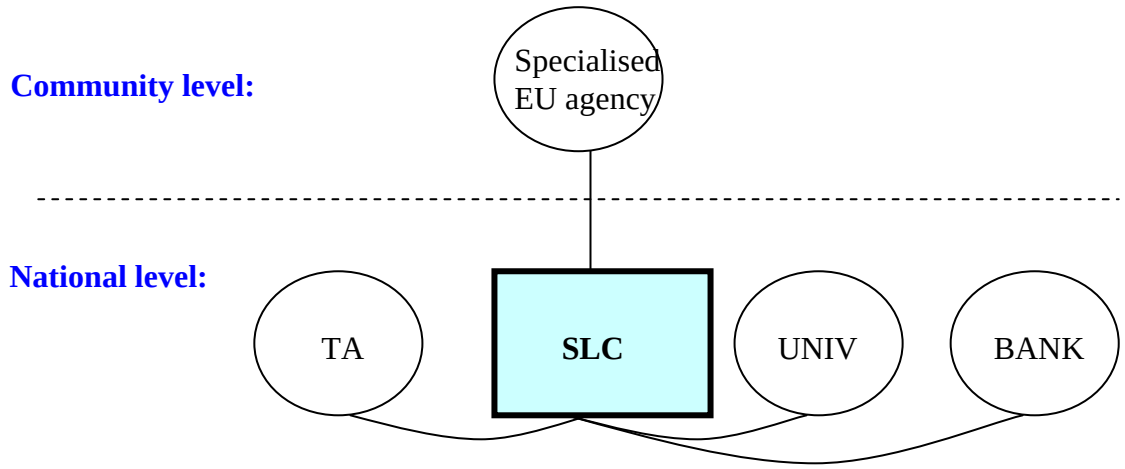
Advantages:

- Tax authorities have technical advantage in collecting income contingent repayments
- Tax authorities have strong enforcement powers
- Much of the necessary information and procedures for student lending are already in place
- National tax offices can solve many mobility issues
- The development of tax systems may have significant positive externalities

Disadvantages:

- An EU agency is needed to monitor and control the tax authorities and to provide the EU subsidy (financing and guarantee)
- National tax systems are neither developed nor integrated enough to fulfil this task
- The operation of national tax systems is difficult to harmonise, because timing, definitions and rules, etc. are very different
- Tax authorities have no direct interest in student lending. The resulting lack of motivation can be costly
- Some Members States may be reluctant to support the loan scheme (fears of brain drain, lack of resources to develop the tax system), aggravating the agency problem
- It is difficult to imagine wholesale finance organised by the tax authorities
- Presumably, the student loan debts will be classified as public. (It is hard to imagine, that tax authorities involve private funds into the financing)
- It is not clear how national tax authorities would share the contracts of mobile students and graduates among themselves

Figure 25. Model 2b Piggybacked on the national student loan centres



The model:

- National student loan centres (SLC) would get a new product defined, supported and monitored by the EU
- The EU loan would be separate from other products
- The loan could be provided either by the home or the host country' SLC
- Many tasks can be outsourced

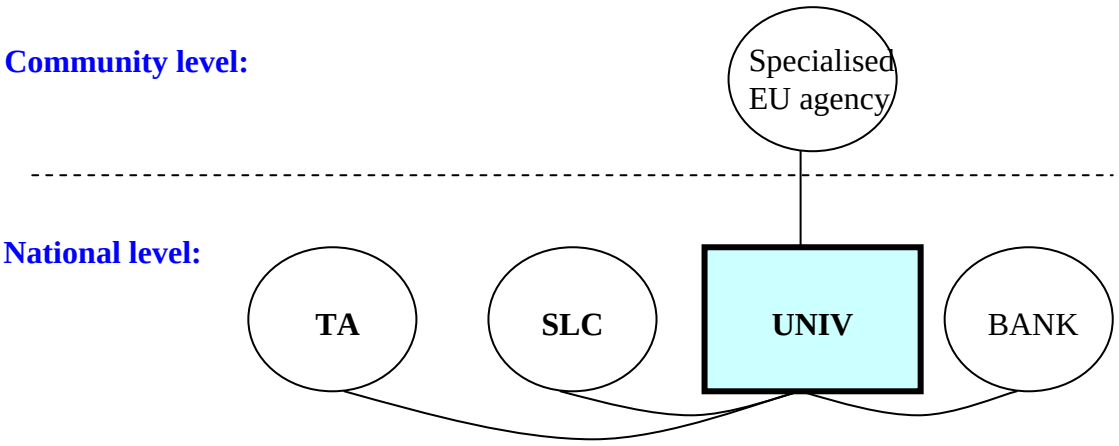
Advantages:

- SLCs have a technological advantage in managing cooperation among different stakeholders
- Member States would be motivated to set up a student loan centre if it did not already exist, which would also help immobile students
- National SLCs would be motivated to cooperate at EU level and set up an integrated network. This would create a significant positive externality, helping national SLCs to collect repayments from mobile graduates (even if the student was non-mobile)

Disadvantages:

- An EU agency is needed to monitor and control the SLCs and to provide the EU subsidy (financing and guarantee)
- SLCs may have different objectives, which can result in high agency costs
- In many cases, SLCs are nonexistent, or small or inefficient
- Well-established SLCs vary widely: eligibility rules differ; repayments may be income contingent or mortgage type; the type of institution varies; the loan may or may not be subsidised. For all these reasons, synergies may be limited

Figure 26. Model 2c Piggybacked on the universities



The model:

- Student lending is delegated to universities as for example in the U.S. (Yale, Princeton etc.)
- The loan product is defined, supported and monitored by the EU
- Many tasks can be outsourced to other stakeholders
- Administrative costs could be financed by the universities

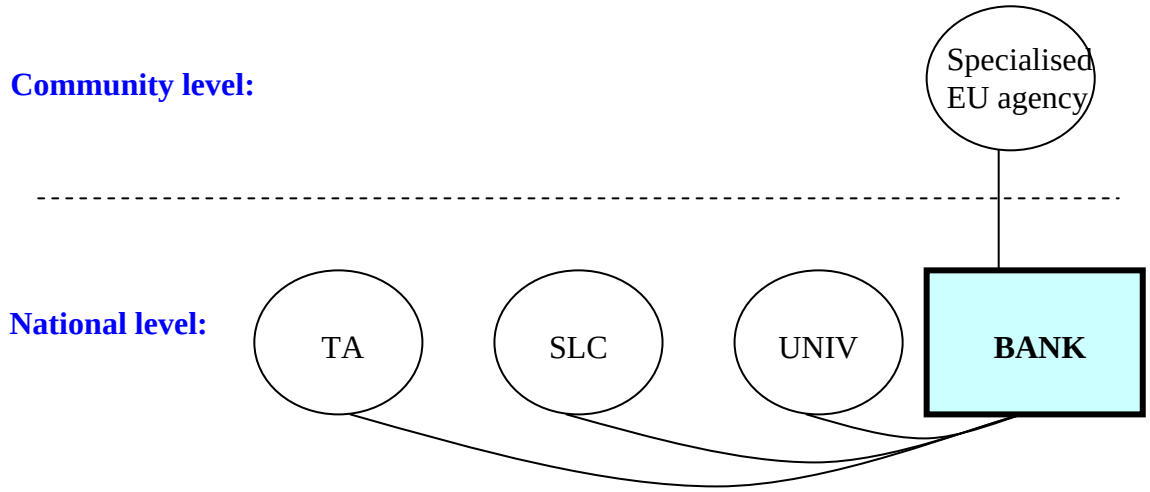
Advantages:

- Universities are interested in attracting mobile students, and so clearly profit from this new instrument
- Agency costs can be low, since the interests of universities are close to the EU objectives
- Universities are specialised in client service and administration, all information is directly available

Disadvantages:

- An EU agency is needed to monitor and control the SLCs and to provide the EU subsidy (financing and guarantee)
- Universities are not good at financial management; it is difficult to envisage wholesale lending operated by universities
- Universities cannot be forced to participate, and some might be reluctant to provide this service
- Lending is not in the main purpose of universities. Involvement in loans may alter their objectives and resources, especially if they take on some default risks
- Universities are not good at collecting repayments. This core activity should be outsourced, raising issues of agency costs again
- Universities are fragmented, so that economies of scale cannot be realised

Figure 27. Model 2d Piggybacked on the banks



The model:

- Student lending is delegated to banks as in many countries for example Germany, Finland, France, Italy. The loan product is defined, supported and monitored by the EU as in the previous models
- Two solutions are possible: (i) banks set up a specialised student loan agency together or (ii) each bank operates on its own. In any case, the EU loan would be separate from other products and activities (firewall)
- It is possible to involve all the banks, or a consortium (if not contrary to competition law)
- Many tasks can be outsourced in this model as well

Advantages:

- Banks have technological advantages in running bank accounts, to execute financial transactions and to manage default, market and other types of risks. Banks have branches in several countries
- Banks could bear a part of the risks and administration costs in exchange for the new clients

Disadvantages:

- An EU agency is needed to monitor and control the SLCs and to provide the EU subsidy (financing and guarantee)
- The objectives of a profit-making bank are very different from those of the EU. Thus agency costs are likely to be high. In the US and Canada in 2010 the student lending system was radically changed. After a long debate it was concluded that it was preferable for the state to make direct loans to students rather than providing guarantees for loans given out by the banks
- International experience (see for example the CEDEFOP survey) shows that administrative costs can be high in a retail bank model
- Loans are financed from the bank's resources, the costs are not transparent, and thus there is not wide competition among the investors. This is particularly the case if only a consortium of banks is involved

6.5.2 Issues and challenges

It is beyond the report's remit to suggest a specific administrative structure. Instead, this section attempts to establish the parameters of what might be feasible (Table 19), and outlines the particular challenges that an EU-wide system would face.

Table 19. Essential administrative functions in a centralised and decentralised model

Function		**Roles and responsibilities In a centralised function**		**Roles and responsibilities In a decentralised function**
Management Accounting & Financial control		Maintenance of all financial records, reporting and production of company accounts. The role will also include liaison with banks and other financial institutions.		Role would remain the same to ensure function meets the requirements of legal and other compliance issues and requirements.
Computer systems and information technology development		This will include control and development of all software[79].		Systems operational activity could be outsourced but would require control and monitoring as a centralised function from a central point.
Internal Audit which would include college and university liaison / auditing, and monitoring / control of external support functions.		Audit responsibility and reporting on all internal functions. Developing relationship management and control over college administration. It should also cover outsourced facilities management e.g., printing etc.		This role is central to an ability to demonstrate clearly to both partners and investors that a strong methodology ensuring data and systems integrity is in place.
Loans Administration		Responsibility for handling all customer enquiries, incoming and outgoing correspondence[80] and telephone contact[81] with borrowers. Controlling release of data to banks and financial institutions for payment requests, liaising with finance on failed payments and handling management information reporting.		Telephony and correspondence could become outsourced functions, though requiring control from a central point.
Central Operations		Control over all incoming loan documentation, e.g., eligibility		Role would remain largely as a centralised function

[79] Development in-house will ensure retention of intellectual property rights and the maintenance of standard definitions.
[80] This could be regarded as a possibly outsourced activity but our recommendation would be to retain in-house because of the access required to borrower records and the aspect of confidentiality.
[81] This is an ideal function for outsourcing but consideration should be given to having this in-house for perhaps, say, the first operational year.

		certificates, application forms and loan agreement and control over off-site storage and day-to-day support for all externally provided support functions		
Personnel		Maintaining all staff records including training. This latter aspect will, at least initially, include training for college and university administration staff.		Training, which would certainly be required in the initial stages could become an outsourced function but records maintenance / control would remain a centralised function.
Collections		Pursuit of all overdue repayments, enquiries from borrowers/banks etc. for all enquiries relating to overdue payments as well as all other aspects relating to pursuit of default. This would include liaising with banks, external partners and support providers, and instigating legal action where required.		Role would remain largely as a centralised function, though functions such as appointment of external trace / collection etc. activities would be outsourced.

CHALLENGES FACING THE IMPLEMENTATION OF AN EU LOAN SCHEME. An EU loan faces a series of issues:

- Tracking students is harder when they are internationally mobile. This is also true of students who borrow from national systems and become internationally mobile, but the proportion of internationally mobile students will be higher in an EU loan scheme.
- The definition of income is different in different countries, e.g., in the UK contributions to approved private pensions are top-sliced. This point is most acutely relevant where there is an income-contingent element, but also to a mortgage loan that allows deferral where a graduate's income is less than €X.
- Income disparities across the EU are wider than those within individual member states. This has several implications:
    - It affects the maximum size of loan that can be repaid
    - It affects the choice of threshold at which income-contingent repayments start, or below which a graduate can defer repayments in a mortgage scheme
- Exchange rate risk is relevant, as discussed in section 6.4.4. The problem arises also for students who borrow from national schemes and become internationally mobile, but in that case it is clear that a graduate who has borrowed from the UK scheme, for example, has to repay in sterling, and that the individual graduate bears the exchange rate risk. In the case of an EU loan (a) the rate risk will affect more students, and (b) the way the risk should be shared is a matter for debate.
- If low-earning graduates are required to make a nominal repayment to enable the loans administrator to stay in contact, then a mechanism is needed to distinguish

non-receipts from this group from non-repayment by graduates who should be making more than nominal repayments, where the issue is one of potential default. Both groups will require action, but perhaps with different priorities.

- Regulatory and legal requirements are both relevant to avoid a situation in which a series of differing rules apply in different member states. Equally, it is important to be careful that these do not conflict with statutory consumer rights.

- If the introduction of any online application process is being considered, it is essential to ensure complete compatibility of computer systems within the education sector, and how these will fit with those of the loans administrator.

6.6 Political implementation

Economists tend to focus on strategic policy design and to underestimate the importance of implementation. Section 5 discussed policy design and this section technical implementation, i.e. administrative aspects. Both are core to the remit of this study. But good policy design and effective technical implementation are not enough. It is necessary also to build political support for the loan proposal, i.e. to effect political implementation.

Though not central to this study, it is important to remember that politics matters: improving higher education requires strong political leadership. In its absence, it takes a long time, and political mishandling can muddy the waters, making reform harder than it needs to be. The situation that prevailed in the UK in the 1990s exemplifies both problems. Without strong political leadership reform may be impossible – see, for example the political difficulties that attend the discussion of tuition fees in most European countries.

7. Analysing the Options

7.1 Delphi Method

The research team used a two-round Delphi method to gather opinion about the alternatives for design characteristics and institutional framework.

7.1.1 Methodology

THE DELPHI METHOD is a systematic and interactive technique for using a panel of experts. The experts answer questions, make comments on statements, and express ideas on issues in two or more rounds. After each round, a facilitating team[82] provides an anonymous summary of the experts' comments from the previous round, along with the reasons and supporting arguments for their judgments. In the light of those replies, the experts are then asked to revise their earlier answers. Experience with the Delphi method shows that during this process the range of the answers will converge upon a consensus and in that way the process decreases the variation of the recommendations.

FIRST DELPHI ROUND: The facilitators sent out the description of the repayment models (Section 5.2) and asked the following four questions:

1. Please comment on the basic principles and their rationale
2. Please provide arguments about the relevance of Model 2a. In your opinion what other measures are needed to make the scheme attractive for the students and sustainable in financial terms?
3. What kind of support mechanism is needed to finance the costs of non-repayments and/or the policies against brain drain or other purposes? Can or should it be connected to EU funds?
4. In your opinion, should the parameter setting of the scheme (loan amount, interest rate, income threshold, level of fix repayment, percentage of income to be repaid) be universal or differentiated by countries and /or borrowers?

At this stage experts were asked to keep the inflow of ideas, issues and comments as broad as possible, encouraging all participants to be creative. The members of the expert panel submitted their first round of ideas to the facilitators, based on which the team created a structured anonymous summary of all the answers, comments, clarification, questions, additions and further suggestions (see Appendix 4). This summary was sent out to the experts for the second round.

SECOND DELPHI ROUND: In the second round two questions were asked:

1. Please overview the attached summary and briefly describe the loan product you think would best serve long-term EU policies. If you have any further comments, questions, clarifications etc. please let us know.
2. Please conclude what institutional solution is the most appropriate for the loan product you proposed and please also explain why.

The Delphi method was finished by a structured write up of the experts' views on the loan product and the institution (see Appendix 5, summarised briefly below.

[82] Facilitators were Edina Berlinger and András Nemeslaki.

7.1.2 Delphi results: the loan product

Eligibility for the loan should be transparent, with simple and clear requirements. Experts drew attention to the fact that simplicity and clarity also reduce administrative costs. Naturally, safeguards against cheating should be built in, and online self-eligibility checks might support the application process. In order to increase awareness of potential borrowers and universities, it is important to promote the scheme. Some experts raised the question of whether academic performance should be considered and/or how eligibility is affected when or if the student changes study programme.

Experts agreed on the desirability of a loan product with *universal characteristics* for all borrowers. Universal parameters are easy to understand, and the political risk of acceptance can be minimised by offering a unified product across the whole of Europe.

As far as the *loan amount* is concerned, there appeared to be a consensus that it should cover both tuition fees and living costs for the period of study. Some experts suggested taking into consideration available financial support (grants, national student loans) as well.

The emphasis of a full *income-contingent* scheme and / or income contingent elements was dominant in the expert responses, supported by the argument that default in income-contingent schemes is typically lower than in mortgage-style lending. It is also true that it is administratively more expensive but the additional costs are offset by improved cash flow and can be further reduced as administration develops.

The *collection mechanism* and the *default management* will be critical elements, according to the experts. Some suggested creating a "mutual risk fund" from the graduates' repayments in order to manage credit loss by applying a cohort risk premium. The downside of this approach is that some borrowers would opt out of the system (adverse selection). Expert opinion varied as to the most efficient methods of collection. The role of tax offices was discussed but also the attendant issue of increased coordination costs.

Early repayment without penalty was also near-unanimously considered desirable, as was the inclusion of *occasional payment holidays* in the event of job transitions or employment problems.

Some experts indicated surprisingly *short maturities:* for example 4-5 years. Probably, the Delphi experts based their conclusion on their experience of student lending with higher-income borrowers and a more homogenous portfolio. Note, however, that in the EU-level student loan scheme income differences are much higher than within a single country, and that low-income borrowers should also be able to repay the loan. Given the extreme case of a Bulgarian student studying for, say, a master's degree in the UK and returning to Bulgaria upon completion, it would not be feasible for him/her to repay in 12-20 years: Rather a 30-40 year repayment schedule would be more realistic.

The experts made many concrete suggestions for setting the *interest rate,* which are taken into consideration in our final report. As a basic principle, operating costs should be covered, depending on the type of other funds and sources that are available. This leads to the important issue of subsidising the scheme.

A firm statement of *self-sustaining operations* was articulated by the experts. They expressed a common view that the system should not increase the burden on EU taxpayers, and that its operation should be streamlined and simple. On the other hand, some pointed out that EU policy objectives might be reinforced by using subsidies to create desirable

incentive structures for borrowers (for instance against brain drain). In contrast, one of the experts took the position that there should not be interference with the free movement of people and services, not even by EU subsidy, since it transgresses fundamental principles of the European Union.

7.1.3 Delphi results: institutional models

In the second round of the Delphi method, the facilitating team asked which institutional solution is the most appropriate for the loan product, and why. Five basic institutional models were presented:

- Specialised, EU-level agency
- National student loan centres
- Consortium of some big banks
- All banks
- Universities

First of all, the *specialised EU-level agency* appeared to be the first preference of all our experts – though qualified by a number of warnings and constraints. It was, for instance, emphasised that the organisation should have a flat management structure, with a strong management structure. Some activities can be outsourced, with the exception of mission critical operations, e.g. collection, raising finance and liaising with EU level authorities. Some of the key arguments for a specialised EU-level agency were that universities, banks and national student loan centres possess a national outlook on mobility, and that pan-European level interests are better represented by a dedicated EU-level institution. One of the experts also stated that banks are especially bad at cross-border student lending.

Secondly, experts advocated greater *involvement by universities*. University administration can be straightforward, as there is only one product to manage. This in turn means simplicity in dealing with enquiries, resulting in fewer errors. By having only one product, marketing also becomes simpler. This new instrument would provide universities with the opportunity to offer a wider range of study and to become more actively involved in shaping educational requirements. Involving universities in administration could be presented as part of the overall benefits package.

The *involvement of alumni* emerged as an interesting idea. was also mentioned – the underlying premise being that peer pressure might be used to improve repayment discipline. Innovative instruments offer opportunities in this respect, for instance social networking (Facebook) and creative use of information communication technologies to support outreach and access.

Thirdly, the *role of banks* was discussed. As it turned out, there was a consensus that delegating product management to banks or a consortium of banks is a “second or third” best option. Several questions were raised in this regard: would the funding be provided by banks? Should the EIB provide loans? How should EU funds, bonds and other instruments be used? All these concerns and ideas are summarised in Appendices 4 and 5 and were fed back into the main report and incorporated in our suggestions.

7.2 Multi-Criteria Scoring Method

The research team analysed (1) the four design options (loan product) and (2) the five institutional models with the help of a Multi-Criteria Scoring Method. The details can be found in Appendix 2.

1. The design options

The following options were assessed:

O1: Unified conditions for all borrowers with no subsidy
O2: Unified conditions for all borrowers with subsidy
O3: Different parameter setting for different type of borrowers with no subsidy
O4: Different parameter setting for different type of borrowers with subsidy

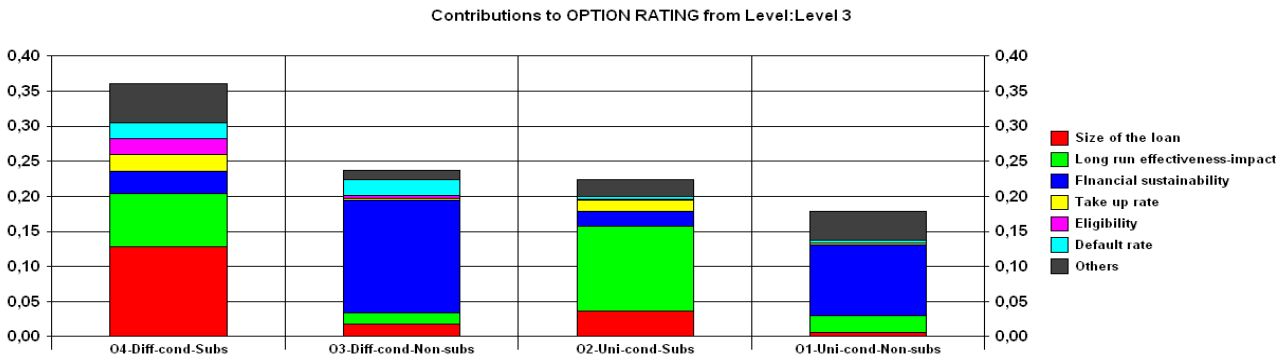
According to the design options the following criteria and criteria weights were determined by the research team in the framework of a sophisticated evaluation process based on pair wise comparisons:

The criteria and the criteria weights used for the evaluation of the design options:
Efficiency (0,429)
- Funding cost (0,010)
- Default rate (0,052)
- Administrative costs (0,052)
- Financial sustainability (0,314)

Equity (0,071)
Effectiveness (0,5)
- Eligibility (0,027)
- Size of the loan (0,189)
- Take up rate (0,047)
- Long run impact (0,236)

The design options were assessed against these criteria. The results can be seen in Figure 28.

Figure 28. Composition of the scores of the design options



Source: CriterionDecisionPlus

As we can see in Figure 28, O4 received the highest total score especially in the criteria of long-term impacts and financial sustainability; because differentiated parameters and outside subsidy make it possible to give out a relatively high amount of loans and get it back in the long run. On the other hand, O3 (differentiated conditions without subsidy) secured its second position because of high performance in terms of financial sustainability, while O2 reached almost the same total score with a strong assessment of its long term impact. In the case of O1 Figure 28 confirms that the lowest score is explained in the low values of effectiveness (the loan amount is seriously constraint). Sensitivity analysis showed that

these results are quite stable, only extreme changes in the criteria weights would result in different ranking.

2. The institutional models

The following models were assessed:

M1: Specialized EU-level agency
M2: National student loan centers
M3: Consortium of some banks
M4: All banks: the scheme is open to any financial institution upon meeting certain requirements
M5: Universities

The detailed description of the alternatives and the performance criteria can be found in section 6.5. For the MCSM analysis we excluded the institutional model based on tax authorities because experts indicated that at present the tax systems in Europe are not sufficiently well developed and integrated, therefore it is not a feasible alternative.

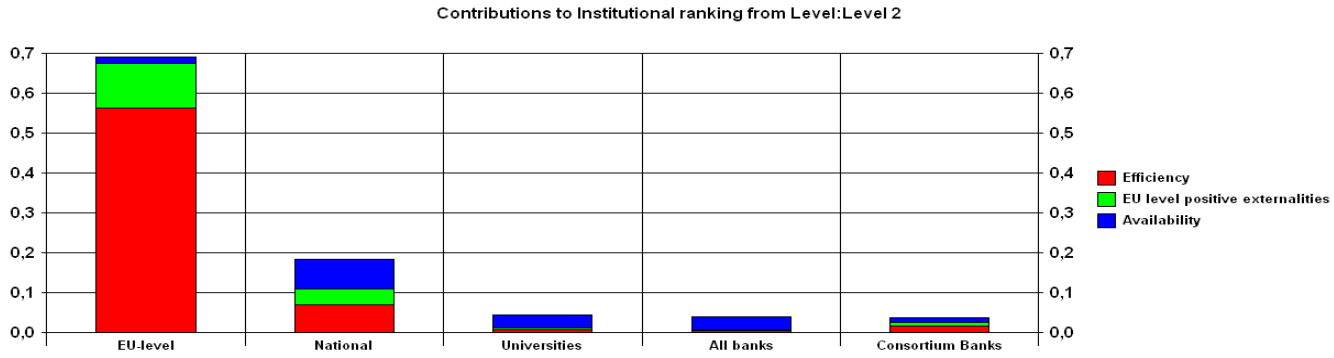
The criteria and the criteria weights were different in this context:
Efficiency (0,667)

- Agency costs (0,500)
- Collection mechanism (0,083)
- Administrative costs (0,083)

Availability (0,167)
EU-wide positive effects (0,167)

The scores are presented in Figure 29.

Figure 29. Composition of the scores of the institutional models



Source: CriterionDecisionPlus

Figure 29 clearly shows that the team gave a very high weight to efficiency, and identified the EU-level agency's (M1) performance as potentially very good in this regard due to the fact that responsibilities are clear, the objectives are well-defined, the performance can be easily measured, therefore the agency problems are minimised. When comparing the result with the Delphi Method, the expert panel suggested a higher potential for the university-based implementations than the MCSM approach. Though universities are good at disbursement, they face serious challenges in collection and managing the financial engineering of such instruments. But the disbursement advantages can be exploited in all five models by outsourcing some client service tasks. The team in the MCSM rated the national schemes (M2) higher than the rest of the models, because they valued the rich

experience of these institutions in operations and also the efficient local mechanisms. Sensitivity analysis showed that the ranking is quite stable in this case as well.

7.3. Case study analysis

This part of the study identified which of the alternatives defined in section 5.3.5 would best correspond to the national contexts of the selected countries with student loan schemes already in place. The case studies looked in particular at Germany, Hungary, Lithuania, the Netherlands, Spain (Catalan region) and the UK. The full analysis is contained in Appendix 3.

From a variety of variables, listed in Appendix 3, we selected those most likely to influence the functioning of an EU student loan scheme:

- **Repayment flows will be stronger in richer than in poorer countries.
- Administrative capacities developed in existing loan schemes could be used for administering the EU student loan scheme at the national level.
- The functioning of the EU student loan scheme will also be influenced by the quality of education, the average loan portfolio, labour market absorption of graduates, and returns to higher education in particular.
- In addition, the attractiveness of subsidised or non-subsidised models will be influenced by whether or not the Member State in question is a net contributor to the EU budget.

Other variables are likely to influence the loan scheme in combinations with others and thus have been assessed individually. Among those, the existing loan scheme and its portability, mobility trends and already-available state support to students should be mentioned. Below we provide analysis for each country and identify the alternatives that pose minimum risks across the selected Member States.

CONCLUSIONS. Despite significant differences and clear preference of different models in the selected countries, it is of key importance that the EU student loan scheme finds a common denominator and adequately controls risks in all of the Member States. Controlling risks may be even more important than benefiting from favourable national conditions. Therefore, based on the data in Table 24, it can be concluded that although administrative capacities in some countries are sufficient to implement Model 2b, the context is unfavourable and hence Model 2a should be preferred. In addition, differentiated solutions that increase repayment rates in different countries and protect certain socio-economic groups should be preferred. Although three countries from the sample are net contributors and the other three are net receivers of EU budget allocations, option O3 matched national contexts better, as O4 would require more administrative capacities.

Table 20. Comparison of the alternative models in six national contexts

Country	2a	2b	O4	O3	O2	O1
Germany	1	2	1	3	2	0
Hungary	1	4	3	1	0	1
Lithuania	1	0	2	1	1	0
Netherlands	2	0	0	2	1	0
Spain (Catalonia)	1	-4	1	1	2	-2
UK	1	0	1	2	0	0
Total	**7**	**2**	**8**	**10**	**6**	**-1**
positive	**8**	**15**	**13**	**11**	**9**	**1**
negative	**1**	**13**	**5**	**1**	**3**	**2**

Note: 2a refers to the Hybrid model with income-contingent repayments for low earners; 2b refers to the Hybrid model with income-contingent repayments for low- and middle-income earners; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.

The sample did not include any of the countries where loan schemes do not currently operate at all (Czech Republic, Ireland and Romania). If other countries were introduced, it is likely that subsidised alternatives will be preferred, considering the uneven distribution of income, returns to higher education, and mobility. On the other hand, subsidies would require even higher administrative capacities, which are more limited in those countries without loan schemes. It is important that the issues faced by low-income countries such as Bulgaria are adequately addressed in the upcoming stages of loan design. In this respect, the case studies do not allow adequately identifying the need for subsidies, yet they strongly confirm that Model 2a for repayment and differentiated options for EU contribution are currently best suited to the EU context.

8 Potential evolutionary pathways

Sections 5 and 6 advocated starting with a simple, robust and well-targeted loan scheme that is capable of developing in the future. The suggested starting point is:

- Limited eligibility (only mobile students within the EU, and only master's programmes
- A fixed and long maturity period with income-contingent elements: (i) income-contingent repayment for graduates with low income, (ii) a fixed level of repayments linked to an aggregate income category; (iii) an early repayment option without penalty (Model 2a)
- The fixed level of repayments and the income threshold below which repayments are income-contingent and country specific (and probably depend also on the debt and the age of the borrower)
- The interest rate is the same for all borrowers: the sum of the risk-free rate + default risk premium + operational margin, but variable over time
- Limited size of loan (tuition fee + living costs, but with the total loan capped at between €10,000 and €12 000)
- EU-level subsidies covering at least the start-up costs, perhaps also with some sort of guarantee for the refinancing loans
- A specialised EU-level institution that outsources some tasks to tax authorities, national student loan centres, universities and commercial banks

The EU-level student loan scheme can evolve in a number of directions.

EVOLUTIONARY PATHWAY 1: the size of the loan: the income threshold below which income-contingency applies would rise over time, so that Model 2a (income contingency only for the poorest) would morph into 2b (income contingency for low and medium earners). Eventually full income contingency is an option. This direction of travel makes it possible to offer larger loans per graduate provided that (i) incomes grow; (ii) incomes converge; (iii) administrative capacity improves.

EVOLUTIONARY PATHWAY 2: widening coverage of the loan system:

- Wider range of education levels: loans for mobile students taking master's degree; bachelor degree, and/or PhD
- Wider geographical coverage: loans for EU students studying outside the EU, e.g. the US
- Wider eligibility rules: loans for immobile students, for older students, for vocational education etc.

EVOLUTIONARY PATHWAY 3: a more sophisticated loan design.

Appendices

Appendix 1. Interviews

Many different stakeholders were represented. Questions were related mainly to the CAV of student lending and partly to basic design issues. The interviewees were:

Representative of universities: João Bacelar
Project Coordinator at European University Foundation – Campus Europae
Email: joao.bacelar@campuseuropae.org
Representative of an international organisation: Andreas Blom
Senior Education Economist, The World Bank
Email: abloom@worldbank.org
Representative of the banking sector: Sébastien de Brouwer
Head of Department, Retail Financial services, Legal, Economic and Social Affairs, European Banking Federation
Email: S.deBrouwer@ebf-fbe.eu
Academic: Bruce Chapman
Professor at Australia National University
Email: bruce.chapman@anu.edu.au
Representative of students: Maarten Coertjens
Executive Policy Officer for Education, European Youth Forum
Email: maarten.coertjens@youthforum.org
National Student Loan Scheme manager: Tamács Csillag
CEO, Hungarian Student Loan Center
Email: csillag.tamas@diakhitel.hu
Representative of an international organisation: Richard Hopper
Senior Education Analyst, OECD
Email: Richard.HOPPER@oecd.org
Representative of an EU organisation of vocational education and training: Patrycja Lipinska
Expert, CEDEFOP
Email: patrycja.lipinska@cedefop.europa.eu
Academics: D. Bruce Johnstone and Pamela Marcucci
Researchers at State University of New York at Buffalo
Email: dbj@buffalo.edu
Representative of a private international student loan facility: Cameron Stevens
CEO, Prodigy Finance Ltd.
Email: cstevens@prodigyfinance.com

It is helpful to divide responses into supporting statements (A2.1), concerns (A2.2) and interesting ideas (A2.3).

A1.1. Supporting statements

The discussion of EU Added Value in section 1 drew in part on the statements gathered from the interviews, and we also made references in the text as [S-*number*]. Supporting statements are grouped in the same categories as the concerns, see below:

Target of mobility of 20%

1. Mobility has marked effects on social cohesion; therefore it should be promoted as an end in itself.
2. Mobility serves equity and social cohesion purposes, it helps talented young people to attain higher education levels, and it is an important policy goal.
3. The EU should support mobility, as it is important for EU integration and a fantastic means to foster cultural sensitivity and economic integration.
4. I would rather emphasise how more widespread mobility may contribute for furthering European cohesion, mutual knowledge and citizenship. Mobility must carry a political weight in itself, even more so at a time when the European project is faced with growing nationalism in many of its domestic political arenas.
5. Postgraduate mobility is more important than at undergraduate level.
6. Cedefop considers mobility an important objective. There are no quantified targets/benchmarks specifically for VET. However, the target : '20% of those graduating in the European Higher Education Area should have a period of study or training abroad' is relevant for VET as VET at tertiary level, notably ISCED 5B level, is a part of higher education. Also, if you look at higher education programmes with VET included. With reference to VET, the Copenhagen process laid the foundation for development of common tools and principles which promote mobility. These include: NQFs linked to the EQF, ECVET, recognition and validation of non-formal and informal learning. Much has been done at the EU level. It is important to implement these instruments at national level. Another important policy tool to promote mobility: measures promoting language learning. The countries implement a wide range of financial instruments that stimulate participation in learning, (not only/necessarily in higher education; Cedefop examined in particular those instruments that promote continuing education and training); some of which might also (on top of loans) promote mobility (e.g. vouchers, individual learning accounts, training funds).
7. Student mobility is an objective which could increase skills of students in Europe and increase the level of skills for jobs in the banking sector. The banking sector, which is becoming increasingly international, would look for students who have more international experience and language skills There is still room for improvement of the existing mechanisms, e.g. not all places for Erasmus exchanges are filled up.
8. Erasmus has not proven particularly flexible or efficient enough from a systemic viewpoint and over the years. Ambitious efficiency gains will require a supranational approach that goes beyond the current design and sophistication level.

Barriers to mobility

9. Mainly financial limitations restrict mobility.
10. More money is needed to achieve greater mobility.
11. With more investment the 20% target is attainable.
12. Our research reveals that potential for mobility is not fully exploited through the existing instruments. In. Leonardo da Vinci (instrument particularly relevant for

VET) funds seem insufficient as countries call for more funding - ask for more resources to increase mobility, particularly for young people. Administrative burden is high which hampers the use of the instrument. According to some surveys, Erasmus grants are not sufficient. Many financial arrangements at national level do not promote equal opportunities enough.

Grants versus loans (cost-sharing)

13. Loans are *the* mechanism, with grants as the only viable, but limited alternative.
14. Even in some high-income countries (France, Spain) there is a high need for education financing.
15. Grants and scholarships are fantastic for students, but the fiscal reality is that we cannot afford to increase them.
16. The availability of grants is limited by definition due to the high financial burden.
17. Additional grants are too expensive: a loan may be the answer.
18. As the lifelong benefit for students is higher than for their society, it is fair to pay back a percentage of earnings to the society. Loans are fair and the only practical option.
19. In general, subsidies to higher education are regressive. When you do not charge people and all is paid by taxpayers, this means financial help to advantaged people. Tuition without a loan scheme is a bad idea, as it stops people from studying. ICL is a compromise.
20. The debt is generally a fairly small amount in graduate's lifetime earning. In Australia, a graduate earns $1.5 million more than a non-graduate, and the debt is only $20,000.
21. Loans and grants should complement each other and be harmonised.

Brain drain versus brain circulation

22. Overall, most students will end up in their own country – workers' mobility is not as large.
23. Loans would facilitate higher volumes of student mobility and greater access from various geographical areas, broader achievement of objectives, more market of people and ideas, international understanding, and transfer of skills.

CAV and complementarity between the EU and the Member States

24. Current programs are insufficient, not designed to take into account the holistic vision of students moving across borders. In the top graduate program 60% of incoming students are struggling to find any loan funding as the existing programmes are nationally centred.
25. National schemes are facing difficulties as students work abroad.
26. The EU needs more to achieve the targets than current mechanisms can provide, even though in certain aspects they address the needs of mobile students.
27. National mechanisms for many reasons are not able to handle student and labour mobility: it should be handled at the EU level.
28. The effects of national student loan schemes are still very marginal and almost negligible.
29. National student loan schemes face serious difficulties in collecting repayments if they leave their home countries after their studies.
30. National schemes are designed for the home country; there is always an issue with people going overseas. In Australia, international students have no access to the national loan system.
31. The national student schemes alone are not capable of handling mobility. The size of the national student loan is not big enough to foster mobility. National systems must concentrate on their self-sustainability.

32. Not all national loan systems/arrangements support mobility, because in some countries students cannot take loans to study abroad, or foreign students studying in given country might face difficulties in taking a loan due to many requirements (e.g. residence permit, min period of working abroad or living in a given country). The instruments should operate at EU level only if efficiency and value-added is proven. Coordination at EU level, if it is well-designed, can bring more benefit than national coordination.
33. An EU-level student loan institution by its weight and size would be more efficient in operation.
34. It would definitely promote mobility, but several issues would have to be tackled to make it efficient and sustainable. Granting of loans, repayments should be thought about carefully. Different institutions should cooperate. Overcoming financial barrier for students is the main advantage. Loans would provide better access to funds, allowing to borrow financial resources from future income. Otherwise it is difficult to have the full financial support in advance, without co-financing.
35. Loans would increase the contribution of private sector to funding of HE. It is important as the HE sector suffers from underinvestment from the private sector and faces public financing constraints.
36. A European level cohort risk premium and/or EU level guarantee could make private finance cheaper.
37. In case of cross-border lending the FX risk can be managed in a most efficient way due to multicurrency transactions, better market positions and lower transaction costs.
38. It could also enhance cooperation between European student loan systems. An EU-level system could be positive in every sense; it could start a dialogue about student loan systems as well.
39. If the EU level scheme would be income-contingent and tax authorities would be involved it would strengthen the cooperation between tax authorities and strengthen the efficiency of collection of national ICL systems.
40. Such a system could be a catalyst for making the EU fiscal systems converge.
41. The traditional banking model is hardly capable of financing mobile students.
42. The scheme must be coherent with national mechanisms and other policies as to encourage not only geographical, but also social mobility.
43. Implementation would make available a wealth of data on the economic return of studies.
44. A federal, centralised system is much cheaper to administer.
45. Starting from a blank page would be more efficient than trying to build on existing mechanisms.

Political problems, conflicts of interests

46. National loan schemes in some countries are under pressure (including private loans) because of increasing mobility. Mobility is not stimulated this way.
47. National loan schemes in some countries are under pressure (including private loans) because of increasing mobility. Mobility is not stimulated this way.
48. There is a need to increase opportunities for students where national schemes do not exist or are not portable; increase the social dimension of mobility - for people with financial constraints. It would put students in Europe on the same grounds, providing a more equal system.

Income contingent repayment

49. I would strongly argue for the income-contingent design. […] Differences in tax systems as such do not threaten the operation of the system.

50. ICL is less a problematic than normal loans (other loans have no built-in insurance).
51. Tax authorities are expected to resist. In Australia, they said it was completely impossible, but the government said they are doing it anyway. And they made it work; now it works extremely well. The UK experienced the same bureaucratic resistance.

Default risk

52. You need to get graduate earning profiles in each country and then design collection parameters: 1 – making sure to get the money, 2 – not being severe on students.

Financing of the scheme

53. There is an EU basis for the scheme already – the EIB, where you have a funding mechanism that could potentially work with the private sector. The structures are already there. It simplifies the process to work with the private sector.

A1.2 Concerns

These concerns articulated by the experts in the framework of the interviews are classified by topic. We have taken care to address all these concerns in detail in the Interim Report when CAV was discussed.

Target of mobility of 20%

1. Increasing mobility for its own the sake is not beneficial to the EU and may even be a waste of resources; therefore we urge more investment in the quality of mobility.
2. International student mobility as such is not the most important goal; general access to higher education is more important.
3. German, French and Italian universities are overcrowded. Introducing more international students just for the sake of mobility will not address the needs of these universities.
4. Thinking EU-wide rather than internationally, the EU loses the benefit of attracting human capital and export earnings.
5. Those who want to be mobile may not intend to study *in* the EU but in the US. Mobility in the EU is limited mobility.
6. There is a risk that older, more prestigious western universities will benefit more from increased mobility.

Barriers to mobility

7. Grants, scholarships, exchanges, partnerships and joint degrees can help the EU to improve student mobility.
8. Not all problems can be solved by adding more money - young people face various administrative obstacles as well.
9. Number of students is a function of affluence and linguistic capabilities
10. Loan schemes rationalise students' choices, but rational choice may work against mobility.

Grants versus loans (cost-sharing)

11. The EU has already got the tools - grants, Erasmus, etc. The essence of it is to enhance mobility among HE *institutions*, less so between countries
12. The EU has lots of incentives already, mainly in the labour market policies, for

students to become mobile. It is enough.

13. Students are risk-averse in some countries more than in others. They might think, if families pay taxes, why should they take a loan to study? If students have to get a loan for mobility, it may convince them to study at their national university instead. Expected or perceived return to graduate from high school is more limited. They do not see the added value of higher education sufficiently.
14. An EU-level mobility loan scheme would be socially unfair (leaves responsibility of financing with the student, while the society gains considerably from increasing education, increased electoral participation, democracy, lower crime rates)
15. We believe that most of education should always be financed by the state. It is based on the social model of Europe – the society invests in its members' education and receives a return, as older generations, which benefited from education, pay for others' education through taxation. Self-financing would break this generational solidarity.
16. Uncertain returns of education would discourage investment. If one invests in education, they should be able to work. Meanwhile, youth unemployment in the EU is two times higher than normal…. In Spain one could never take a loan.
17. When loans are introduced in addition to grants, they always replace grants as budget constraints increase. It would be naïve to believe that the new mechanism only adds to the existing ones – it opens the door to change the mechanism. The loan scheme would even lower mobility, as it is clearly meant to replace grants. Therefore our organisation opposes it.
18. Loans will not foster student mobility because of debt aversion. Grants are needed.
19. Student loans do not necessarily attract people.
20. Grants are a more equitable solution.
21. High default rates make student loans expensive. The costs of loan systems take public money away from grants and other forms of financial aid. Collection and administration is costly. Grants are better.
22. Disadvantages of the loan: high administration costs. It would have been cheaper for the US government under the Carter administration to give money to students rather than lend.
23. Private finance will not work without a state guarantee.
24. EU-wide student loan needs to include additional means (preferential treatment) to support disadvantaged groups/underrepresented in learning. From our research it is clear that many financial schemes promoting participation in learning do not succeed in ensuring equal opportunities - do not address or address at low level those who need the assistance the most. Such a solution (additional preferential conditions for those groups) should be considered and designed into the scheme

Brain drain versus brain circulation

25. Will not the loan scheme accelerate brain drain, i.e. erode the domestic labour force?
26. Will not the loan scheme mean that a country will lose the best students, i.e. erode the domestic higher education system?
27. One thing may be declared or stated initially by the politicians but the outcome may be different: people may behave in a different way in reality. Something declared to promote "brain circulation" can turn into brain drain.
28. If the EU-level mobility loan is badly designed, it may push students to remain in the country in which they studied.
29. A European program for Romania would lead students who cannot get government grants (as in most post-communist dual-track systems) to study

abroad, but not in Bulgaria or Greece, but rather in Germany or France.

30. It would be important that this new EU-level institution foster international circulation of students, labour force and ideas, but not an East-West mass flow of people, a kind of a brain-drain. How it can be avoided that the richest countries with stronger economies, in better positions get the best students? Moreover they would not have to use national resources but would be supported by EU instruments and funds.
31. For the Eastern EU Member States it is more important to provide options for students in fee-paying tracks in their national universities without looking to the EU to bail out the educational systems.

CAV and the task sharing between EU and Member States

32. National loan schemes would be enough. The EIB could substantially assist in the development of national student loan programs, by helping to capitalise or securitise these loan programs and thus creating a secondary market for these loans.
33. Portability of national loans would be a much less bureaucratic solution than setting up an EU-wide system.
34. It should not duplicate the existing national schemes that support mobility. It should only add to them.
35. There is no need to duplicate the existing ones if they address the needs of mobile students (as in Denmark or Sweden).
36. Another agency in Brussels to distribute the loans should not be expected.
37. It's not clear what purpose would be solved by a European loan program that cannot be solved by individual countries. Any country can start its own program can have one.
38. It is important that any EU program would remain within the EU's mandate and not substitute for individual country mechanisms and student loan programs. If the objective is mobility and equity in mobility, it is not the EC's job to remedy that equity in individual Member States.
39. Coordination of national agencies might be difficult, and such a solution could be costly. National institutions would have to be involved (tax authorities, authorities responsible for existing schemes…) - it might be difficult to motivate them to cooperate. Administration of such a scheme on EU level difficult task
40. It should rather be decentralised and see how to capitalise on the existing schemes rather than create two parallel schemes: one national and one for mobility.
41. Poorer countries would like Germany, France and the UK to pay for their students' mobility. Note that better-risk German students in effect subsidise worse-risk Bulgarian students via an EU-wide risk cohort.

Political problems, conflicts of interests

42. Students may not want to be as mobile as governments want. The scheme will be helpful to students who already consider going abroad rather than convincing new students to do so.
43. People feel the student loan is linked to the issue of the tuition fees. Very important countries in Europe do not have tuition fees and have strong resistance to it. German students claim they would "fight to the death to prevent them".
44. It needs political will: not all countries may be willing to participate.
45. It is difficult to mobilise political will.
46. Some countries would resist any interference with their (highly developed) educational systems.
47. In the countries where national schemes exist, they will resist replacement/

duplication. Possible political constraints for setting up

- Tax authorities might resist it (in terms of repayment, they may resist additional tasks and responsibilities).
- Ministries of education and finance might also resist; they might be unwilling towards reducing their autonomy in deciding about national loan system.

It would be important to provide them with adequate information. The main technical challenges:

- Introduce the mechanisms to verify eligibility and checking whether the loan is used for educational purposes.
- Design and introduce the mechanisms which would compensate the differences in prices and living standards in different countries
- Develop and implement mechanism of repayment (have access to/trace information on borrowers' level of income); the mechanism should also take into account the differences in wages/economic development between the countries.

48. Should education be financed publicly or privately? Some countries more advanced, so the idea of student loan has already been accepted (higher education financed privately), but not in other countries it has not been agreed by the society and authority. Diverging views would make it difficult to set up such a scheme, at least in the short run. Debate to be opened at national level, otherwise two parallel systems will develop: national, which is subsidised and public, and EU schemes - for mobility and privately co-financed. This makes it unclear whether it is realistic in short-term politically. It might imply existence of parallel systems: one for mobile and one for immobile students. It might be difficult to line such a system. Public administration might resist setting up an additional EU loan scheme.

Income contingent repayment

49. Monitoring of income and strong systems of tax revenue are a prerequisite, and these are not present across the EU.
50. You can mimic ICL with a mortgage-type loan.
51. It will be very expensive, because the scheme has to expect full cooperation of all tax systems in the EU. It is difficult to make it operational, as all countries have their own ways of collecting tax revenues.
52. How can some governments collect repayments with their already fragile tax systems (black or grey economies)?
53. There are so many differences in income, tax systems. Time-span of reimbursements is an issue.

Default risk

54. Education costs and repayment capacity differ tremendously. The EC should make sure not to end up with big defaults through this very predictable pattern.
55. Venezuela had a World Bank-sponsored loan system for students going abroad. It was very unsuccessful: students never returned, never paid back the loans, and it was expensive to administer the scheme.
56. Many students will try to avoid repayments.
57. Collection and international enforcement are difficult.
58. Credit risk should be handled and it is still to be found out how the European risk cohort could work.
59. Students tend to over-commit in countries where they did not have loans before as they are optimistic about their earning capacities.

Financing of the scheme

60. Who will finance it? EIB can be one source but it is not enough.
61. The question of public finance will also be sensitive, ministers of finance might have some concerns, because you have to demonstrate that it would not cost more. If the scheme is not self-sustainable, it would impact on public finance.

A1.3 Interesting ideas

The interviews provided several ideas about the design of the loan scheme, its alternatives and international experience.

Design and implementation mechanisms

1. Another option is that the EU only provides guarantees to national loan schemes for mobility.
2. A risk-sharing approach with a layered structure is needed. Management can be outsourced, but the commercial sector should not be brought in to handle the repayment risk. E.g. the EC could assume 50% of the risk; the rest should be transferred to states and institutions.
3. The EC will need to set up a clearing house, which would make sure that credit from one university (e.g. in the UK) is not transferred to another (e.g. in Romania). I.e. it needs a central data institution where the size of each individual's debt is visible.
4. Personal financial assistance is needed for the students.
5. Performance-tested calculation of the repayment could still play a role in enhancing its attractiveness.
6. Mobility windows built into curricular design would also be a good tool to foster mobility.
7. We would support the introduction of a mobility card, which arranges the portability of social security and student benefits so that students have the same rights in all EU countries.
8. An EU-level identification system would be necessary (e.g. the social security number).
9. The scheme, once in place, could be subsequently scaled up to include other, non-mobile students.

Learning from practice

10. The EU needs to look at the US experience when designing its loan scheme.
11. The WB experience in Colombia showed that some regions proved more risk-averse, e.g. where mostly conservative rural families live. Many of them had negative experience with loans, e.g. for buying land. In other regions over-optimism prevailed. Risk sharing should be designed to find a way out of this situation.
12. It is important to overcome the overly negative reaction of student bodies in the context of the Bologna Process, as well as to develop an information strategy which targets students in regions/countries where loans are not yet widespread (not those that are a political risk per se but those where the information gap remains a major putative pitfall according both to studies and empirical experience).
13. Equal access is very important and should receive due attention. The scheme should reach those who do not have proper access to education and training.

Appendix 2. Multi-criteria scoring method

In order to enrich the arguments for our recommendations the research team executed two Multi-Criteria Scoring sessions. The first ranked the four design options for the loan and the second analysed the five alternatives of the institutional architecture.

1 Methodology

Multi-criteria scoring methods (MCSM), sometimes called multi-criteria decision making (MCDM), is a discipline to support complex systems analysis and to aid decision makers facing numerous evaluations in connection with these systems. Measurements in MCSM are executed on different scales, and thus provide the opportunity to include subjective indicators, qualitative opinions and different preferences. The outcome of the analysis depends on who is making the decision, and on their goals and preferences. Because of these features, the methodology is particularly well-suited to large-scale policy assessment and strategy analysis. We used a special version of MCSM called Analytic Hierarchy Process (AHP)[83] supported by a software tool Criterium Decision Plus (CDP) by InfoHarvest.

The multi-criteria scoring using the AHP method needs two sets of inputs. The first is the list of alternatives to be assessed, the second is the set of performance criteria against which the alternatives are measured. Performance criteria can be organised into hierarchical levels where the higher levels are broken down to lower level criteria. Alternatives are always measured against the lowest level, which measurements then add up to the higher levels. For the two scoring sessions the expert team[84] used the existing four loan product options and the five institutional models.

After the alternatives had been clarified, the expert team brainstormed the relevant performance criteria and organised them into a hierarchy suitable for assessing the alternatives. Since the criteria are measured on different scales and the experts at this stage could not have real data about the performance of the different options, a pairwise comparison methodology was used. During this process the expert team went through all the combinations of performance criteria pairs and indicated on a scale of 1-9 which criterion was preferred against the other. With this input, the CDP software calculated the expert team's criteria weights using the AHP method.

Once the performance criteria weights were determined, the expert team compared the loan options and institutional models. In practice, the team took each performance criterion and reached a consensus about how much a given option is preferred to the other in contributing to that criterion. All these data was fed into CDP, and final scoring calculated combining the criteria weights and the comparison of options.

Given that AHP uses expert judgements both in determining criteria weights and comparing the alternatives, sensitivity analysis is useful to show how much the final scores change if the expert group changes its preferences. For that reasons, two sorts of sensitivity checks were made after the scoring sessions. The first one was to check how the final ranking of the options change if performance criteria weights are changed. Secondly, we examined the composition of the final scores and verified which criteria were the key determinants of the

[83] Saaty, Thomas L. (2001). Fundamentals of Decision Making and Priority Theory, Pittsburgh, Pennsylvania: RWS Publications. ISBN 0-9620317-6-3.

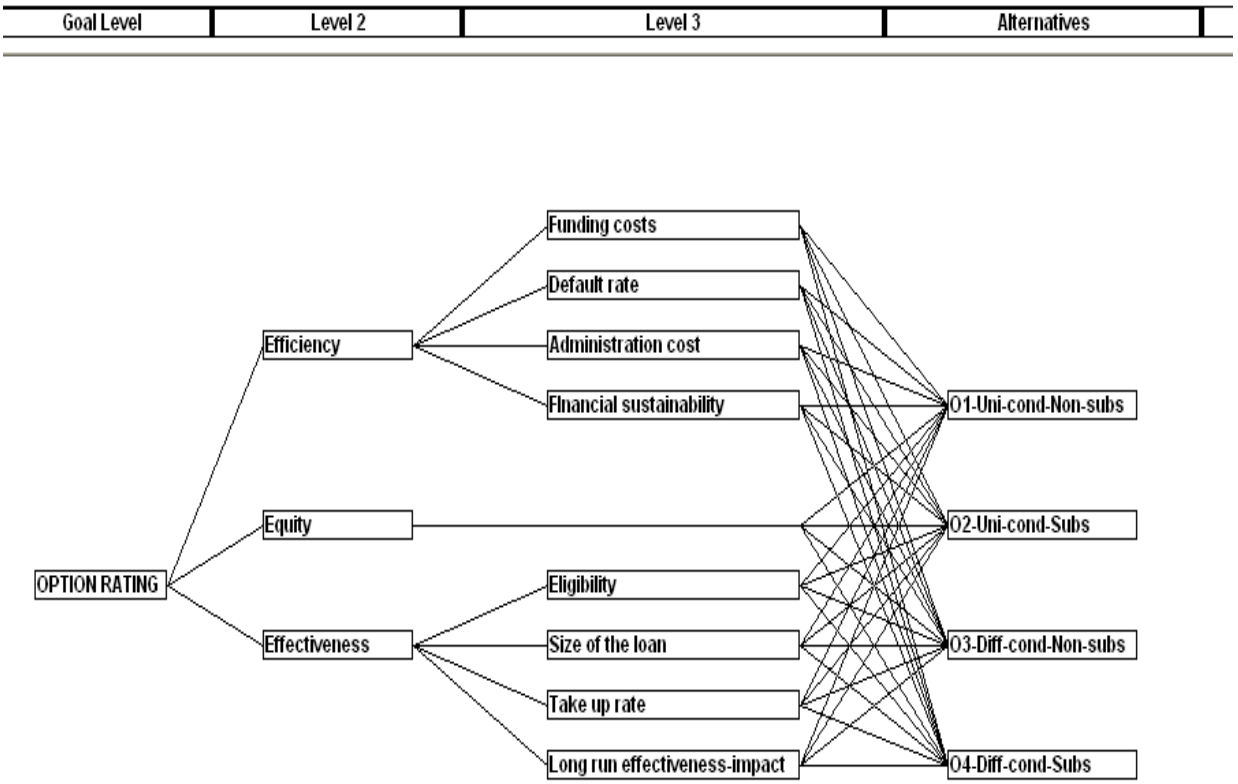
[84] In both MCSM sessions the experts were the Hungarian research team members.

aggregate score. This information then was discussed and verified with other expert opinions included the Delphi study and other parts of the report.

2 MCM results: the loan product

Figure 30 presents the criteria-structure the team defined. The detailed description of the criteria and sub criteria are included.

Figure 30. Evaluation criteria for the loan product options



Source: CriterionDecisionPlus

The expert team analysed the following four options:

- O1: Unified conditions for all borrowers with no subsidy
- O2: Unified conditions for all borrowers with subsidy
- O3: Different parameter setting for different type of borrowers with no subsidy
- O4: Different parameter setting for different type of borrowers with subsidy

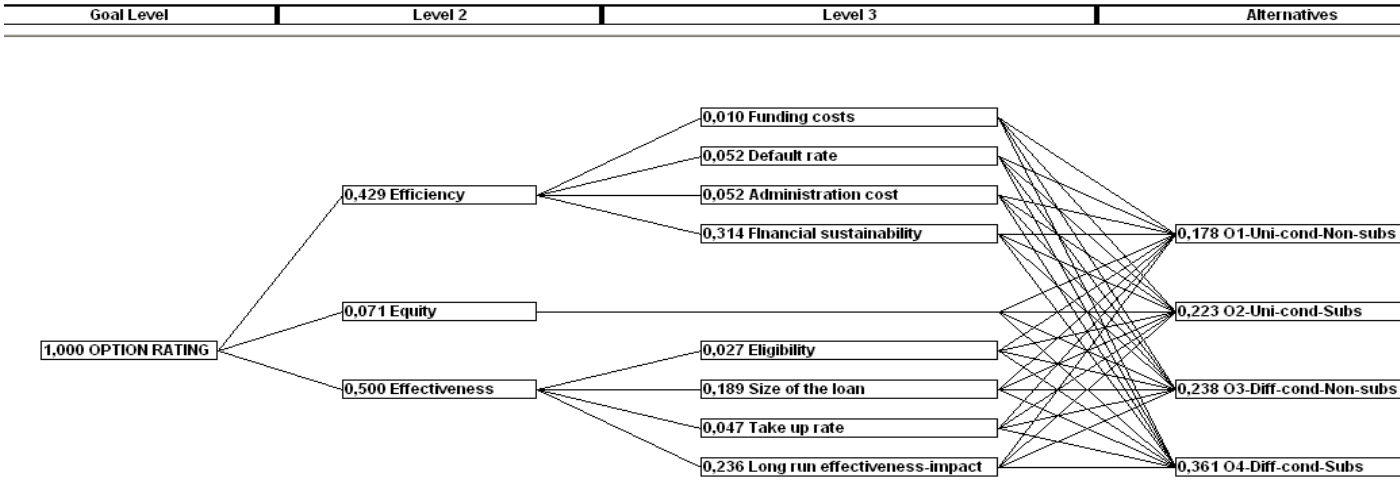
In relation to *equity* for instance the research team agreed that both loans and grants are needed for a well-functioning higher education system. Poorer groups in society are more risk-averse about debt, so that their opportunities might be improved more effectively grants. The other reason why equity received less weight than efficiency and effectiveness is that the objective of the EU level loan scheme is not to include everybody but to assist the achievement of the desired level of 20% potentially mobile students. Comparing *effectiveness* criteria the team concluded that the size of the loan is more important than (a) eligibility and (b) the take up rate. When weighting the *efficiency* factors the team emphasised the importance of keeping default rates low and creating alternatives that are

sustainable over the long run. Administrative costs and funding, although important, seem to be manageable by innovative management techniques.

After the criteria weights had been calculated, the performance of the four options was compared in pairs using each criteria.

The results of the criteria weighting and comparison of options can be seen in Figure 31.

Figure 31. MCSM results of loan product options

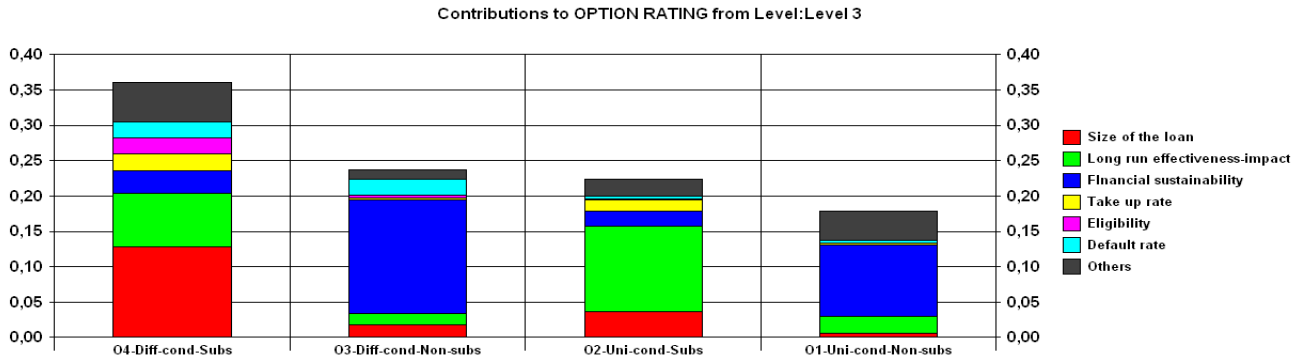


Source: CriterionDecisionPlus

As we can see the highest score was calculated to O4 (differentiated parameters with an EU subsidy). The second and third are O3 and O2 respectively, the lowest score being given to O1 (unified parameters and no subsidy).

It is interesting to compare these results with the Delphi study, where concerns were expressed about both subsidy and differentiated parameters. The experts could probably be convinced by detailed calculations showing that the loan scheme is not feasible without differentiated repayment conditions and some EU subsidy. Figure 32 shows the options and the composition of their scores.

Figure 32. Composition of the scores of the loan product options

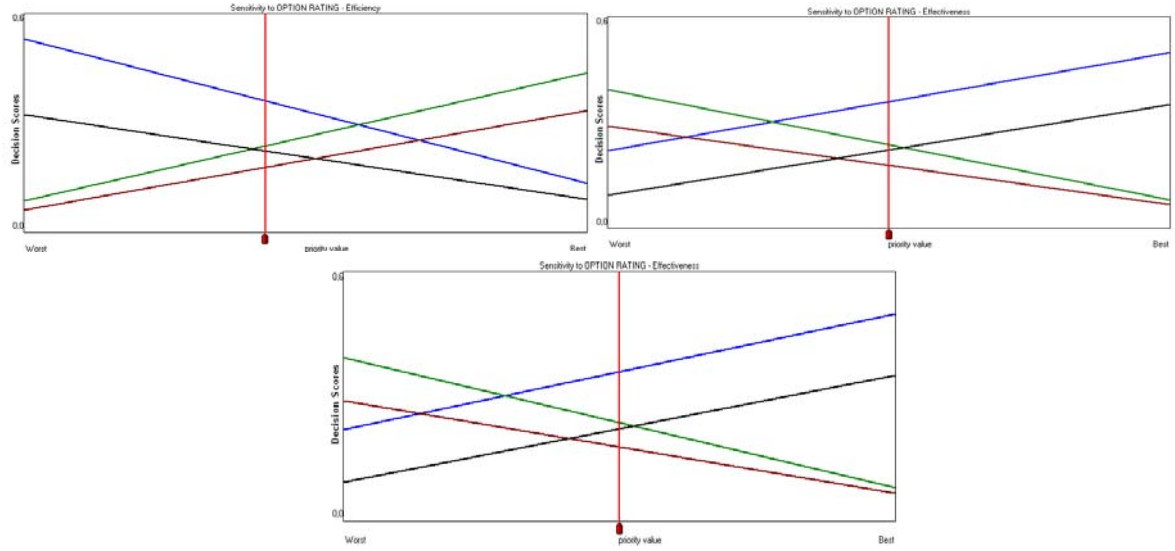


Source: CriterionDecisionPlus

As we can see in Figure 32, O4 scored highly in terms of short- and long-term effectiveness and financial sustainability. On the other hand, O3 secured its second position because of high performance in terms of financial sustainability, while O2 reached almost the same total score with a strong assessment of its long term effectiveness. In the case of O1, Figure 32 confirms that the lowest score is explained in the low values of effectiveness, especially the scalability of that scheme.

Figure 33 shows the results of the sensitivity analysis. The left-hand figure shows how the final scores change if the experts change the importance conferred to efficiency, while the right-hand figure does the same for effectiveness. The red vertical line indicates the weight values which were calculated for efficiency and effectiveness after the pair wise comparison.

Figure 33. Sensitivity analysis of effectiveness and efficiency



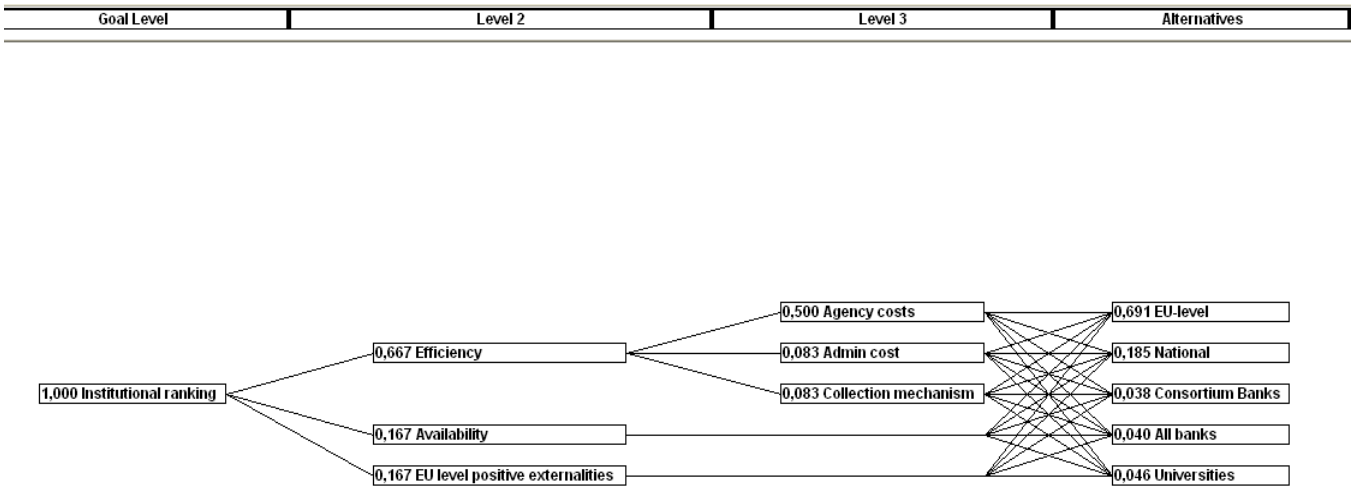
Source: CriterionDecisionPlus

Figure 33 shows that the ranking of the options (between O4 and O3) changes only if the efficiency weight increases and/or the effectiveness weight decreases beyond the cross section of O4 and O3. The CDP software indicated that changing the ranking would require more than a 10% increase or decrease of the weight; we can therefore conclude that the above results are stable.

3 MCM results: the institutional models

In order to assess the five institutional models the expert team built the MCS model depicted in Figure 34.

Figure 34. Evaluation criteria for the institutional models



Source: CriterionDecisionPlus

The performance criteria were defined differently in this situation as we can see in Figure 34. The three top-level criteria were institutional efficiency, availability, and positive externalities at the EU level. The expert team described efficiency through the level of administrative costs, the quality of the collection mechanisms, and agency costs. Within the efficiency criteria the last received the highest preference weight. EU level externalities and availability received the same weight.

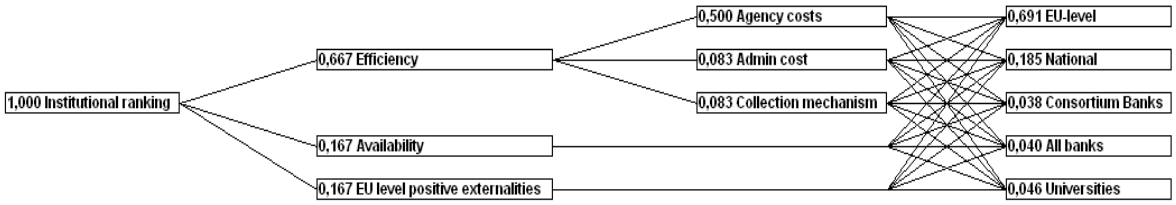
The expert team analyzed the following five institutional models:

- Specialized EU-level agency
- National student loan centers
- Consortium of some banks
- All banks: the scheme is open to any financial institution upon meeting certain requirements
- Universities

The detailed description of the alternatives and the performance criteria can be found in section 6.5. For the MCSM analysis we excluded the institutional model based on tax authorities because experts indicated that at present the tax systems in Europe are not sufficiently well developed and integrated. In the long run, however, this is the target model to which it would be best to converge.

The last column in Figure 34 shows the final scores after comparing the five models. The specialized EU-level agency was ranked the highest, national student loan centres second, and systems administered by universities third; models based on financial institutions (consortium of banks or all banks) were ranked lowest.

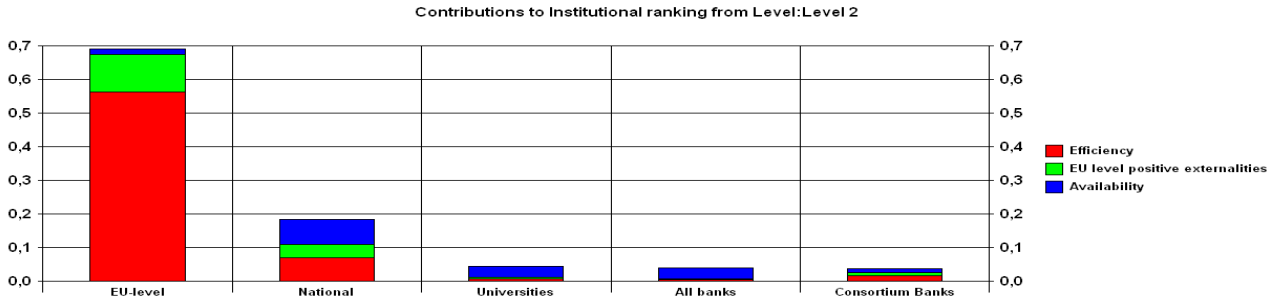
Figure 35. MCSM results of institutional models



Source: CriterionDecisionPlus

Figure 36 shows the composition of the scores, to highlight the strengths and weaknesses of each model assessed by the expert team.

Figure 36. Composition of the scores of the institutional models

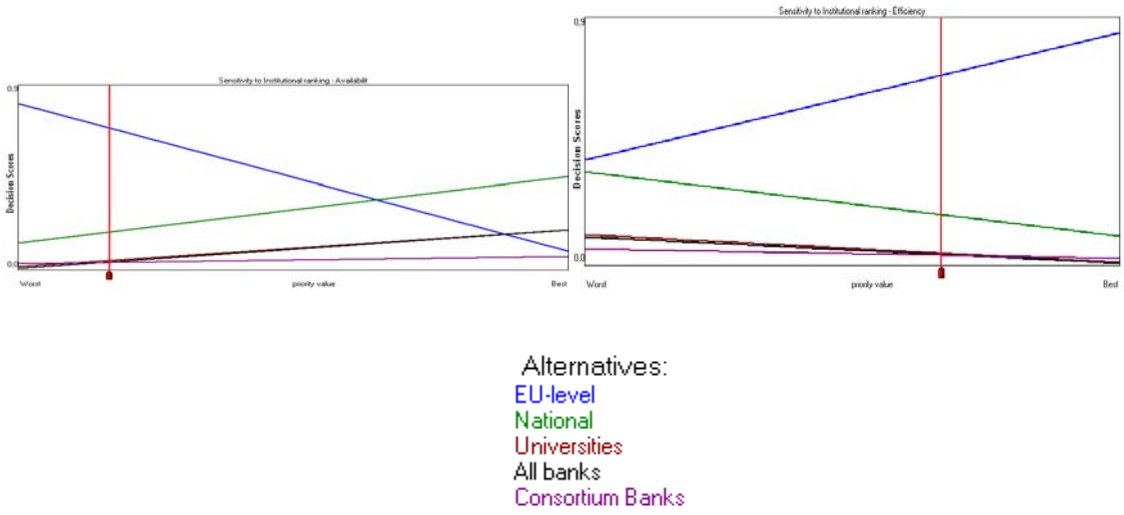


Source: CriterionDecisionPlus

Figure 36 clearly shows that the team gave a very high weight to efficiency, and identified the EU-level agency's performance as potentially very good in this regard. When comparing the result with the Delphi Method, the expert panel suggested a higher potential for the university- based implementations than the MCSM approach. Though universities are good at disbursement, they face serious challenges in collection and managing the financial engineering of such instruments. But the disbursement advantages can be exploited in all five models by outsourcing some client service tasks. The team in the MCSM rated the national schemes highly because they valued the rich experience of these institutions in operations and also the efficient local mechanisms.

CDP software confirmed that the results are stable within the expert group; a 10% change in any of the performance criteria did not change the rank order of the five options, see Figure 29.

Figure 37. Sensitivity analysis of availability and efficiency



Source: CriterionDecisionPlus

Appendix 3. Case studies

This part of the study identified which of the alternatives defined in section 5.3.5 would best correspond to the national contexts of the selected countries with student loan schemes already in place. From a variety of variables listed in Appendix 3 we have selected those that are likely to influence the way the EU student loan scheme is expected to function:

- It can be predicted that repayment will be smoother in richer countries in comparison to poorer countries.
- Administrative capacities developed in the existing loan schemes could be used for administering the EU student loan scheme at the national level.
- The functioning of the EU student loan scheme will also be influenced by quality of education, average loan portfolio, labour market absorption of graduates, and especially returns to higher education.
- In addition, the countries being net contributors to the EU budget or net receivers is also a factor that influences whether subsidized or non-subsidised models will be favoured.

Other variables are likely to influence the loan scheme in combinations with others and thus have been assessed individually. Among those, the existing loan scheme and its portability, mobility trends and already available state support to students should be mentioned. Below we provide analysis for each country and identify the alternatives which pose minimum risks across the selected MSs.

Germany

Being the largest EU economy in the EU, Germany has a vibrant higher education sector and a large (in absolute numbers), linguistically educated student body, for which returns to education are high. Just under a half of students obtaining a degree abroad leave to the most popular destinations, 6 out of 10 are in the EU. Among the eligible students, however, only a small part may be interested in the alternative of borrowing for mobility, when generous state support is provided and the national education system offers good value for money. Nonetheless, mobility trends suggest there is a market for more mobility financing: (a) the volume of credit (Erasmus) mobility (in absolute numbers) is very high (b) Germany attracts many international students, who may need additional financing and, especially after the labour market will be opened to workers from EU12 in 2011, many are quite likely to stay in Germany.

A conventional type loan for students is currently administered by a special public institution. It has a parental/learner income/assets test to determine eligibility. The repayment period is long, with a long grace period and 0% interest rate. It has a means-tested element and aims at increasing equity. The national loan is already portable. In this respect it will compete with the EU student loan scheme, but only for the limited share of borrowers eligible to receive the national loan. Table 21 shows how the different models of repayment and EU contribution relate to context variables and administrative capacities.

Table 21. Comparison of alternative models in terms of adaptability to the German context

		Positive effects	Negative effects	Balance
Repayment models	**2a**	- High volume of Erasmus mobility, which increases the potential borrower pool with uncertain remaining length of education and education outcomes		1
	2b	- Fully portable scheme already in place, implying administrative capacity - High returns to higher education, implying that few will request a means test - Transparent economy with high administrative capacities of institutions - High private investment in education implies that assistance from employers in repaying loans is likely - Small family size implies that students do not drop out of the labour market for extensive periods of time	- For those already receiving state support additional loans are not likely to be necessary. Equity concerns are met within the national scheme - Only 20% of incoming Bologna students are EU nationals, which creates administrative burden - Low tax return rate may create administrative difficulties	+5-3=**2**
EU financing models	**O4**	- Brain regain mobility pattern, which implies that students from poorer countries are likely to stay in Germany and German students return to work - Highly valued German universities attract learners from abroad, especially poorer MSs - A large share of German students obtaining a degree abroad choose countries where education is expensive	- Germany is expected to subsidise poorer MSs, while it offers a portable loan to domestic students. Therefore a scheme with a subsidy may be politically unpopular - The national loan is comparatively large and does not charge interest	+3-2=1
	O3	- High incoming labour flow, which suggests that many former learners will be repaying loans in Germany - A large share of German students obtaining a degree abroad choose countries where education is expensive - High degree of self-financing (52%) of studies abroad is a market of student lending		**3**
	O2	- Saving dominates over borrowing, therefore the risks of overborrowing are low - Means-tested support for students is already handled by	- Germany is expected to subsidise poorer MSs, while it offers a portable loan to	+4-2=2

		Positive effects	Negative effects	Balance
		the state, implying that an EU-wide scheme would highly benefit students who are 'sandwiched' between merit-based and means-tested support (i.e., not eligible for any of these). So far only 29% students receive state support - A large share of German students obtaining a degree abroad choose countries where education is expensive - High degree of self-financing (52%) of studies abroad is a market of student lending	domestic students. Therefore a scheme with a subsidy may be politically unpopular - The national loan is comparatively large and does not charge interest	
	O1			0

Note: 2a refers to the Hybrid model with income-contingent repayments for low earners; 2b refers to the Hybrid model with income-contingent repayments for low and middle-income earners; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.
Sources: see Appendix 26.

Overall, model 2b can already be implemented in Germany. Option O3 would best match the German context, as it a) allows loans large enough to meet the needs of outgoing degree students from Germany (19% outgoing degree students obtain a degree in the UK), (b) allows addressing equity concerns and flexibility through differentiated conditions for borrowers (depending on age and other characteristics), and (c) is beneficial to Germany in terms of no additional strain on the EU budget, since it is a net contributor to the EU budget and is not likely to receive subsidies to cover the losses within the system: those are controlled by introducing differentiation among borrowers according to their country of origin, age, etc. As there are relevant public institutions already in place, the institutional model could transfer more management responsibilities to the national authorities.

Hungary

Despite economic uncertainty and GDP per capita significantly below EU average, the Hungarian economy seems capable of fully absorbing higher education graduates. High returns to education can be a key factor in reducing risk aversity, which is very important for the EU student loan scheme. On the other hand, academic mobility is rather low in Hungary. As many as 39% incoming degree students are from Romania and Slovakia, many of them could be assumed to come from the Hungarian minority of these countries. If they take loans, many of them are likely to work and repay them in Hungary. Meanwhile, outgoing students mostly leave to German-speaking countries, large numbers choose France or Finland, where tuition is small or zero. Therefore it can be estimated that among students with sufficient linguistic capacities and academic merit, free education will remain a preference.
Hungary already has an income-contingent national student loan scheme since 2001, which uses private funds and is managed by the Student Loan Centre, aiming to make the loan scheme fully sustainable. The state provides a targeted interest rate subsidy (for some special groups of borrowers, e.g. for women while on maternity leave etc.), and guarantees to the whole institution. Data on outstanding debts are obtained from tax authorities which also creates a public bad borrowers list. Therefore it can be concluded that developed administrative capacities are already in place. The expected positive and negative effects are presented in 22.

Table 22. Comparison of alternative models in terms of adaptability to the Hungarian context

		Positive effects	Negative effects	Balance
Repayment models	**2a**	- This model allows using income from the rather large informal economy to repay the loan - Comparatively low average income and GDP per capita, as well as economic uncertainty, may imply that the numbers of low and medium income earners will be high	- The national income-contingent loan is likely to seem 'safer' and more attractive than repayment in fixed monthly instalments after a certain income level	+2-1=1
	2b	- The already existing loan scheme is based on cooperation of several public and private institutions and allows judging the country's administrative capacities - High returns to education (unemployment rate of highly educated individuals is lower than EU average and 65% lower than the national average) imply that few individuals will request a means test - Small family size suggests that most learners will not leave the labour market for extensive periods - Most mobile students migrate within the EU, allowing easier administration - Currently mobility and students' linguistic capacities are comparatively low, suggesting that the number of borrowers will be limited until the loan contributes to boost academic mobility	- Informal economy is large, hence complicating repayment	+5-1=**4**
EU financing models	**O4**	- The already existing loan scheme is based on cooperation of several public and private institutions and allows judging the country's administrative capacities - 69% mobile students leave to Germany, Austria, the UK, France or the Netherlands, were living costs and, if applicable, tuition are high, hence the loan should be large - Differentiated conditions are needed in order to address		**+3**

		Positive effects	Negative effects	Balance
		brain loss and income differences of graduates among EU MSs		
	O3	- Differentiated conditions are needed in order to address brain loss and income differences of graduates among EU MSs		+1
	O2			0
	O1		- A small loan is unlikely to meet the needs of mobile learners, since most of them choose countries where living costs and, if applicable, tuition are high	-1

Note: 2a refers to the Hybrid model with income-contingent repayments for low earners; 2b refers to the Hybrid model with income-contingent repayments for low and middle-income earners; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.
Sources: see Appendix 26.

The national loan scheme could complement the EU student loan scheme in many aspects, e.g.:

- It is already fully portable;
- It is rather similar to the EU student loan scheme by being universal (no means-testing) and aiming at providing opportunities for all students.

However, the additional market of the EU student loan scheme would be:

- Learners undertaking expensive studies abroad (the national loan is small, yet returns of higher education are high);
- Diverse learners who do not currently benefit from state support.

In the future, it is possible that the national student loan could evolve into a scheme for non-mobile learners, while mobile learners would benefit from the EU student loan scheme. Administrative capacities have already been developed, yet the structure of the Hungarian economy calls for some caution regarding the readiness to adopt the 2b model. In terms of EU contribution, Hungary would strongly favour the O4 option (differentiated conditions, subsidised) to avoid brain loss and encourage more learners to take the loan. This option would also be politically popular, since Hungary is likely to benefit from subsidies, while the differentiation would address multiple equity concerns. In terms of institutional model, the national authorities are already experienced in managing an income-contingent loan, and these capacities could be used in the EU student loan scheme.

Lithuania

Of the six countries selected for the in-depth study, Lithuania has the lowest GDP per capita, private investment in higher education, the largest informal economy and very low share of direct state support to students, which suggests that overall income of graduates, is likely to be low, and co-financing is not widespread. The student body is very large and increasingly mobile, with very high linguistic capacities, thus, there is a market for more mobility funding.

Yet the country is experiencing brain loss, with very high and rather concentrated labour mobility to EU15 countries. In 2005, a third of highly educated persons in the Baltic states and Poland considered moving to another EU country in 5 years[85]. Therefore many loans can be expected to be repaid in other countries.

Lithuania already has a conventional type portable loan scheme for students, which was expected to become one of the milestones of the on-going higher education reform. The aim of the national loan scheme is to ensure high participation in education. Private loans, provided by retail banks and credit unions, are guaranteed by the state. There is no means test; borrowers are only expected to have no outstanding debts. Loans for education add to 830 EUR per capita household loans (the number is approximately equal to mean monthly income). Positive and negative effects of the Lithuanian context are discussed in Table 23.

*Table 23. Comparison of alternative models in terms of adaptability to the Lithuanian context**

		Positive effects	Negative effects	Balance
Repayment models	**2a**	- Medium returns to higher education: although unemployment rate of persons with tertiary education (5.5%) is 60% lower than the national average, it is still higher than EU average (4.5%), while mean monthly earnings increase only by 42%		**+1**
	2b	- Tax return rate is very high at 69%[86]	- Large shadow economy (30% in 2002)	0
EU financing models	**O4**	- Very low private investment in higher education (9.3% of all investment), which implies little co-financing and reliance on state support for education funding. In addition, limited direct public support to students (15%) suggests there will be a demand for large loans - As noted above, returns to higher education are medium, therefore incentives are needed to prevent brain loss - The national grant and loan do not cover all study costs at home and are even less responsive to the needs of learners abroad	- Large shadow economy (30% in 2002)	+3-1=**2**
	O3	- Labour mobility is high,		1

[85] John R. Dobson, Irina Sennikova (2007), "From fundamental freedom to political and economic 'hot potato' in 50 years: labour mobility and migration within the EU", *Journal of Business Economics and Management*, 8(2): 123-136, p. 128.

[86] State Tax Inspectorate (2010). <http://www.vmi.lt/lt/?itemId=10816022>; estimate in percent provided at <http://www.zebra.lt/lt/naujienos/verslas/31-proc-gyventoju-nepanoro-susigrazinti-pajamu-mokescio-permokos-206183.html>

		Positive effects	Negative effects	Balance
		therefore many loans are likely to be repaid elsewhere. It is important that students who return to Lithuania are not disadvantaged vis-à-vis those who stay in the countries they studied in		
	O2	- Most Lithuanian degree students choose countries where tuition is low or zero: Germany (25%), France (4%), Sweden (2%). The loan would be mainly used to cover living costs. - Currently 51% students self-finance their studies abroad, implying that a large part of the students go abroad as a part of some programme	- While it is true that many students are part of programmes, it is likely that those who cannot finance their studies from any programme are often excluded from mobility	+2-1=1
	O1			0

*Note: 2a refers to the Hybrid model with income-contingent repayments for low earners; 2b refers to the Hybrid model with income-contingent repayments for low and middle-income earners; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.
Sources: see Appendix 26

The national loan, although portable and offering a significant contribution in cases when only living costs are borne by the student (esp. in Erasmus), will not compete with the EU student loan scheme in:

- Financing more expensive studies, esp. since studying in the UK is gaining popularity;
- Financing studies of students who receive neither merit-based nor means-tested support;

It will contribute to expanding the choices of Lithuanian students. Nonetheless, support for students repaying their loans in their home country should be envisaged to prevent further acceleration of brain loss. Having taken all context variables into account, repayment model 2a is the most feasible, and option O4 would best meet the needs of Lithuanian borrowers. Local administrative capacities could be used in collecting information about income, but it cannot be predicted whether they could also contribute to loan administration.

The Netherlands

With the highest GDP per capita and poverty threshold, particularly low unemployment rate and as many as 10 universities among Europe's top 100, the Netherlands has a highly developed higher education system and economy which absorbs the benefits of higher education. The fact that the national higher education system provides good value for money may be a disincentive to borrow for financing mobility, but almost every fourth outgoing student chooses to study in the UK, creating a market for student lending. Private investment in higher education is higher than EU average, and direct public support to students is also comparatively high. A vast majority of students maintaining own households are reported to benefit from state support in some way.

There are two types of loans in the Netherlands: an income-contingent public loan scheme and a (rather marginal) conventional private loan scheme. The public loan, which aims to ensure high participation in education, is managed by a special public agency. A part of it is performance-related and becomes a grant if studies are successfully completed; the other part is repaid with low interest. There is a means test for applicants. Income data is provided by tax authorities. The two loans are closely linked, and none is guaranteed by the government. Loans for education add to 2,005 EUR per capita of household loans, and it has been reported (see earlier in this report) that borrowing for studies is rather unpopular (35% students' disposable income is from employment). Table 24 presents the positive and negative effects of the national context on the EU student loan scheme.

Table 24. Comparison of alternative models in terms of adaptability to the Dutch context

		Positive effects	Negative effects	Balance
Repayment models	**2a**	- Household debts are already rather high, therefore accumulation and administration of debt should be as simple as possible - As a brain gainer, the Netherlands is likely to administer repayments of other countries' nationals' loans. Fixed instalments for more beneficiaries will allow easier cross-national administration. However, interestingly, the share of EU15 nationals in the country's labour force is many times higher than of those from EU12[87]		**2**
	2b	- Very high tax return rate (85%) - Almost negligible informal economy	- Returns to higher education are comparatively low. Tertiary education reduces the probability of unemployment by under 50% and increases mean monthly earnings by just 33%. - Family size is comparatively large (over EU average), therefore ways to prevent decreases in monthly earnings from constituting a burden on former learners would have to be mainstreamed into the loan scheme (in the national scheme the	+2-2=0

[87] Dobson, Sennikova (2007), p. 128.

		Positive effects	Negative effects	Balance
			borrower may request repayment to be postponed)	
EU financing models	**O4**			0
	O3	- Currently 54% mobile students self-finance their studies abroad, which potentially excludes those who currently cannot afford to be mobile - Labour mobility is quite high (16% Eurobarometer respondents have lived and worked in another country), thus some loans will be repaid elsewhere, and other countries' nationals loans will be repaid in the Netherlands.		**2**
	O2	- High costs of studies at home may encourage to opt for paid studies abroad, which asks for a large loan	-	1
	O1			0

Note: 2a refers to the Hybrid model with income-contingent repayments for low earners; 2b refers to the Hybrid model with income-contingent repayments for low and middle-income earners; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.
Sources: Sources: see Appendix 26

As it can be seen from the table, although highly developed administrative capacities are readily available, model 2b would be challenged by the labour market and mobility trends in the Netherlands. Since the Netherlands is a net contributor to EU budget, it is likely to favour the O3 option. Administrative capacities are sufficient to both collect information and administer the loan. There are unmet needs in higher education financing, and especially in ensuring access to education for people from all socio-economic backgrounds.

The EU student loan scheme is likely to complement the national schemes by:

- Providing bigger loans for expensive studies abroad;
- Expanding equity and facilitating access to mobility.

Spain (Catalonian region)

Even with GDP per capital higher than EU average, Spain remains a net receiver of EU budget allocations[88], and its education system is facing several challenges[89]. Nonetheless, it continues to attract students from abroad, particularly Erasmus students (over 28 thousand according to recent data) and degree students from non-EU countries (29% of incoming

[88] "Programming and management of structural funds 2007-2013 - local and regional perspectives", SRN Europe (2006) seminar, Barcelona, 21 April 2006. http://www.srneurope.net/docs/Barcelona_Seminar_with_S3.pdf.
[89] According to Eurostat data and thematic reports, early school leaving is widespread among persons with lower socio-economic backgrounds, and social selectivity of higher education prevails. In addition, high youth unemployment and 9% unemployment rate of persons with tertiary education signal low returns of higher education.

students obtaining a degree in Spain come from top 5 sending Latin American countries). While absolute numbers of mobility are high, relative numbers are low.

The Catalonian region in Spain has a mortgage-type loan for students, which is private and provided by retail banks without government guarantees. It includes a means test of parental/learner income/assets in determining eligibility. Interest rate is 2-4%. Although the loan is cheap, it has to be repaid fast and in monthly instalments, hence increasing risk adversity. In this study, a loan scheme with any public sector role has only been identified in Catalonia, which does not allow judging national administrative capacities. Expected positive or negative effects of Catalonian context on the various models identified in section 5.3.5 are presented in Table 25.

Table 25. Comparison of alternative models in terms of adaptability to the Spanish context

		Positive effects	Negative effects	Balance
Repayment models	**2a**	- Graduates returning to Spain are likely to find themselves in a variety of situations, including unemployment, therefore the threshold for means test should be low		**+1**
	2b	- Administrative capacities are already in place in Catalonia	- Particularly high youth unemployment, including those with higher education (9%), will lead to many persons requesting means test - Returns to higher education are comparatively low - Administrative capacities are only regional - The loan would add to already large household debts (2,163 EUR household loans per capita) - Tax return rate is less than 50%, and shadow economy is considerably large	+1-5=-4
EU financing models	**O4**	- There is a large unmet demand for mobility financing (70% mobile students currently self-finance their stay abroad), especially if it increases access to higher education - Mobility flows of outgoing students are concentrated, most students leave for EU countries, 47% to either the UK or Germany,	- Administrative capacities are only regional - Brain loss scenario implies that many students will be repaying their loan abroad	+3-2=1

		Positive effects	Negative effects	Balance
		where tuition and living costs are high - The regional loan is small and has to be repaid fast, with fixed monthly instalments, thus increasing risk adversity		
	O3	- Mobility flows of outgoing students are concentrated, most students leave for EU countries where tuition and living costs are high - The regional loan does not address risk adversity	- Brain loss is already an issue in Spain. With low returns to higher education and unmet potential for mobility, brain loss is likely to increase	+2-1=1
	O2	- There is a large unmet demand for mobility financing, especially if it increases access to higher education - Mobility flows of outgoing students are concentrated, most students leave for EU countries where tuition and living costs are high - The regional loan does not address risk adversity		**2**
	O1		- Brain loss is already an issue in Spain. With low returns to higher education and unmet potential for mobility, brain loss is likely to increase - A small loan is unlikely to meet the needs of most mobile learners, since they choose countries where tuition and living costs are high	-2

Note: 2a refers to a conventional loan which becomes an ICL for persons receiving low income; 2b refers to a conventional loan which becomes an ICL for persons receiving low or medium income; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.
Sources: Sources: see Appendix 26

The regional loan scheme cannot be a viable competitor to the EU student loan scheme, as:

- It is limited by region;
- It is fairly small in scope, without a public contribution.

The EU student loan scheme could:

- Boost currently low mobility;
- Promote equity among regions and social groups.

Overall, model 2a is more suitable for Spain. Although there is a demand for differentiated solutions promoting equity in education and mobility, the country may be administratively challenged by options O4 and O3. Provided that Spain is likely to be a receiver of the

subsidy, O2 would be the most viable alternative. In terms of institutional settings, some administrative capacities are available, but it is not clear (esp. having in mind regional decentralisation) to what extent they could be used to administer the EU student loan scheme.

The United Kingdom

While the UK is a very attractive destination to many students from other EU MSc, only 19% of its foreign students from the top 10 destinations are EU nationals. The UK embodies a brain pass-through scenario. Its education system, with as many as 29 universities among Europe's top 100, is attractive to foreign students (outgoing Erasmus mobility is only a half of the numbers of incoming Erasmus students, and the number of outgoing students is 10 times smaller than that of incoming students). Additional funding may further increase mobility.

Co-financing of higher education is very common in the UK. Private investment in education is particularly high, and so is direct public support to students. There are three loan schemes in place (two are rather marginal, see comparison in the previous sections). A very well-developed UK student loan scheme has a very high take-up rate and covers both tuition and living costs. The loan is deducted automatically from the employers' payrolls. A means test determines what part of the loan will be allocated as a grant. The loan is currently not accessible to non-resident foreign students, and if it were, the brain pass-through scenario of mobility and differences in living standards between the UK and sending countries estimating the income threshold after which the loan is to be repaid would be especially challenging. Meanwhile, the main destinations of UK students do not require large loans, but the needs of outgoing students are not met through the non-portable scheme. Table 26 shows which positive and negative effects of the UK context the different models identified in section 5.3.5 are likely to face.

Table 26. Comparison of alternative models in terms of adaptability to the UK context

		Positive effects	Negative effects	Balance
Repayment models	**2a**	- High labour mobility may imply that many loans taken in other countries will be repaid in the UK		**1**
	2b	- Good administrative capacities developed in three local student loan schemes, the biggest of them being an ICL - Strong effects of higher education on employment: the risk of unemployment (3.2%) is reduced by 58% compared to the national average. Therefore few persons are expected to request delays in repayment	- The effect of tertiary education on income is medium (mean monthly earnings increase by 39%), therefore a large body of students will find themselves in medium or even low income cohorts - Large family size (1.9 children) and insufficient levels of income protection during parental leave may lead many beneficiaries to request delays or means test	+2-2=0
EU financing models	**O4**	- Compared to mean earnings, the amount of household loans per capita is not very large (897	-	1

		Positive effects	Negative effects	Balance
		EUR)		
	O3	- 86% students already receive state support, which is not portable. Having in mind the strength of the UK's education system, studies abroad can mainly be attractive to UK students if they are cheaper or for the purpose of language learning. Unsurprisingly, the main European host countries of mobile UK students are France (9%) and Germany (8%). By far more students leave for the US or Australia. Therefore mobile students going to another EU country are likely to take relatively small loans to cover their living costs. It is important that these loans facilitate access to education mobility - Compared to mean earnings, the amount of household loans per capita is not very large (897 EUR)		**2**
	O2			0
	O1			0

Note: 2a refers to the Hybrid model with income-contingent repayments for low earners; 2b refers to the Hybrid model with income-contingent repayments for low and middle-income earners; O4 is an EU-subsidised loan scheme with differentiated eligibility conditions, O3 is a non-subsidised loan scheme with differentiated eligibility conditions, O2 is an EU-subsidised loan scheme with universal eligibility conditions, and O1 is a non-subsidised loan scheme with universal eligibility conditions. See section 5.3.5 for details.
Sources: Sources: see Appendix 26.

Taking into account the living standards and quality of education in the UK, mobility is often influenced by other factors rather than competitive advantage of universities abroad (e.g. language learning). In this respect, the pool of potential beneficiaries of the EU student loan scheme is likely to be limited. However, its niche is expected to be:

- Outgoing UK students who are unable to transfer student support, yet need funds to cover the living cost in the countries of their choice;
- A small number of UK students studying in other EU MSs where universities charge tuition.

Since access to mobility is of key importance, O3 could be the most viable alternative. Regarding repayment models, although excellent administrative capacities are in place to implement model 2b, some features of the UK labour market and mobility patterns suggest that model 2a would be a less risky solution. Local administrative capacities can be used for both collecting information and administering the loan.

The main conclusions of the case study analysis are set out in section 7.3 of the main text.

Table 27. Country data used in case studies

Indicator (and EU averages where relevant)	Hungary	Netherlands	Germany	Spain	Lithuania	UK
Socio-economic background						
GDP per capita (PPP) 23600.00*	14834.79	30704.25	28375.51	24496.77	12460.27	27348.44
At-risk-of-poverty threshold (PPS, single person)*	3,957	11,500	10,776	8,372	4,170	11,348
Strength of the HE system NA: universities among Europe top 100[1]	0	10	13	0	0	29
Private investment into HE (%, EU27-13.5)*	9.5	16.2	14.6	12.7	9.3	30.5
Direct public support as % of expenditure on education*	15.1	26.8	21.9	8.8	14.5	30.8
Total support to students (grants and loans)****	1,700 +Interest subsidy	9,200	9,000	6,000	3,300	13,700
Receivers of state support (own households)**	: Substitute: loan take-up 14-24%	83	29	30	:	86
Size of shadow economy[2]	25,1	13	16,3	22,3	30,3	12,6
Tax return rate[3]	:	85%	30%	41%	784,815 - 69%[90]	:
Characteristics of the target group						
Participation in ISCED5-6 (EU27 19,040,200, 3.8%) % population*	413,700 4.1%	602,300 3.7%	2,245,100 2.7%	1,781,000 3.9%	204,800 6.1%	2,329,500 3.8%
Costs of studies (PPP)****	7501	9685	7979	6574	7675	13305
Unemployment rate of persons with tertiary education (EU average: 4,5%)*	3.5 Total: 10 (-65%)	2 3.7 (-46%)	3.3 Total: 7,5 (-56%)	9 Total: 18 (-50%)	5.5 Total: 13.7 (-60%)	3.2 Total: 7.6 (-58%)
Mean monthly earnings by educational attainment (ISCED 5A, 2006)*	1775 Total 1052 (+69%)	3293 Total 2453 (+34%)	:	:	1164 Total 822 (+42%)	4095 Total 2955 (+39%)
Contribution of monthly job income to students' total income**	:	35	28	52	:	31
Fertility rate of persons aged 20-40*	1.35	1.77	1.38	1.46	1.47	1.90
Average loan portfolio (EU	5157.41 514 EUR per	33046.00 2005 EUR	-15971.00 no debt (?).	99134.17 2163 EUR per	2776.51 830 EUR per	54894.01 897 EUR

[90] State Tax Inspectorate and http://www.zebra.lt/lt/naujienos/verslas/31-proc-gyventoju-nepanoro-susigrazinti-pajamu-mokescio-permokos-206183.html

Indicator (and EU averages where relevant)	Hungary	Netherlands	Germany	Spain	Lithuania	UK
average 346480.8 mio. EUR/700 EUR per capita)*	capita	per capita	195 EUR per capita savings	capita	capita	per capita
						Student mobility trends
Erasmus outgoing[4]	3518	4902	23407	24399	2425	7429
Erasmus incoming[4]	2205	6894	17722	28175	1117	16065
Students studying in another EU/EEA/candidate country[5]	1.7	2.1	2.8	1.3	3	0.7
Linguistic capacities of students (ISCED5-6 knowing >=2 languages**	31.1	:	52.2	33.6	89.1	:
Financing needs at home, EUR****	5037	0	0	1535	3611	0
Self-financing of mobility (family, own income + job while abroad)**	:	48+6	:	65+5	39+12	:
% lived and worked in another country in the past[6]	3	16	8	10	11	16
Labour flow in and flow out balance	-0.1%	1.2%	-0,4%	-0.1%	0	-0.2%
Mobility scenario	BL	BG	BRG	BL	BL	BPT
Incoming and outgoing mobility data by country	Available at: Education International and the European Students Union. 2008. *Mobility barometer: An assessment of the mobility of academic staff and students in Europe*					
						Characteristics of the national loan scheme
Public/private***	Private	Public	Public	Private	Private	Public
Size of the loan***	143 EUR/month for publicly supported courses and 179 EUR/month for privately supported courses	650-850 EUR, depending on the period of studies	648 EUR	A total of 9 000 EUR for preferential loans and 30 000 EUR for postgraduate loans (approx. 188 or 625 EUR/month during 4 year studies)	for tuition fees – no more than the standard study price set yearly; for living expenses – 1882 EUR / year (approx. 157 EUR/month); for Erasmus – 2259 EUR / year (approx. 188 EUR/month).	:
Objective***	Social	Cost-sharing	Social	Social	Cost-sharing	Cost-sharing
Period of repayment (years)***	Until the beneficiary is 65 years old	15	30	10	15	25
Portability of the loans (yes, no, limited)***	L	L	Y	L	L	N

Sources:
* Eurostat;
** Higher Education Information System (HIS). (2008), *Social and economic conditions of student life in Europe. Synopsis of indicators / Final report*. Eurostudent III 2005-2008;
*** Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe;
**** Own calculations;
Other sources:
1 Times Higher Education-QS World University Rankings 2009 / Financial Times Global MBA rankings 2010;
2 Schneider, F..(2002), 'Size and measurement of the informal economy in 110 countries around the world', *World Bank*;

3 OECD (2008), *Returns filed electronically - personal income tax and corporate income tax*.
4 “Erasmus student mobility 2008/2009: Total number of students for studies by home and host country”, European Commission DG EAC (2009), http://ec.europa.eu/education/erasmus/doc/stat/table109b.pdf
5 “Key data on education in Europe”. EACEA (2009), http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/105EN.pdf
6 Special Eurobarometer 337 / Wave 72.5 – TNS Opinion & Social

Appendix 4. Summary of the first round of Delphi method

QR1.1. Please comment on the basic principles and their rationale (see section 1).

The overall view on the requirements and the concept:

- I believe that you have singled out the most impossible requirements – efficiency, effectiveness, equity and sustainability. I want such facility/scheme to increase access, increase the equality of opportunities without requiring much additional "government/EU" funds in the sector.
- The requirements mentioned in 1.1 are both important and appropriate, but the fulfillment of Efficiency (especially: low default rate) is particularly important so that the others could be realized.
- I have a positive view on the basic idea. It converges with an increasing pressure on governments (and student) to increase private contribution to higher education / private funding of universities parallel to diminishing public funding, and higher financial needs of teaching and research.
- We believe that the requirements outlined for an EU wide programme represent the key criteria sufficiently.

Experts would add/change the following requirements:

- Political acceptability of the scheme by as many stakeholders as possible
- Financial stability of the scheme
- Specific targets that would let us measure the performance of the scheme. This is particularly true for the default rate and the administration costs, and the impact for the individual student. Saying low for the former and high for the latter is too abstract. You need to define what low and high means with concrete values.
- The loan scheme should not require huge (or unfettered) subsidization from the EU budget;
- Limited exposure to cheating;
- Avoid overlap or displacement of national/regional schemes.
- KISS – explicit reference should be made to the transparency of the system eg. Clear eligibility requirements and to ensuring low administrative overhead/simple to administer.
- We believe that a more appropriate term for "Equity" should be "Access". Without being overly semantic, the difference is that we subscribe to the view that all students should be able to access the loan regardless of demographics (assuming that risk indicators like prior default do not appear in their credit profiles). However "Equity" potentially implies that the loan parameters should be harmonized at a programme level for all borrowers – and we do not believe this is a desired outcome.
- The meaning/intention behind the requirement "A stable, long term institution is necessary to assist investment in human capital" is not clear to us. Investment in human capital is a desirable outcome, and clearly this should represent a long term policy choice for the EU. This specific loan scheme, which is incremental and experimental in nature, might be stifled by long term bureaucracy if an initial requirement is to create (or involve) a long term stable institution. In other words we think that the programme should be designed to be long term, but should retain the flexibility and dynamism in its early stages to allow for adaptation and flexibility. Our rewording of this requirement would be: "A long term student loan programme is necessary to assist investment in human capital". Or drop it as a requirement.

Strengthening statements:

- Basic principles make sense.
- *Balance between safeguards and administrative simplicity is needed*: The concept note include various models in terms of repayment rule which depict very well tow internal contradictory forces: financial stability of the scheme (payments need to be high enough to enable the system to become self-sustainable) but with strong income safeguards to protect low earners and to minimize potential debt aversion while at the same time they should be easy to administrate. Whether it is feasible from am administration standpoint to have "full income" contingent payments might be too difficult to implement.
- *Administrative constraint*: "full income" contingent payments might be too difficult to implement.
- *KISS+ evolutionary pathway*: Initially the system must be simple since this will be to the benefit of everyone involved, administrators and students alike. The design must, however, be capable of scalability to cope with what will become an ever increasing demand. Designed such that future development is seen as an integral part of the system already in place and not as a 'bolt-on' development since these often become difficult to manage. The over-riding principle is to ensure that the system works first time since failure will undoubtedly tarnish the scheme's future image. All of these issues should assist in easing political sensitivity.
- *Smooth evolution*: The introduction of the scheme for masters programmes for mobile students only will help firstly in proving system functionality albeit on a small customer base, allow input from university staff on issues arising from their perspective, identify issues with expanding eligibility and at the same time minimize losses and any other risks involved. It must be borne in mind that although initial running costs may be lower because fewer administration staff are involved this will not necessarily have the same impact on system development costs. The system should be developed on the basis that greater numbers can be added to the portfolio with minimal effect. The loan programme is short meaning that borrowers will move into repayment relatively quickly (say) 9/10 months after graduation.
- *Information on mobility and human investments*: The participation of only mobile students should provide an opportunity of considering the likely numbers moving between member states. It will allow clear identification of the numbers staying in the country of study/returning home and consider the benefits to their own economy. It will assist in the design of recruitment programmes in conjunction with universities and at the same time perhaps remove some of the difficulties in achieving policies regarding mobility and learning across Europe.
- We agree on the KISS and Evolutionary Pathway. We also think that 1 year Masters programmes are indeed best-placed for pilot purposes for the reasons outlined.

Concerns, disagreements:

- It is a good idea to start with a pilot operation that can then be extended to other groups. But there is also the risk that it works because it is small and it will not work if it becomes too big. I find important that you show how the features of the model you will be considering can then be expanded and tested.
- Why only 1yr Masters programmes? Many countries have 2yr Masters under Bologna and to narrow only to 1yr might lead to some countries (which have a predominance of 1yr programmes) being favoured as destinations loan & programme shopping. Last bullet about the value of 1yr Masters seems inappropriate here
- Full degree mobility assumed, no discussion of credit mobility? Eg. One year of a 2yr master. Double degree programmes with one period at home and one abroad.

- Masters programmes have less brain drain than Bachelors – I am not sure what the background for this assertion is. We don't have any evidence to this effect and in-fact it might seem counter-intuitive.
- Mobility this is sometimes difficult to define. There is a blurred area between citizenship/nationality/residence which can leave students between the cracks. For instance a UK resident who has not been resident in the UK for the 3 years prior to studying cannot access a particular UK national scheme. This should be borne in mind. Perhaps pricing can be slightly higher than equivalent national schemes so that applicants self select.
- We do not agree with the arbitrary assessment of E10,000 as the amount that makes a "significant contribution" as the differences are large at a country, university and even course level. E10,000 might be far too little for a student at a top university in the UK, and too much for a student studying philosophy in Bulgaria.

Further suggestions:

- I can understand the rationale for choosing degree mobile students. But I can also see strong arguments to start with Erasmus students and consider putting together Erasmus grants and loans. One issue that might be raised is the issue of mobility vis-à-vis outside the EU from EU students outside their host country and from non-EU students to EU countries. It is part of the mission of the EU to facilitate the mobility of non-EU countries that are part of existing agreements between the EU and those countries. Quite often these students do no return to their countries but contribute through remittance flows to the wealth of their country of origin. If the idea is to enlarge mobility outside the EU we are moving to a discussion related to immigration policy and skills drain.
- It is mentioned that the value of the loan should be small because of financial stability of the scheme (agreed), but "big" enough to respect the principle of free education at the point of entry (agreed). I think we also should take into account in the amount of the loan where the student is coming from (sources of financing available at domestic level) and where is going to (average costs of studying in the country of destination) to avoid having students double dipping and taking too much debt. I don't see anywhere reference that if the student comes from a country with full portability and large loan amount whether this will be taken into consideration and he/she will not be eligible for the EU loan facility. This of course and that goes without saying brings in additional complication into the system with an overall cap if needed.
- I am wondering whether you are considering any academic performance as a requirement (or as a sweetener in terms of repayment conditions?).
- The loan should relate to the extent of living costs and tuition fees in the host country and also the supports available. A graduate from a poorer State will finish his Master program in a rich State by substantially more debt. Returning to his country, because of the likely lower incomes this graduate means higher default risk.
- Eligibility should be extended to EEA. However, an argument should be given as to why a scheme would not cover EU/EEA students wanting to be mobile globally (outside EEA borders) or incoming students to the EEA.
- Both tuition fees and living costs should be covered.
- I am an advocate of the building up of a saving system, NOT of a loan system. The current financial crises (and its causes) indicate the weaknesses of bad loans.
- Academic merit of the students should also be taken into consideration.
- We believe that the loan sizing and interest rates should be granular to at least university level (and preferably to course level). This fairly recognizes that some universities have better placement for graduates at higher salaries (reflected in their

cost of tuition) and thus higher loans could be made available to their students who can be confident to repay due to their improved earnings.
- Universities need some skin in the game and should be prepared to invest into their students.

Some points were not clear:
- Can you please explain the meaning "a stable long-term institution is necessary .." Too vague.
- Brain circulation preferable to brain drain – this needs to be unpacked a bit. Preferable to individual Member States/participant countries? In which case does it not come under political sustainability/acceptability?
- What is meant by the last bullet on the need for a stable long-term institution necessary (i.e. the scheme?). Not demonstrated. Investment in human capital is largely the competence of individual Member States/regions. This point should rather refer to where the gap lies, and which cannot (or with great difficulty) be plugged at individual country level – EU added value, this links to the conflicts of interest point above.
- Could students change programme or institution without jeopardising the loan?
- Would the status of the institution awarding qualification be an eligibility criterion? Eg public HEI, private, recognised/accredited study programme?

Missing points:
- *Institutional architect*: No discussion of whether should be administered front end (loan giving) and payment collecting, at EU or other level. Devolved to national/regional level? Loans awards at EU level and collection at national level through taxation schemes? This point is a very complex one and essentially sits in the basic principles area. Eg. A mortgage-type scheme offers much greater potential for simplicity of collection at EU level, ICS or hybrid requires a mechanism to assess payment capacity (other than self-certification, which leaves the way open for abuse).
- *Management model*: The concept paper does not address the critical issue of the setting-up, implementation, monitoring... i.e. all the practical aspects related to the management of pan-European system ((EU agency, networks of banks, national schemes, etc). I believe that the option to be chosen may have an impact of what is feasible to implement and the type of repayment rule that is "optimal" so I would like to have seen a discussion of the model and its practical implications. The paper is silent on the basic conditions to set up such a scheme. Further research is needed to analyze the possible legal structures, the source of financing of the scheme, the management of the scheme, the reporting and control mechanisms....The recent experience with the European Financial Stability Facility offers an interesting case study. Another interesting model is the work on the preparation of the micro credit fund supported by DG Employment.
- *Duplications*: The concept note needs to make much clearer the links between this EU scheme and the various National schemes. What about for example the level of debt that the students can accumulate from both national and EU scheme? Shouldn't the level of debt be capped at some level (ideally that depends where the student is going to).

QR1.2. Please provide arguments about the relevance of Model 2b (see section 2). In your opinion what other measures are needed to make the scheme attractive for the students and sustainable in financial terms?

Strengthening statements:

- Basically, I agree with the analysis and the consequences, as well as your choice.
- Can we say that a system with mortgage repayment with strong income safeguards built in has more than default and weaker access than a pure income contingent one, while the latter definitely has higher administrative demands.
- the difference is not so much between a scheme with income contingent and a scheme with mortgage payments, but whether we have strong income safeguards built in (which by definition exist in an income contingent scheme and may not exist in a system with mortgage repayments!). So whatever model we choose we have to have very strong income safeguards built in to minimize debt aversion.
- I do not think that pure income contingent repayments are feasible in the context of the EU loan scheme and that for two reasons. First because that would require to have all participating member states with working Tax Systems which is not the case. So if we consider income contingent repayments they would have to be closer to the Hungarian system and even then in countries with high level of fiscal evasion it might be an issue. On the other hand we know that income contingency is heavier to administrate then income contingency.
- It is possible, that administrative demands and costs of income-contingent system are higher than that of mortgage system, but these higher expenditures are compensated by much less credit losses.
- The model must be simple and transparent in terms of form, implementation, and administrative features. It should be equitable, control-free and fraud-resistant) to be Europe wide acceptable. 2b does not meet these basic requirements. In Europe, tax systems, welfare and (the quality of) education systems and institutions are too far apart for such sophisticated system. Implementation costs will be too high. Other risk/disadvantage: insecurity for the student.
- Perhaps Model 2b responds better to equity but may pose significant administrative burden and EU financial exposure is higher.
- After reading the paper, the mortgage-based seems perhaps a better option than my initial perception.
- Wholly or substantially self-financing in the long term. Limited exposure for the EU budget.
- The implementation of model 2b has advantages covering the wide and differing needs of a potentially multi-faceted customer base. It has the advantage of being more income contingency focused allowing the potential of perhaps moving more easily to this basis of lending as the scheme grows in number with expected growth in levels of required lending. Although requiring a fully detailed evaluation this could perhaps simplify any future systems development required for any such migration.
- It would also provide a good test bed to evaluate student lending, future development and could possibly be used as the vehicle to attract the banks and other institutional investors to become involved.
- Model 2b's key benefit is increasing the available loan cap, and thus making it more relevant to more students. This comes with the administration burden of monitoring income levels across countries (and internationally since there is no guarantee the student will remain in the EU post-graduation).

Further suggestions:

- One possibility which would be a variant of your model 2b) so to speak is that you could consider a mortgage system with say three levels of repayment to be chosen by the graduate (e.g. x0 to be paid during 10 years, x1 to be paid during 15 years or

X2 to be paid during 20 years) possibly depending on the amount borrowed and on the average level of incomes in different countries so to allow that poor borrowers in poor countries can choose the small payment for some time.

- graduates could ask for a temporary waiver of the payments if the income level of the graduates falls below a certain amount (which could vary according to the country where the graduate lives). In a first stage the burden of the proof would fall on the graduate, and to ease administration verification could be done only in case that the client would claim this remission for more than x months/years.
- I believe that a symbolic repayment should always be the rule (like in Hungary where graduates have repay at least 6% of the minimum wage making the minimum repayment in this case country dependent but with a generic rule that does not change by country). In the case of countries where fiscal evasion is high at least the graduates would have to pay something.
- Loan sizes should be capped at course tuition fees rather than at an arbitrary level which will significantly under provide for many students and significantly over provide for others.
- Interest rate and terms (average and maximum) are determined at a university/course level. (In brief this can be done by building a scorecard based on data obtained from university surveys of graduates over the previous five years). An average term could be assigned, with an automatic option for any student to increase the maximum term for affordability concerns.
- University should put up the default cushion of say 4% (100% or in 50:50 partnership with an EU fund).
- All students can access the loan programme, at different amounts (based on their course tuition), the default cushion is provided by the university since this institution has a direct impact on the student's employability, salary and post-graduation affordability. There is more effort required upfront in building the scorecard but significant savings over the life of the loans as there is no need to monitor individual student's income levels (as in contingency-linked systems). The student has the option to revert to the maximum term automatically in the event of hardship. In other words it is a mortgage model that predicts future affordability on a course/university level and then allows the individual to personally adjust the term to take into account individual affordability issues. As more and more data is added to the model the scorecard becomes better at predicting interest rate and maximum term for cohorts.
- The involvement of the national tax authorities could result in decreasing of the administrative demands and costs of repayment, and it could help to keep the default rate on a reasonable level. My opinion is that the main reason for non-repayment and late repayment in a well-designed income-contingent system is not the solvency, but the willingness.
- Expanding the customer base doesn't generate higher administrative demands and costs directly.
- The arguments about size and potential exposure are difficult to judge. Would it be possible to do with a worked model – more to give an indication of the proportional differences between the models than the accuracy of size on each model?
- Awareness of availability of financial support is often cited as one of the most significant barriers faced by (potentially) mobile students. The scheme would need to be widely promoted, at EU level or by national authorities.
- Managing expectations – how to deal with eligible applicants in efficient/effective manner and non-eligible applicants eg. Online self-check of main qualifying criteria.
- The way to set-up earnings confirmation for low earners would best be achieved by building the system such that as much as work as possible can be undertaken by human intervention at loans administration level. This model perhaps requires significantly higher levels of administration staff, with higher administrative costs to

handle processes and the income confirmation and support documentation required from students. It could also lead to increased administration at university level.

Some points were not clear:

- Paper indicates that admin. capacity needed for 2b is substantially higher. Why is the administrative capacity difference so distinct between 2a and 2b?
- Measurement of people's income – tax system or some other way? What would be the other way? Self-certification leaves exposure to the same risk/perverse incentives identified in 1b, just perhaps different level.
- How to determine the level of when income-contingency fades out and flat-rate repayment kicks in? Does this differ across countries? Implications for (central) administration?
- All the several models presented include a listing of advantages and inconvenient that could have also been included in the others. I give an example: in model 2a it is stated " the timing and size of voluntary early repayment depends on individual income" . Isn't that something that can be included in all models without exception regardless of the type of repayment rule? Or am I missing something here?

Missing points:

- Voluntary early repayment mentioned but not expanded.
- Potential for payment holiday/freezing for graduate & basis?
- Securitization of loan?
- Mutual guarantee?
- What is in it for national administrations/taxation authorities? Implies significant additional workload.

QR1.3. What kind of support mechanism is needed to finance the costs of non-repayments and/or the policies against brain drain or other purposes (see section 3)? Can or should it be connected to EU funds?

Some experts are against EU subsidies for default loss covering:

- In my opinion a student loan scheme could become a self-sustaining system and exists safely if all the losses are financed within the loan scheme in the long term. This is the best way to avoid or to reduce the political problems. Personally I think the greater incentives to adverse selection (i.e. better debtors will opt out of the system) is a more manageable problem than the potential political problems of the loss-financing from EU resources.
- Any EU lender institution should be not for profit AND self-sustaining. Except for the costs of setting up such a facility, EU-funding (taxpayers money too) should not be an option.
- Default contingency at EU level – this is one of the biggest risk (and cost) areas. Concern that exposure of EU budget should be minimised insofar as possible.
- The simplest way of offsetting some of the risks involved is to have a cohort risk premium thereby spreading the risk across the entire portfolio which could have the downside of students deciding to opt out of participation.

Some experts are against EU subsidies for brain-circulation policies:

- Any secondary policy objective other than providing the possibility to study at an accredited university/he-program, like equal division of higher education workforce / policy against brain drain, should be avoided. This would be contrary to European free movement of people and services (the European citizenship).
- Differentiation by countries: this poses difficulties. Whilst individual MS have natural desires that their graduates return to make a positive economic contribution to their

country of origin, at EU-level mobility for learning, but also to establish oneself, live, work start a family etc is positive and one of the fundamental freedoms of the EU. A substantial amount of case law on the portability of grants and loans exists. See, for a summary: A guide to the rights of mobile students in the European Union http://ec.europa.eu/education/yom/wpguidance_en.pdf

Some experts are for an optimal mix in financing default losses:

- As far as the default is concerned (and I include here both true defaulters and those that will benefit from a remission of the loan, i.e., those that will die, long term unemployed, handicapped you name it) I would say that there are as you present in your paper very strong arguments to have the EU at least partially (mainly) financing it. If nothing else the political argument is very strong. But in the case of mobility degrees, and in a context of increasing competition between Universities and if they are charging tuition fees (and since the Universities will have all the interest in attracting these students) we may consider that the Universities could also contribute with a symbolic percentage of the tuition fees received but it would increase their responsibility in the scheme.
- If banks are going to be chosen (like for example in NRW, Germany) then I would defend that they should also bear a small percentage of the default (moral hazard). We can also consider other contributors such as the member states, and the students, but the main contributor should be no doubt the EU.
- If it is not possible to finance all the losses within the loan scheme the other suggested solution could be that the losses should be financed only partly from outside subsidy.
- We believe that there are many improvements become particularly relevant when dealing with cross-border, internationally that can be made to the operational design of the programme to improve portfolio performance. These include best practices in underwriting, application processing, relationship management and lifecycle management. And new innovations such as community cohesion/peer-to-peer models that demonstrate particular relevance in reducing default in student loan portfolios. Assuming that these best practices are in place, and that the interest rate and terms are set at statistical scorecard levels, we believe that first loss liability should be allocated to the university. This could be done on a shared basis with an EU fund, but having the university with “skin in the game” encourages honesty in tuition fee pricing, improvements in career development services and graduate’s employability and a clear benefit to the universities for developing and increasing brand equity and competitiveness (i.e. increased loans for students to pay the increased tuitions). At a level of 4% we believe that this would not require EU funds to be committed and would be a manageable “expense” for universities (default on a properly managed programme should be less than 4%).

Some experts are for an optimal mix in financing brain circulation policies:

- I like the idea of offering some sort of forgiveness to create incentives for mobile graduates to return to poorer Member States, but I also can see the member states raising many issues here and the costs off such measure more than setting its benefits. First, let’s be clear what is meant? Do we mean Bulgarians returning to Bulgaria or would be a Sweden going to Bulgaria eligible? What about a Romanian to Bulgaria? Where would the line be drawn? The only case we would truly preventing brain-drain from the member country perspective would be the first one where we require the student to go back to their country of origin and in addition the country is poor (defined as GDP per capita below the EU average?) but member states might see it in conflict with freedom of move. Still the idea has some merits and might be worth discussing it/raising it as a possibility at a consultation meeting

with a wider range of stakeholders. I agree from a technical standpoint if such idea were to be taken on board then financing should come from the EU budget. But wouldn't be unacceptable for the EU perspective to finance this sort of thing?

- I think, there must be some way of tying any such policy must be linked to EU funding. To counter brain drain is, in some respects, a finely balanced issue which must be looked at very carefully. One way would be too consider some form of (say) annual financial incentive for students returning to their home country after graduation but this runs the risk of being seen as cross-subsidisation and introduces also the sovereign debt question. It could also be the case that students could be made to stay for a prescribed period in their home country at the end of which their loan would be considered for write off.

Missing points:

- Potential for involvement for other institutions in risk taking or sharing incl. commercial banking sector?
- 'Minimum loss is from graduates with low lifetime earnings' – please clarify
- Rather than focusing on the negative impacts of brain drain, we would advise further research into the positive impacts of migration such as ambassadorship, diaspora effects, inward investment and remittances and social cohesion.

QR1.4. In your opinion the parameter setting of the scheme (loan amount, interest rate, income threshold, level of fix repayment, percentage of income to be repaid) should be universal or differentiated by countries and/or borrowers (see section 4)?

General views on parameter setting:

- It is mentioned that the loan should be accessible for students regardless of their nationality, socio-economic status… What about level of debt? Is that going to be a condition? In some "quasi-universal schemes" without means testing or credit risk scoring the level of debt is a screening condition.
- In my opinion the parameter setting of the scheme should be universal. (To design a loan scheme with some differences across the Member States with the requirements that it should be fair, appropriate, effective and efficient, etc. is almost impossible, and it could cause a lot of disagreements and dissatisfactions for the graduates.)
- The establishment of an EU-level scheme with this sort of differentiation by country is also politically sensitive. Currently, for example, EU mobility programmes operate on the principle of solidarity. In addition, 'Poorer Member States' – how do you define poorer MS (presumably GDP per capita, or could be average (graduate) earnings)? Which would fall into this category, a cut-off line or gradient? Would it be reviewed over time?
- The setting of parameters for any scheme should, as far as possible, be universal since it is much easier to understand and to administer. Many of the arguments for setting these differently on a country by country basis apply her in exactly the same way as they do to incentives for low earners and/or to possibly a lesser extent to differing repayment thresholds although this may well be the easiest of all to understand. That said, however, it all needs to viewed against the background of the levels of participation sought as well as whether this should be an even spread or increased participation from poorer countries. The introduction of universal parameters is easy to understand as is any systems development although variations could probably be quite easily achieved by (say) look-up tables. It may well add to any administrative difficulties outlined in the answer to question 1.2 above.

- We believe that the loan parameters should be set at university/course level (it is possible to do this at borrower level as we already implement this in our scorecard model for MBAs – but this can affect equity perceptions and introduce political questions). As mentioned this requires an effective scorecard to determine interest rate and term (and sufficient datapoints from university surveys to enable the building of a scorecard – this is relatively easy to achieve electronically). Alternatively you could start with larger first loss provisions from universities until actual default became apparent to allow for pricing and terms to be more accurately adjusted.
- In summary I would support a scheme with elements of differences between rich and poorer member states to be addressed may be with a grant element. I would prefer the element of differentiation to be addressed by differences between "poorer" and "richer" graduates regardless where they are from or going to.91 That could be addressed with lagged income contingency system where the percentage of repayment depends on the level of earnings or that the graduate can choose the level of mortgage depending on the income subject to verification/based on own
- declaration of earnings. If the management model to be chosen includes a EU student loan agency then why not using the grant element (Dutch model of combining grants and loans in the same agency) to handle those differences?

Loan amount:

- Loan amount should be limited by the preset (annual) study costs in the country in question; below, it should be at the request / choice of the student.
- Of course country differentiation will need to exist in terms of amount of loan.

Interest rate:

- A fixed and universal interest rate is strongly advisable.
- In my opinion it would be difficult to justify having differing rates for risk. Graduates from less affluent countries and therefore perhaps more likely to default may not accept they should pay a higher premium and be turned off applying when it may well be the case that is from such students that increased involvement in student lending at a European level is required.
- Cannot be a profit, significant surplus generating but equally cannot be subject to huge subsidization from public purse.

Repayment:

Max duration of loan scheme (4 or 5 year) should be indicated.

Missing points:

- Loan amount €10k seems roughly ok. Would this be an average? Or a cap? If average, would there be a cap? Is there differentiation by country of the size of the loan, eg linked to cost of living index or other?
- Interest rate – start at point of graduation (preferable) or immediately? Market-rate, government-rate plus small amount? Capped?
- Who is providing the capital?

[91] Of course country differentiation will need to exist in terms of amount of loan.

Appendix 5. Summary of the second round of Delphi method

Expert A

Universal parameter setting
- Political risk is more relevant than the issue of adverse selection.

Loan amount
- Living costs and tuition fees should be covered

Income contingent
- This could be administratively more expensive but at the end they produce less credit loss then mortgage type

Repayment
- Mutual risk fund should be built from the graduates repayment in order to manage credit loss. For a self sustaining system the default rate is a very important measure to be controlled. Using the tax offices in collection could result in keeping the default low and improving collection.

EU subsidy only for enforcing policy objectives, for instance the brain drain „policy".
- System should be self sustaining. This is the best way to achieve high performance criteria (effectiveness, equity, efficiency). Consequently, the scheme should minimize the EU support (not use at all) in the long run.

EU level agency supported by universities
- Non-profit agency with a strong management structure
- Management of the product which is defined by EU
- Fundraising
- Collecting repayment (only outsource this, is control mechanisms are in place)
- Operational tasks are outsourced, banks only act as technical contributors.

EU is the guarantor of the loan – for liabilities not for the repayment.

Expert B

Unified parameters

Loan amount
- Tuition fee and living costs

Mortgage type seems better after reading our paper

Eligibility
- Transparent, clear requirements. This also ensures low administrative overhead. Simple access with online self eligibility checks. Promotion is very important, student should be aware of the system. Safeguarding against cheating should be built in.
- Should be clarified if study results have an impact and/or changing study programs.

Repayment
- Clear and fair repayment with payment holiday opportunities. Involving tax authorities requires additional workload and increases complexity.

EU subsidy
- Self financing in the long run is important, to have a limited exposure to the EU budget.
- Brain circulation should be preferred to brain drain. The system should clearly address the CAV on this issue: how does it address problems which are not done by national schemes.

Expert C

Loan amount

Capped at value that ensure financial stability of the scheme but ideally (i) covers tuition fees at the University and (ii) living costs in the destination country netted out of grants and loans that the student gets in his home country.

Income contingencies:

Debt is written off in the case of death, long term disability. Low-income earners have the possibility of deferrals of repayments. After 25 years debt to be forgiven and taken by guarantee/default fund.

Eligibility:

All master students from EU-EEA attending a recognized institution in the EU area (if programme lasts for two years then the loan should cover the two years). Age limit of 40 years at the time of enrolling in the programme. Loans to be available for the official duration of the studies plus one semester.

No credit scoring/no means testing

Repayment

Normally 10 years, max 15-20 years (precise numbers to be decided based on what are the requirements to ensure financial stability).

Grace period: 6 months -1 year. Only to be extended if the student decides to pursue further studies (i.e. PhD).

Three levels of mortgage (if we want the banks involved that will make the scheme acceptable for them). (students can choose one of the three levels) with very strong income safeguards built-in. Minimum repayment obligation even in the case of unemployment or inactivity (e.g. 5% of minimum wage or unemployment benefit in the country of residency).

Interest rate: Universal, variable as a rule with possibility to choose fixed. Interest charged during studies, not compounded, but only paid after graduation.

Early repayments possible without penalty.

Default:

Catching defaulters: use of all systems available – credit system/tax system/social security.

Default to be financed by a combination of (i) EU subsidy, (ii) Banks, and (iii) Universities.

EU level agency

Specified as narrow as possible. At minimum they will need to:

- manage various flows of information (with University about the student status; with the various tax authorities to know about income status of the student for income safeguards)
- manage default fund
- monitoring and evaluation of the scheme
- liaise with EU on regulation matters

Confidentiality issues are managed more easily than with “consortium of bank” solution.

Counter argument: one more EU level agency!

Outsourcing possibilities: for example, one can have a model where the lender institution is the Specialized EU-level agency with Banks providing financial services and collection of repayments and they will bear some of the default risk alongside the universities.

Consortium of banks

Second best alternative: coupled either with a EU guarantee or with the establishment of a default fund to be co-financed by EU and Universities and participating banks.

Disbursement of loans and collection of repayments should be outsourced to banks.

Innovative in applying new instruments

such as new networking tools (e.g. Facebook to keep in touch with students/graduates.)

Questions to be resolved

Working capital to be provided by banks?

Bond issues? EU funds? EIB loan?

Expert D

Loan amount

Should be limited by the preset (annual) study costs (living costs and tuition fees) in the country in question; below, it should be at the request / choice of the student

Eligibility

Equitable, control free, and fraud resistant. No income threshold of parents or alumnus.

Repayment

Fixed repayment (amount and time-frame) is preferable. Earlier repayment always be possible.

Max duration of loan scheme (4 or 5 year) is indicated.

Interest rate: A fixed and universal interest rate bases on rate of inflation + small extra to co-cover the costs of the system is strongly advisable.

EU subsidy

Self sustaining: EU taxpayers should not be used for this. Should be simple and transparent in administration. Should take into consideration that European tax and welfare systems are far apart from each other.

Policy enforcement

Only the enforcement of study at accredited universities/programs. All other policy enforcements should be avoided (such as brain drain and division of higher education work force) since they are against the free movement of people and services.

EU level centralised agency

Expert E

Loan Amount

Capped at tuition fee level. This ensures that students have some “skin in the game”.

Also tuition fees reflect differences in university quality, exit salary, career potential.

Mortgage with income contingent safeguards

Eligibility

All students regardless of background. Eligibility set at university/course level. Any students accepted into an eligible course become eligible. We think it makes sense to include non-EU students studying at EU institutions due to the Human Capital objectives of EU policy. This can be done if the contracts and programme are correctly structured.

Each student should be subjected to background checks, and where possible bureau data to make a risk decision. Loans should be declined for judgments, criminal

record, bankruptcy, fraud or unresolved default. This is critical to maintain low default.

Mandatory life insurance!

Repayment

Loan Term: Study period (with no payments) + 6 months no payment + 7 year paydown. Maximum loan term would be 12 years. Students would have the option to prolong the term automatically if it is needed.

Payment holidays - up to 2 periods of 3 month payment holidays during term (interest still accrues, term remains same). Graduate can choose to halt payments for 3 months automatically 2 times during the term. This provides for short term employment issues, job transitions, etc.

Interest only period - up to six months one time during term.

Early Repayments - can be made at any time with no penalty.

Interest Rate: E3M + 4%: It also depends on the source of funding and could be lower if subsidised.

Default

University guarantee: 10% guarantee kicking in at 5% student default. Kicking it in at 5% means that the university is not affected by expected 'normal' default. The 10% level is high to start with and could be reduced over time to more realistic levels (of around 3-4%) once an accurate picture of default is built.

Administration fee: 1.25% charged upfront to borrower to cover cost of risk screening, background check and admin.

EU level agency

Universities, banks, and national student loan centres have a national outlook on mobility. Pan-European level interest can be represented by a dedicated EU level institution. Banks are especially bad at cross-boarder student lending.

EU level guarantee looks less politically palatable.

Alumni and school stakeholders as funders/investors

This would ensure peer pressure therefore add more social cohesion to the scheme.

Funding

By the use of a simple securitization structure (with just two bands of debt – senior and junior), in order to ensure sustainability and private funding.

Default Band (approximate)	**IMPACT**		
	Junior Layer (e.g. EIB)	Senior Layer (e.g. commercial banks)	University
0%-5% default	Return reduces	-	-
5%-15% default	-	-	Guarantee Called (10% at risk)
15%-25% default	Return reduces	-	-
25%-100% default	-	Return reduces	-

Example funding mix:

Junior Debt: 25% of total @ E + 7.5%

Senior Debt: 75% of total @ E + 1.5%

Expert F

Universal parameters

The introduction of universal parameters is easy to understand as is any systems development although variations could probably be quite easily achieved by (say) look-up tables.

Loan amount

The potential of loan availability to mirror more closely costs of study would, in all probability, result in a desire from students to participate. It would also mean Universities could become more competitive

Income contingent

The additional costs will be partially offset by increased cash flow and would be further reduced as administration evolves becoming simpler. Further savings will also arise not least will from a reduction on collection costs. Default on income-contingent schemes is traditionally lower than, for example, mortgage style lending. For that reason the costs associated with pursuing non-repayers become lower, as do the costs of pursuing and the registration of default and potentially legal costs. Factors such as this are very often marginalised in the debate on income-contingent vs. mortgage style lending

Eligibility

It must be borne in mind that although initial running costs may be lower because fewer administration staff are involved this will not necessarily have the same impact on system development costs. The system should be developed on the basis that greater numbers can be added to the portfolio with minimal effect. The loan programme is short meaning that borrowers will move into repayment relatively quickly (say) 9/10 months after graduation

Repayment

It is advised to develop a cohort risk premium thereby spreading the risk across the entire portfolio which could have the downside of students deciding to opt out of participation. This, however, is a variation widely available in the UK but is generally sold under the banner of payment protection or some other guise. In my opinion it would be difficult to justify having differing rates for risk. Graduates from less affluent countries and therefore perhaps more likely to default may not accept they should pay a higher premium and be turned off applying when it may well be the case that is from such students that increased involvement in student lending at a European level is required

EU-subsidy

To counter brain drain is, in some respects, a finely balanced issue which must be looked at very carefully. One way would be too consider some form of (say) annual financial incentive for students returning to their home country after graduation but this runs the risk of being seen as cross-subsidisation and introduces also the sovereign debt question. It could also be the case that students could be made to stay for a prescribed period in their home country at the end of which their loan would be considered for write off. I think, however, there must be some way of tying any such policy must be linked to EU funding.

Universities as lending agencies

The scheme should be an income-contingent scheme then in case of the involvement of University administration will become simpler since there is only one product to understand. This in turn will mean simplicity in dealing with enquiries and fewer errors. By having only one product, marketing becomes simpler across the entire spectrum which in turn Universities may decide to augment with their own information leaflets/packs. One product will mean they require fewer administration staff (further savings). Any increase in cash flow arising from income-contingent

repayment would provide Universities with the opportunity to offer a wider range of study and to become more actively involved in shaping educational requirements. Any need to involve Universities in aspects of administration could be argued/sold as part of the overall benefits package on issues such as this. Savings could also become a consideration allowing Universities to actively promote themselves and to become more competitive.

Appendix 6. Spill-over effects of student lending

Table 28 shows how other Member States may be affected if a given Member State implements its student loan scheme for a specific subgroup.

Table 28. Spill-over effects of student lending

Member State 1 implements SL scheme for these subgroups:	**N1 Non-mobile home students working in MS1**	**N2 Non-mobile home students working in MS2**	**I1 Incoming foreign students working in MS1**	**I2 Incoming foreign students working in MS2**	**O1 Outgoing home students working in MS1**	**O2 Outgoing home students working in MS2**
Spill-over effects on Member State 2	neutral	positive	positive?	positive?	positive	positive

Source: the authors

N1+N2: If a Member State implements a student loan scheme exclusively for their non-mobile students the other Member States will rather benefit from the increasing number of better educated workers "brain gain". Even if it may produce some political tensions due to crowding out fears, the overall balance is rather positive.

I1+I2: If a Member State implements a student loan scheme for the incoming foreign students, his HE become more attractive and the other Member States will suffer from the negative "brain drain" effect but at the same time they will benefit from the competition, the knowledge transfer and also from savings public money or state guarantee by not supporting the mobility of their citizens. The sum of these spill-over effects is positive although difficult to assess.

O1+O2: If a Member State implements a student loan scheme for the outgoing home students, other Member States will profit from this "brain gain".

Appendix 7. Overpayment mechanisms

Overpayment can be required in several forms:

1. An interest rate risk premium
2. A debt multiplier
3. Extra repayments
4. Extra years of repayment

Let us exclude administration costs for the sake of simplicity. We will use the following notation:
H: individual debt
I: income
α: repayment burden

1. Interest rate risk premium (*p*)

The interest rate of the loan (*r*) equals the risk free rate (*f*) plus the default risk premium. Debts are accumulated according to r and the repayment obligation is due until the debt becomes zero or for N year at maximum.

$$r=f+p$$

$$H_{i,0} = d_{i,0}$$

$$\mathrm{H_{i,t}} = \max\left(0; \mathrm{H_{i,t-1}} \cdot \mathrm{r} - \alpha \cdot \mathrm{I_{i,t}}\right)$$

$$\mathrm{c_{i,t}} = \min\left(\mathrm{H_{i,t-1}} \cdot \mathrm{r}; \alpha \cdot \mathrm{I_{i,t}}\right)$$

2. Debt multiplier (*M*)

The interest rate of the loan equals the risk free rate (*f*) but the loans taken out are multiplied by *M* which is greater than 1 and this increased amount is to be repaid.

$$r=f$$

$$H_{i,0} = d_{i,0} \cdot M$$

$$\mathrm{H_{i,t}} = \max\left(0; \mathrm{H_{i,t-1}} \cdot \mathrm{f} - \alpha \cdot \mathrm{I_{i,t}}\right)$$

$$\mathrm{c_{i,t}} = \min\left(\mathrm{H_{i,t-1}} \cdot \mathrm{f}; \alpha \cdot \mathrm{I_{i,t}}\right)$$

3. Extra repayment (δ)

The interest rate of the loan equals the risk free rate (*f*) but the repayment burden is increased to $\alpha + \delta$. The debt is reduced only by $\alpha \cdot \mathrm{I}$, the rest goes into a fund dedicated to finance the expected losses.

$$r=f$$

$$H_{i,0} = d_{i,0}$$

$$H_{i,t} = \max\left(0, H_{i,t-1} \cdot f - \alpha \cdot I_{i,t}\right)$$

$$c_{i,t} = \min\left(H_{i,t-1} \cdot f, (\alpha + \delta) \cdot I_{i,t}\right)$$

4. Extra years (υ)

The interest rate of the loan equals the risk free rate (*f*) but when the debt becomes zero, the repayment obligation still lasts for υ years:

$$r=f$$

$$H_{i,0} = d_{i,0}$$

$$H_{i,t} = \max\left(0, H_{i,t-1} \cdot f - \alpha \cdot I_{i,t}\right)$$

Let *t** denote the year when debt becomes zero:

$$H_{i,t^*} = 0$$

$$c_{i,t} = \begin{cases} \min\left(H_{i,t-1} \cdot f, \alpha \cdot I_{i,t}\right) \cdot X_{i,t} & \text{ha} \quad t \le t^* \\ \alpha \cdot I_{i,t} & \text{ha} \quad t^* < t \le t^* + \upsilon \\ 0 & \text{ha} \quad t > t^* + \upsilon \end{cases}$$

Appendix 8. CAV and subsidiarity in student lending

FISCAL FEDERALISM This question can be answered by applying a theoretical framework of „fiscal federalism" for the concrete situation. (Musgrave 1997, Oates 1999) An overview the below considerations and the trade-offs between them can help to make a well-structured analysis, and to avoid incorporating too much personal and value-based judgements.

GOVERNMENT LEVELS can be: EU, national, provincial or local. Now we concentrate only on the first two: EU and national government levels. Task sharing is a question of competences. Competences can be:

First pillar: Exclusive or EU competences (e.g. competition policy)
Second pillar: Shared competences (e.g. foreign affairs)
Third pillar: National competences (e.g. secondary school curriculum)

In the case of EU competences the decision making is „*Supranational*":

- Commission proposes new laws that are voted by the Member States (Council of Ministers and EP). If passed by majority voting it will be binding for every member even those that disagree with it. Majority voting is an important element here. It tells us that Member States have transferred sovereignty to the EU-level.
- Commission may have direct executive authority (like in competition policy).
- European Court of Justice can alter laws, rules and practices in the Member States.

In the case of Shared competences the decision making is „*Intergovernmental*":

- Cooperation is voluntary.
- All the members have to agree unanimously on any common policy.

In the case of National competences there is no common policy:

- Decisions are made by the sovereign governments.

PRINCIPLE OF SUBSIDIARITY: The Principle of subsidiarity suggests setting policies as close to people as possible.
„*In areas which do not fall within its exclusive competence, the Community shall take action in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community*."
[92]

PRINCIPLE OF PROPORTIONALITY: The „Principle of Proportionality" complements it: EU should undertake only the minimum necessary actions.
„*Any action by the Community shall not go beyond what is necessary to achieve the objectives of this Treaty*." [93]
THE FIRST ANSWER TO THE TASK-SHARING QUESTION**:** When in doubt, allocate the tasks to the lowest practicable level. In this way the policy will be subject to more democratic control. This is a strong argument for decentralisation. Centralisation can be justified basically by three considerations: 1) the spill-over effects and 2) the scale economies[94] and 3) informational advantages.

[92] Article 5 Treaty on European Community, 1957

[93] Article 5 Treaty on European Community, 1957

[94] Compare this statement to the citation from the Treaty of Rome on page XXX.

1. Spill-over effects (externalities)

SPILLOVER EFFECTS IN GENERAL: Spill-over effects are the economic side-effects, known as externalities.

- In case of a positive spill-over (i.e. army) if all parties decided separately, the size of the policy would be too small. (*Free-rider problem*)
- In case of negative spill-over (i.e. state aid to national firms) if all parties decided separately, the size of the policy would be too big.

Both positive and negative spill-overs make local decisions suboptimal for the EU as a whole (this situation is called *Prisoner dilemma* in game theory), thus the presence of externalities necessitates common policy thus centralization.

SPILLOVER EFFECTS IN STUDENT LENDING**:** Significant positive spill-over effects are present. If a Member State creates its own comprehensive student loan scheme supporting all kinds of mobility, the other countries will profit from the mobility and the enhanced competition without spending public money or guarantee on student lending and without risking high administration costs and default losses. Free-riders benefit from the student loan systems set up by the others, thus Members States have interest in limiting their student lending activity to a minimum level which is definitely suboptimal. This argument provides another justification why it cannot be expected that Member States solve the problem by their own and why a common policy is needed.

2. Scale economies

ECONOMIES OF SCALE: Scale economies in the provision of public services also favour centralization, because cost savings can be realised as the size of the service increases.

ECONOMIES OF SCALE IN STUDENT LENDING: The possible sources of scale economies in student lending are the followings:

- wider risk cohort, better diversification; [S-23]
- more efficient financing and risk-management (due to better market position); [S-23-33]
- more efficient collection mechanism, lower administration costs especially in mobility lending; [40]
- better crisis-resistance (political, financial and social crisis);
- lower costs of design and implementation (set-up costs, consultancy) etc.

COOPERATION OF NSLSS IN COLLECTION OF REPAYMENT: It must be emphasised that the collection of the repayments of the mobile workers cannot be solved at national level by definition. The cooperation of NSLSs becomes inevitable if graduate mobility significantly increases.

3. Informational advantage

DIVERSITY OF PREFERENCES: Fiscal federalism suggests considering an additional issue as well: the informational advantage. We have seen that people's policy preferences are very different related to HE financing issues and also to student lending. In such a situation a one-size-fits-all policy would require too much compromise; therefore student loan policy should be differentiated. If differentiated policies are to be set, then the question is: which government level is probably better in determining the appropriate policy elements. It is an issue of information and incentives to adapt policies to the preferences of the people.

NSLSS HAVE INFORMATIONAL ADVANTAGE IN NON-MOBILE LENDING**:** National student loan schemes vary country by country, due to the fact that they were designed for specific needs

and alongside specific policy objectives within the specific political, cultural context of a particular member state. The vast majority of the borrowers study and work at home (> 95%) and systems were designed basically to serve these borrowers. It is beyond discussion that in non-mobile lending NSLSs have absolute informational advantage.

EU HAS INFORMATIONAL ADVANTAGE IN MOBILE LENDING: In principle, NSLSs could develop new products to serve mobile students and workers as well, but it is important to see that definitely they have information disadvantage in mobile lending. The necessary information on preferences, opportunities, financing needs, riskiness and income perspectives of mobile students and workers are much easily accessible at EU level.

THE FINAL ANSWER TO THE TASK-SHARING QUESTION**:** We have to evaluate the trade-off between the arguments for decentralisation (principles of subsidiarity and proportionality) and the arguments for centralisation (spill-over effect, scale economies and informational advantage). Trade-offs are difficult to measure, but it follows from the above discussion that arguments of the centralisation are the strongest with mobile students, rather modest with mobile workers and non-convincing in the case of non-mobile students and workers. Putting all elements together we suggest the task sharing presented in Table 29.

Table 29. Suggested task-sharing in student lending (EU and national governments)

Loans for mobile students	**Exclusive or EU competence** (participation is obligatory for all Member States if it is accepted by majority voting)
Collection of repayments of mobile graduates	**Shared competence** (voluntary cooperation)
Loans for non-mobile students and graduates	**National competence**

Source: the authors

Appendix 9. Mapping of loans available for students at ISCED 5A and 6 levels across 33 European countries, by type of loan

Table 30. Mapping of loans available for students at ISCED 5A and 6 levels across 33 European countries, by type of loan

Country	Type of loan	
	Conventional / traditional loan	**Income-contingent loans or loans with income-contingent elements**
Austria	X	
Belgium (French-speaking community)	X	
Bulgaria*	X	
Croatia (Međimurje county)	X	
Cyprus (no role of government)	X	
Czech Republic	NO schemes with role of government (political discussions undergoing)	
Denmark	X	
Estonia	X	
Finland	X	
France	X	
FYROM	X	
Germany	X	
Greece**	X (only at ISCED 6 level)	
Hungary		X
Iceland		X
Ireland	NO schemes with role of government (political discussions undergoing)	
Italy	X	
Latvia	X	
Liechtenstein		X
Lithuania	X	
Luxembourg***		X
Malta		X
Netherlands 1 – Public student financial support		X
Netherlands 2 – private loan	X	
Norway	X	
Poland - The	X	

student loan and credit scheme		
Portugal	X	
Romania	NO schemes with role of government (plans to introduce the scheme in 2011)	
Slovakia	X	
Slovenia	X	
Spain ****	X	
Sweden		X
Turkey	X	
United Kingdom1 - Student loan		X
United Kingdom2 - Professional and career development loan	X	
TOTAL	**24**	**8**

* The Bulgarian loan scheme starts to operate in October 2010. However future features of the latter scheme are already known and therefore it is included in the study.

** In Greece a loan scheme with government role is applied only for postgraduate students at ISCED 6 level (PhD studies).

*** In Luxembourg the type of repayment is agreed between the bank and the borrower, so there may also be some cases of conventional loan repayment.

***** In Spain we have identified two loans: preferential (for all university students) and postgraduate (for postgraduate students) loans in Catalonia and a national (state) loan scheme for postgraduate students at ISCED 5A (Master studies) and 6 levels (PhD studies).

Source: Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 10. Access restrictions: Eligibility/risk assessment criteria applied in 32 European loan schemes

Table 31

Country	Age	Nationality/ Citizenship	Place of residence	Labour market status	Parental/ learner income/assets (means test)	Absence of outstanding debts	Academic merit	Other criteria
Austria	X	X	X		X	X		
Belgium (French speaking community)		X	X					X
Bulgaria	X	X						X
Croatia (Međimurje county)		X						
Cyprus		X						X
Denmark		X						
Estonia		X	X					X
Finland	X	X	X		X (indirectly)	X		X
France	X	X	X			X		X
FYROM		X						
Germany	X	X	X		X			
Greece		X	X					X
Hungary	X	X	X			X		X
Iceland		X						
Italy		X	X				X	
Latvia	X	X	X		X			X
Liechtenstein			X					
Lithuania						X		
Luxembourg			X					
Malta	X	X						X
Netherlands1 – public loan	X	X	X		X		X	X
Netherlands2 – private loan	X		X			X		X
Norway		X	X					
Poland – The student loan and credit scheme	X	X			X	X		X
Portugal					X	X		X
Slovakia		X						
Slovenia			X		X			
Spain			X		X			

Country	Age	Nationality/ Citizenship	Place of residence	Labour market status	Parental/ learner income/assets (means test)	Absence of outstanding debts	Academic merit	Other criteria
(Catalonia)								
Sweden	X	X	X			X	X	X
Turkey		X						
United Kingdom1 – UK student loan	X	X	X		X			X
United Kingdom2 – Professional and career development loan	X	X	X		X	X		X
Number of cases	14/32	25/32	20/32	0/32	11/32	10/32	2/32	17/32

Source: Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 11. Breakdown of loan scheme users by different characteristics

Table 32

Group of learners	Austria	Finland	France	Hungary	Netherlands – public loan	Poland	Sweden
Female	50,2%	58,4 %	n/a	57%	49%	n/a	61 %
Male	49,8%	41,6 %	n/a	43%	51%	n/a	39 %
Full-time learners	n/a	100 %	n/a	70%	n/a	77,8%	90 %
Part-time learners	n/a	0 %	n/a	30%	n/a	22,2%	10 %
Aged 15-24	15,3%	67,8 %	86%	25 %	12%	n/a	55 %
Aged 25-34	44,3%	28,7 %	13%	65 %	63%	n/a	31 %
Aged 35-54	35,0%	3,4 %	n/a	10 %	25%	n/a	14 %
Aged 55-64	5,4%	0,08 %	n/a	0 %	0,2%	n/a	0 %
Foreign nationals	n/a	<5.5 %*	n/a	0.002 %	n/a	n/a	7 %
Nationals learning abroad	n/a	~10 %	n/a	0.0005 %	n/a	n/a	8 %

* Only the total number of foreigners using any kind of student support is known.

Source: Survey of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 12. Loan amounts

Table 33: Loan amounts across 32 European loan schemes, in euro

Country	Maximum amount of loan per month (unless indicated otherwise)
Austria	25 000 in total approx. 625/month for 4 years of learning/studies)
Belgium (French speaking community)	124
Bulgaria	50-130
Croatia (Međimurje county)	145
Cyprus	75 000 per family member / 150 000 per family approx. 1875/month for 4 years of training/studies)
Denmark	367
Estonia	1917 per year (approx. 190/month)
Finland	Depends on the age and the level of education: in ISCED level 3, if learner is aged under 18 – 160, if 18 and over – 300; in ISCED level 5-6 – 300; recipients of adult education allowance – 300; studies abroad: for ISCED 5-6 – 440, for ISCED 3-4 -360.
France	15 000 in total approx. 375/month for 4 years of learning/studies)
FYROM	39
Germany	324
Greece	300
Hungary	143/month for publicly supported courses and 179/month for privately supported courses
Iceland	No limit
Italy	6000 in total approx. 150/month for 4 years of training/studies)
Latvia	For studies in Latvia – 170/month, for studies outside Latvia – 805/month
Liechtenstein	900
Lithuania	Depends on the purpose; for tuition fees – no more than the standard study price set yearly (30/month in 2009/2010); for living expenses – 188/month; for Erasmus – 226/month.
Luxembourg	880
Malta	23 300 in total (approx. 580/month during 4 year studies)
Netherlands1 – public loan	1st period – 650, 2nd period – 853
Netherlands2 – private loan	2 500 in total (5 000 for HE studies abroad approx. 63 or 125 /month for 4 years of learning/studies)
Norway	1 112
Poland - The student loan and credit scheme	150
Portugal	416
Slovakia	133

Slovenia	21 000 in total (approx. 525/month during 4 year studies)
Spain (Catalonia)	9 000 – 30 000 in total, depending on the level approx. 225-750/month)
Sweden	619
Turkey	For ISCED 4-5 levels – 100/month; For ISCED 6 (Masters) – 200/month
United Kingdom1 – UK student loan	Rates for England for 2010/2011: Tuition fee loan: 3950 in total per year approx. 395/month) Maintenance loan: for those living in London 8315 in total (831 /month), elsewhere in the UK – 5940 (594/month), living with parents – 3200 (320/month) Rates for other regions may be different
United Kingdom2 – Professional and career development loan	360-1 230 in total (18-62/month for 2 years of training/studies)

Source: Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 13. State subsidies in student lending

Table 34

Country	General interest rate subsidy	General alleviations, grace periods	Targeted support	State guarantee	Loan forgiveness	Other
Austria						Subsidy to the saving payments of the borrower
Finland		Yes	Yes, interest rate subsidy	Yes	Yes	Tax deduction
France				Yes		
Hungary		Yes	Yes, interest rate subsidy	Yes, for the managing institution	Yes	
Netherlands1 – public loan		Yes			Yes	
Netherlands2 – private loan	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Poland – The student loan and credit scheme	Yes	Yes	Yes	Yes	Yes	
Sweden	Yes	Yes			Yes	
United Kingdom1 – UK student loan	Yes	Yes			Yes	
United Kingdom2 – Professional and career development loan	Yes	Yes				

Source: Survey of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Loan scheme managers provided comprehensive information on state subsidies:

Austria: The Government provides a subsidy to the saving payments of the borrower prior to taking the loan. This subsidy is to be paid back if the borrower does not use the deposits (and the loan) for the defined purposes (e.g. vocational education). Furthermore, in comparison to an ordinary bank loan, the loan fee (0.8% of the loan amount) is not applicable to building society loans.
Finland: Specialised publicly owned institution (KELA) co-managing loans with retail banks can pay the interest due on student loan on the basis of the following criteria: 1) low income,

and 2) the fact that the interest on the borrower's market-rated loan is not being capitalized or that the student hasn't received financial aid during the 5 months preceding the month in which the interest on his interest-subsidized loan is due. Furthermore, in Finland student may receive a student loan tax deduction, if s/he completes his/her degree within the set time and if, at the end of the semester in which s/he completes his/her degree, he has more than € 2.500 in outstanding student loan debt. Finally, Finnish students may also usually get a 2 year grace period for repaying their loans (however different grace period may be agreed between borrower and the bank).

In **France**, the state only provides a loan guarantee to all borrowers, for at most 70% of the loan amount and for the maximum period of 10 years.

Hungary: Government provides the targeted child care subsidy (interest rate allowance). In the case of customers raising small children, receiving maternity/childbirth allowance, child care allowance/subsidy, interest is paid by the central state budget; the customers may receive an earmarked interest subsidy. Furthermore, Hungarian students may receive a short grace period (3 months) for their loan repayments. Finally, state guarantee is also provided. However it is provided not to individual borrowers, but for whole managing institution - Diákhitel Központ Zrt.

Poland: Student loans and credits are granted from the Student Loan and Credit Fund, by commercial banks on preferential terms. The Fund's resources are used to finance: mainly loans for low-income earners, a part of interest on loans taken by students, costs of loan forgiveness (as the loans are guaranteed by the state) and its administrative costs (of the Fund). Furthermore, students in Poland may get a grace period of 2 years for repayment of their loans.

Sweden: 30% of the interest rate of the usual loans is tax-deductible. The VET loans are not subject to this deduction, therefore the Government provides a general interest rate subsidy of 30% to compensate. Government also provides grace period of 6-12 moths for the repayment of loans. The maximum duration of grace period depends on when studies end – in spring or autumn term.

The UK: In the PCDL scheme, Government compensates the interest rate for the learner during the period of learning and for one month afterwards. This subsidy is available to all learners taking this loan. PCDL scheme also allows for a short grace period for a maximum of 2 months (its duration depends on the banks). Meanwhile UK student loan does not foresee any additional interest rate on loans. The only purpose of the applied interest rate of the loans is to adjust the payment to the changing monetary value of the currency. The interest rate is calculated and applied annually, starting in September. It is derived from the Retail Prices Index (RPI) figure as at 31st March. The current rate since September 2009 is 0%. The duration of the grace period under this loan scheme is not precisely defined: student starts to repay on next April when s/he graduates and if s/he is earning more than €18 000 (£ 15 000) a year.

Appendix 14. *De jure* portability of loans across European countries

Table 35

Countries	Loan is available for foreign nationals coming to a country	Loan is available for nationals studying abroad
Austria	Yes, but needs to have a permanent residence and use loan for training/education in Austria	Yes, no limitations
Belgium (French speaking community)	Yes, but only for children learning/studying in French of foreign nationals resident in the region.	Yes, if the course is in French language and not available in the French community
Bulgaria	Yes, for EU citizens only	**No**
Croatia (Međimurje county)	**No**	Yes, no limitations
Cyprus	**No**	Yes, for parents residing in country who child(ren) study abroad
Denmark	Yes, no limitations	Yes, but approval of school/university is required
Estonia	Yes, but only those with long-term residence permit or permanent right of residence	Yes, no limitations
Finland	Yes, but needs to have a residence permit (which is given after 4 years of living in a country) and live for a purpose other than studying	Yes, but studies should correspond to Finnish studies or form a part of a Finnish degree programme
France	Yes, for EU/EEA citizens living in a country for 5 years	Yes, but only for partial studies (e.g. Erasmus)
FYROM	**No**	**No**
Germany	Yes, for EU nationals and non-EU citizens with certain residence permit – no minimum residence requirement; for others – 5 years residence (or 3 years parents residence)	Yes, unlimited in EU, but maximum 1 year elsewhere
Greece	Yes, but there may be some restrictions applied by the bank	Yes, but there may be some restrictions applied by the bank
Hungary	Yes, for EU/EEA citizens with residence permit and living for a purpose other than studying	Yes, no limitations
Iceland	**No**	Yes, but there are limits for the amount of loan for school fees and the number of years person can receive a loan
Italy	Yes, only residents of Italy, aged between 18-35 and complying with the set merit criteria	Yes, but only for partial studies (e.g. Erasmus)
Latvia	Yes, for EU and other citizens with valid residence permit	Yes, but only for universities accredited in a foreign country
Liechtenstein	Yes, but only for persons with at least 3 years of uninterrupted residence or 5 years regular residence or having a parent with regular residence 5 years residence during the last 10 years)	Yes, but only if they had 5 years regular residence during last 10 years and do not receive support from country of their current

Countries	Loan is available for foreign nationals coming to a country	Loan is available for nationals studying abroad
		residence
Lithuania	Yes, EU nationals or non-EU nationals with residence permit	Yes, but only for partial studies (e.g. Erasmus)
Luxembourg	Yes, but only for those working in Luxembourg, family of a person working in Luxembourg, or resident in a country for a 5 years	Yes, no limitations
Malta	**No**	Yes, only portable loans exist (they must be brought abroad or used for distance courses based abroad)
Netherlands1 – public loan	Yes, for EU/EEA/Switzerland living in a country for five years without interruption or, if they lived less, they (or they parent(s)) have to wok minimum 32 hours/week. Citizens of other countries are eligible with certain residence permits. If person has a study permit then s/he is not eligible	Yes, but only for registered full-time students in a country and for training/studies which a part of Dutch training/studies
Netherlands2 – private loan	Yes, but only if foreign nationals get public loan	Yes, but only if learner/student continued receiving public loan
Norway	Yes, special quota for students from developing countries; EU/EEA/EFTA nationals are eligible if they reside for family reasons or if they were working 2 years continuously before starting an education	Yes, but only for programmes approved by Norwegian Agency for Quality Assurance in Education)
Poland - The student loan and credit scheme	Yes, for EU nationals working/living or whose members of family work/live in Poland and who are studying in Polish HE institutions	Yes, but only for registered students in a country and only for partial studies (e.g. Erasmus)
Portugal	Yes, no limitations, however additional collateral may be requested by banks	Yes, but only in programmes approved by Portuguese Ministry of Higher Education
Slovakia	**No**	Yes, no limitations
Slovenia	Yes, only residents of Slovenia	Yes, no limitations
Spain (Catalonia)	Yes, only for studies in Catalonia, additional collateral may be requested by banks	Yes, only for Catalan residents
Sweden	Yes, for EU-citizens (and equals) having residence permit or living or working in Sweden for 2 years or family members of Swedish citizens/residents and who did not come to Sweden in the purpose of studying. Other nationals with residence permit are also eligible	Yes, but for those who lived in a country for at least 2 years and for training/studies provided by institutions approved by authorities
Turkey	**No**	**No**
United Kingdom1 – UK student loan	Yes, for EU nationals residing in a country for 3 years and attending a full-time course at a UK university	**No**
United Kingdom2 – Professional and career development loan	Yes, but foreigner has to be settled in the UK and have a residence permit	Yes, but only if the course is not available in the UK
'Yes' answers/all 'yes' and 'no'	25/32	26/32

Countries	Loan is available for foreign nationals coming to a country	Loan is available for nationals studying abroad
answers		

In this table only the formal (de jure) conditions of loan portability are considered (survey did not examine how/if they are applied in practice (de facto).

Source: Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 15. Default losses in student loan schemes

Student loans and websites listed - throughout the text stated that not much information on the French Student Loan Scheme. In the table though there are two mentioned (in fact there is only one scheme in France and the two sites included is for the same scheme but from different sources and covering different angles). In fact, the system that was introduced in France is very similar to the Portuguese one – award of loans is done though commercial banks that have signed an agreement with the Government that will partially guarantee the loans.

Table 36. Writing off of the loans

Country	Number of contracts written off			Average default rate*	Amount written off, in millions EUR		
	2006/ 2007	2007/ 2008	2008/ 2009		2006/ 2007	2007/ 2008	2008/ 2009
Austria	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Finland	4 947[1]	6 635[1]	7 471[1]	2,13	1,3[1]	0,7[1]	15,6[1]
France	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hungary	5481	7770	10658	8,23	6,2	8	11,3
Netherlands1 – public loan	n/a	2967	4328	0,82	14,24	9,05	18,39
Netherlands2 – private loan	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Poland – The student loan and credit scheme	n/a	n/a	n/a	2,32[2]	1,5	1,5	1,2
Sweden	66 000[3]	72 000[3]	68 000[3]	9,35[3]	63	68	86
United Kingdom1 – UK student loan	4200	6500	8500	0,29	8,11	13,12	44,99
United Kingdom2 – Professional and career development loan	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Calculated as number of written off loans divided by total number of loans (averages during the last three years)
[1] Data provided for the years 2006, 2007 and 2008
[2] Only total data during 12 years of operation available. Average was calculated for the whole period.
[3] Including loans partly written off as part of the state.

Source: Survey of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 16. Take-up rates in student loan schemes

Table 37. Take-up rates of the loan schemes

Country	Take-up rates		
	2006/2007	2007/2008	2008/2009
Austria	n/a	n/a	n/a
Finland	40,2 %	38,2 %	37,0 %
France	n/a	n/a	n/a
Hungary	24 %	22 %	20 %
Netherlands1 – public loan	n/a	n/a	n/a
Netherlands2 – private loan	n/a	n/a	n/a
Poland – The student loan and credit scheme	11,4%	10,8%	10,5%
Sweden	n/a	n/a	40-50%
United Kingdom1 – UK student loan	80% (England); 81% (Wales)	80% (England); 83,6% (Wales)	n/a
United Kingdom2 – Professional and career development loan	n/a	n/a	n/a

Source: Survey of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe

Appendix 17. Lack of information in student lending

Table 38

Country	Availability of information in English	Websites
Austria	**Some information is available in English**	https://www.bausparen.at/eBusiness/rai_template1/314933534010554625-308249056768873230_311711251989244200-320806963203987028-NA-19-NA.html
Belgium (French speaking community)	Information is available only in national language	http://www.cfwb.be/index.php?id=146
Bulgaria	Information is available only in national language (some documents will be made available in English next year)	www.mon.bg
Croatia (Medjimurje county)	Information is available only in national language	www.medjimurska-zupanija.hr
Cyprus	**Some info is available in English**	http://www.laiki.com/web/w3cy.nsf/WebContentDocsByID/ID-E2166081673DE954C225728A003CCB5C
Czech Republic	Loan scheme not available	
Denmark	**Some information is available in English**	www.sustyrelsen.dk
Estonia	**Only legal information is available in English**	http://www.legaltext.ee/et/andmebaas/tekst.asp?loc=text&dok=X70048K3&keel=en&pg=1&ptyyp=RT&tyyp=X&query=%F5ppelaen
Finland	**Detailed information is available in English**	http://www.kela.fi/in/internet/english.nsf/NET/081001133800IL
France	Information is available only in national language	http://www.etudiant.gouv.fr/pid20474/pret-etudiant.html
FYROM	Information is available only in national language	http://konkursi.mon.gov.mk/cgi_sliki/MON/K4
Germany	Information is available only in national language	www.das-neue-bafoeg.de
Greece	Information may be available only in national language	-
Hungary	**Some information is available in English**	www.diakhitel.hu
Iceland	**Some information is available in English**	http://www.lin.is/lin/UmLIN/english.html
Ireland	Loan scheme not available	
Italy	Information is available only in national language	www.diamoglicredito.it/
Latvia	Information is available only in national language	http://www.sza.gov.lv/
Liechtenstein	**Very little information is available in English**	http://www.liechtenstein.li/en/eliechtenstein_main_sites/portal_fuerstentum_liechtenstein/fl-buw-bildung_wissenschaft/fl-buw-ausbildungsbeihilfen.htm Information in national language: http://www.llv.li/amtsstellen/llv-sa-amtsgeschaefte-stipendien_darlehen.htm
Lithuania	Information is available only in national language	www.vsf.lt
Luxembourg	Information is available only in national language	www.cedies.lu
Malta	**Information is available in English**	http://www.education.gov.mt/youth/ysss.htm
Netherlands1 – public loan	**Detailed information is available in English**	http://www.ocwduo.nl/
Netherlands2 – private loan	Information is available only in national language	http://www.abnamro.nl/nl/prive/lenen/studentenlimiet/introductie.html http://www.ing.nl/particulier/lenen/lenen-met-variabele-rente/studentenkrediet/index.aspx http://www.rabobank.nl/particulieren/producten/lenen/speciaal_voor_studenten/studentenkrediet/default
Norway	**Detailed information is available in English**	www.lanekassen.no
Poland – The student loan and credit scheme	Information is available only in national language	http://www.nauka.gov.pl/szkolnictwo-wyzsze/sprawy-studentow-i-doktorantow/system-pomocy-materialnej/kredyty-studenckie/
Portugal	Information is available only in national language	http://devel.mctes.pt/archive/doc/emprestimos.pdf http://www.dges.mctes.pt/NR/rdonlyres/DB16C19A-3C9A-4D42-A538-

		20A9DE823C74/554/dl_2007_309A.pdf http://www.dges.mctes.pt/DGES/pt/Estudantes/ApoioaoEstudante/Emprestimos/
Romania	Loan scheme not yet in operation	
Slovakia	Information is available only in national language	www.spf.sk
Slovenia	Information is available only in national language	http://www.sklad-kadri.si/
Spain	Regional (Catalonian scheme): **Detailed information is available in English only for postgraduate loans** State scheme for loans at ISCED 5A (masters) and 6 levels: Information is only available in national language	Regional (Catalonian scheme): Information on preferential loans (for all university students): http://www10.gencat.cat/agaur_web/AppJava/english/a_beca.jsp?categoria=predoctorals&id_beca=16648 Postgraduate loans (only for postgraduate students): http://www10.gencat.cat/agaur_web/AppJava/english/a_beca.jsp?categoria=universitaris&id_beca=16645 National scheme for loans at ISCED 5A (masters) and 6 levels: http://www.educacion.es/educacion/universidades/convocatorias/titulados-doctores-profesores/prestamos-renta-universidad.html
Sweden	**Some information (mainly for repayment) is available in English**	http://www.csn.se/
Turkey	Information is available only in national language	www.kyk.gov.tr
United Kingdom1 – UK student loan	**Detailed information is available in English**	http://www.slc.co.uk/
United Kingdom2 - Professional and career development loan	**Detailed information is available in English**	http://www.direct.gov.uk/en/EducationAndLearning/AdultLearning/FinancialHelpForAdultLearners/CareerDevelopmentLoans/index.htm http://pcdl.ypla.gov.uk/

Source: Surveys of loan scheme managers in the framework of study Cedefop (forthcoming). The role of loans in financing vocational education and training in Europe, literature review

Appendix 18. Estimation of tuition fees

Table 39

For one year	Public	Private	For non-EU foreigners	Year of data	Comments	Tuition fee estimation
Austria	724	higher		2007-2008		**1000**
Belgium	500-800			2007-2008		**700**
Bulgaria	50-200	n.a.	2200-5500	2007-2008	state quota, he government do not offer student loans for private universities	**60**
Cyprus	none	n.a.	up to 6850	2007-2008		**0**
Czech Republic	none		3000-10000	2007-2008		**0**
Denmark	none		9000-16000	2007-2008		**0**
Estonia	840-2400	n.a.	1920-3000	2007-2008		**1000**
Finland	none	n.a.		2007-2008		**0**
France	none	up to 7500		2007-2008	enrolment fees: 150-420	**0**
Germany	none in some Länder, in others: 100-500	4000-10000		2007-2008	private: it depends on courses and universities	**5000**
Greece	varying	n.a.		2007-2008	universities set the fees, EU students are exempted to pay tuition fees	**0**
Hungary	from none up to 800	640-2800		2007-2008	state quota, it depends on academic performance, in 2006, 50% of students had to pay fees	**700**
Ireland	none	n.a.	up to 36000	2007-2008		**20000**
Italy	from 750	2000-10000		2007-2008	universities set the fees, performance-related	**10000**
Latvia	700-5811		750-5811	2007-2008		**5000**
Lithuania	from none to 3475		1000-5000	2007-2008	students 24% are state funded, http://www.aic.lv/portal/en/	**5000**
Luxembourg	200	n.a.		2007-2008		**200**
Malta	none	n.a.	2500-3000	2007-2008		**0**
Netherlands	1538	n.a.		2007-2008		**1538**
Poland	none	4000-10000		2007-2008		**6000**
Portugal	1000	1500		2007-2008		**1500**
Romania	from none up to 400-700	400-700	3500-9000	2007-2008	it depends on academic merits	**700**
Slovakia	none	n.a.	2200-8800	2007-2008		**0**
Slovenia	undergraduates: none, graduates: up to 1500	n.a.		2007-2008		**1500**
Spain	550-900	up to 6000		2007-2008	depends on regions and courses	**6000**
Sweden	none	n.a.		2007-2008		**0**
United Kingdom	up to 3464	up to 20000		2007-2008	there is no student loan for graduates	**12000**
Iceland				2010-2011	source: www.studyineurope.eu	**2200**
Liechtenstein	n.a.	n.a.			estimated upon tuition fees in Switzerland	**3000**
Norway	none	n.a.		2007-2008		**0**
Turkey	30-250			2005-2006	source: Johnstone	**100**

Appendix 19 Grants in Europe

Table 40

Country	Eurydice, EACEA [2008], p. 109			Other sources (from surveys)		
	Grants min.	*Grants max.*	*Year of data*	*Grants min.*	*Grants max.*	*Comments*
Austria	*180*	*7272*	*2005-2006*			
Belgium	*201*	*4203*	*2005-2006*			
Bulgaria		*148*	*2005-2006*			
Cyprus	*1709*	*2563*	*2005-2006*			
Czech Republic		*653*	*2005-2006*			
Denmark		*7608*	*2005-2006*		*7226*	
Estonia		*1606*	*2005-2006*			
Finland	*349*	*2331*	*2005-2006*	*380*	*6940*	*included 440€/month for mobility support*
France		*3895*	*2005-2006*		*7495*	*included 400€/month for mobility support*
Germany	*120*	*4656*	*2005-2006*			
Greece						*n.a.*
Hungary		*0*	*2005-2006*			
Ireland		*3325*	*2005-2006*			
Italy		*variable*	*2005-2006*		*variable*	
Latvia	*988*	*2174*	*2005-2006*			*mobility grants exist*
Lithuania		*1303*	*2005-2006*			
Luxembourg		*8174*	*2005-2006*			
Malta	*524*	*1134*	*2005-2006*			
Netherlands	*2510*	*2726*	*2005-2006*		*5072*	*2010, IB-Group, http://www.ib-groep.nl*
Poland		*variable*	*2005-2006*			
Portugal	*375*	*5603*	*2005-2006*			
Romania		*variable*	*2005-2006*			
Slovakia		*386*	*2005-2006*			
Slovenia	*603*	*3013*	*2005-2006*			
Spain					*n.a.*	*supports are available through universities*
Sweden		*2528*	*2005-2006*			
United	*32*	*2966*	*2005-2006*			

Kingdom						
Iceland	*n.a.*					
Liechtenstein	*7302*	*10953*	*2005-2006*			
Norway		*3924*	*2005-2006*			
Turkey		*792*	*2005-2006*			
Switzerland	*n.a.*					

Source: Compiled by the authors

Appendix 20. Financial needs in the Erasmus Mobility program

Erasmus grants. The typical duration of a study abroad within the Erasmus programme is 5 months (one semester). All students with accepted registrations are excused additional tuition fees of the host universities. Students have to cover maintenance or living costs, and other costs of studying. The EU Commission offers grants which vary from Euro 702 to Euro 1781 for this 5 month placement in 2010, the amount usually depends on the country. (There is also a so called label category for students who are not eligible for Erasmus grant, but a right to study in abroad with no tuition fees is offered.) This means Euro 140-360 per month. The average amount of grant/month was 157 Euro in 2005-2006, and 242 in the academic year of 2007-2008.

Cost of studying abroad with Erasmus According to the calculations of Carbonell (2008), accommodation costs are usually higher than other living costs.

Table 41. Living costs of Erasmus students 2005-2006 (In power of purchasing parity Euro, for one month)

	ACCOMODATION			OTHER COSTS			TOTAL COST		
	Average cost	Capital city	Non-capital city	Average cost	Capital city	Non-capital city	Average cost	Capital city	Non-capital city
Austria	278.99	294.12	259.28	388.11	386.74	389.89	667.10	680.86	649.17
Belgium	246.28	307.61	223.19	503.74	457.16	521.28	750.02	764.77	744.47
Cyprus	206.00	206.00	n.a	300.00	300.00	n.a	506.00	506.00	n.a
Czech Republic	120.00	127.94	94.82	231.27	225.36	250.00	351.27	353.30	344.82
Denmark	324.62	335.47	315.18	431.54	425.66	436.65	756.16	761.13	751.83
Estonia	180.00	110.00	200.00	250.00	350.00	200.00	430.00	460.00	400.00
Finland	244.55	300.00	224.09	457.07	405.86	475.97	701.62	705.86	700.06
France	269.97	427.56	223.81	460.73	591.96	422.29	730.70	1019.52	646.10
Germany	231.84	224.35	234.47	462.66	553.73	430.59	694.50	778.08	665.06
Greece	228.31	268.52	201.83	398.68	400.00	397.80	626.99	668.52	599.63
Hungary	268.61	281.83	100.00	375.16	386.87	400.00	643.77	668.70	500.00
Iceland	394.00	394.00	n.a.	585.00	585.00	n.a.	979.00	979.00	n.a.
Ireland	381.36	376.17	386.50	573.17	581.29	565.08	954.53	957.46	951.58
Italy	350.01	375.89	333.09	375.09	377.15	373.77	725.10	753.04	706.86
Latvia	250.00	250.00	n.a.	250.00	250.00	n.a.	500.00	500.00	n.a.
Lithuania	106.42	106.90	n.a.	277.28	277.43	n.a.	383.70	384.33	308.00
Malta	233.00	233.00	n.a.	300.00	300.00	n.a.	533.00	533.00	n.a.
Netherlands	346.83	450.00	336.53	413.22	446.94	409.86	760.05	896.94	746.39
Norway	309.61	364.64	282.84	650.39	626.85	654.87	960.00	991.49	937.71
Poland	161.57	200.55	136.81	224.04	167.38	260.02	385.61	367.93	396.83
Portugal	203.47	245.65	171.52	393.94	380.00	404.50	597.41	625.65	576.02
Romania	179.43	181.97	175.00	274.37	259.83	300.00	453.80	441.80	475.00
Slovakia	125.00	125.00	n.a.	225.00	225.00	n.a.	350.00	350.00	n.a.
Slovenia	175.53	210.00	150.00	280.85	255.00	300.00	456.38	465.00	450.00
Spain	242.17	336.64	203.46	431.12	412.83	438.61	673.29	749.47	642.07
Sweden	313.40	315.55	312.91	463.66	457.16	465.14	777.06	772.71	778.05
Turkey	192.26	204.86	179.05	316.29	317.44	315.10	508.55	522.30	494.15
United Kingdom	444.88	491.65	439.58	513.22	599.30	503.48	958.10	1090.95	943.06

Source: Carbonell (2008), EAIE Forum 2007, p. 28.

Financing need. In the academic year of 2005-2006, average cost of living were between PPP Euro 350 to 980 (this range is somewhat higher in nominal Euro), the average amount of grant was 157 Euro. Students have to finance around 200-400 Euro per month by their owns which is 1000-2000 Euro per semester. This amount could be easily financed from national student loans even in the lower income countries.

Appendix 21. Income effects of different degrees

INCOME EFFECTS OF GRADUATION. Graduation significantly impacts on future incomes in Europe. Eurostat (2009) report on Bologna Process in Higher Education emphasises: "Differences in wage levels are above all a matter of educational attainment. Highly educated EU-25 workers earn twice as much as medium- and low-educated workers." According to Eurostat database (Eurostat (2010), Social Inclusion and Living Conditions), median income differences between educated and medium educated employees (people who have been included in tertiary education and who have only higher secondary schools) are very high (160-191%) in Romania, Portugal, Poland, and also considerably high (130-150%) in the most of European country (Greece, Lithuania, Latvia, Slovenia, Luxembourg, Ireland, United Kingdom, Hungary, Cyprus, Czech Republic, Estonia, Finland, Italy, Spain). The lowest value is 117% in Sweden. The range of income levels from highly educated workers is very wide, and in Bologna countries, median income of male is higher than female workers.

Table 42. Mean and median income in EU countries by education level, and income effect of tertiary education, 2008.

Country	Mean income (EUR)			Median income (EUR)		
	Upper secondary and post-secondary non-tertiary education	Tertiary education	Tertiary / Non-tertiary	Upper secondary and post-secondary non-tertiary education	Tertiary education	Tertiary / Non-tertiary
Romania	2493.2	4943.6	198%	2266.7	4326.3	191%
Poland	4708.1	8074.9	172%	4194.7	6706.7	160%
Portugal	12489.2	20727.8	166%	10420.1	17594.8	169%
Lithuania	4684.7	7246.7	155%	4148.0	6150.1	148%
Latvia	5784.2	8787.3	152%	4911.2	7265.7	148%
Greece	12993.8	19439.3	150%	11600.0	17206.7	148%
Luxembourg	34748.0	50840.5	146%	31690.7	44320.0	140%
United Kingdom	25398.9	37028.4	146%	22107.5	30561.8	138%
Hungary	4831.8	7038.6	146%	4544.6	6261.7	138%
Slovenia	11441.7	16522.1	144%	10892.0	15500.6	142%
Finland	20877.7	29297.3	140%	19451.3	25495.7	131%
Ireland	26931.3	37755.8	140%	24033.4	33613.5	140%
Cyprus	18905.3	25989.8	137%	17038.5	23208.1	136%
Estonia	5967.5	8195.6	137%	5395.7	7078.9	131%
Czech Republic	6811.2	9327.3	137%	6169.2	8300.7	135%
Italy	19831.8	26995.2	136%	18151.7	23772.0	131%
Belgium	19691.5	26242.5	133%	18325.6	23600.0	129%
France	19995.8	26539.0	133%	18048.5	23116.7	128%
Netherlands	21769.3	28819.8	132%	19843.3	25302.5	128%
Slovakia	5190.9	6859.0	132%	4849.6	6158.4	127%
Bulgaria	2878.2	3762.6	131%	2514.8	3049.4	121%
Spain	15530.3	20208.5	130%	14356.5	18701.9	130%
Germany	20089.3	26128.4	130%	18014.0	22450.0	125%
Iceland	36879.0	47217.0	128%	32517.9	40144.7	123%
Malta	12527.2	15678.4	125%	11847.6	14807.2	125%
Austria	22177.2	27753.9	125%	20247.1	24127.1	119%
Norway	34092.2	42507.6	125%	32192.4	38742.5	120%

Denmark	26190.5	31731.6	121%	24666.5	29226.8	118%
Sweden	21929.0	26289.7	120%	20975.8	24541.3	117%
European Union (27 countries)	*16263.8*	*24525.5*	*151%*	*14803.0*	*21283.4*	*144%*
European Union (15 countries)	*20721.2*	*27612.6*	*133%*	*18511.6*	*23629.3*	*128%*

Source: Eurostat (2010), Social Inclusion and Living Conditions

Table 43. Mean annual gross earnings by educational attainment in European countries, 2006. Sorted in ascending order by total employment rate.

	No degree *	Tertiary programmes with occupation orientation	Tertiary programmes with academic orientation	Doctorate **	Tertiary with occupation o. / No degree	Tertiary with academic o. / Tertiary with occupation o.	Doctorate / Tertiary with academic o.	Tertiary with academic o. / No degree	Doctorate / No degree
Bulgaria	1986	2537	3937	5684	128%	155%	144%	198%	286%
Lithuania	4259	5200	8171	12290	122%	157%	150%	192%	289%
Latvia	4399	6038	8545		137%	142%		194%	
Slovakia	5750	6745	10926	11833	117%	162%	108%	190%	206%
Estonia	6502	7790	10679		120%	137%		164%	
Hungary	6738	8619	14587		128%	169%		216%	
Poland	7636	12328	11009	14205	161%	89%	129%	144%	186%
Czech Republic	8614	10245	16443	14742	119%	160%	90%	191%	171%
Slovenia	13119	20874	28257		159%	135%		215%	
Cyprus	19186		35252					184%	
Netherlands	34891	49027	49187		141%	100%		141%	
Ireland	36473	52309	40250	56176	143%	77%	140%	110%	154%
United Kingdom	34196	48622	57025		142%	117%		167%	
Average	*14135*	*19195*	*22636*	*19155*	*135%*	*133%*	*127%*	*177%*	*215%*

Source: Eurostat (2010)

* Upper secondary and post-secondary non-tertiary education - levels 3-4 (ISCED 1997)

** Second stage of tertiary education leading to an advanced research qualification - level 6 (ISCED 1997)

Tertiary programmes with occupation orientation approximates bachelor degrees (but some kind of postgraduate degrees also), tertiary programmes with academic orientation approximates master level degrees (and also professional degrees)

According to Financial Times rankings (Financial Times (2010)), the top Global MBAs increased the participants' salaries by 100.96 percentages in average, nearly after graduation. Approximately 80 percents of the participants of best one hundred MBA programmes had found employment or accepted a job offer within three month of graduation. Considering only the European MBA degrees, graduating in a top European MBA program means 60-160 percent higher salaries in the labour market (table below).

Table 44. Top European MBAs' effects on individual's salaries and employment.

Rank in 2010	School name	Country	Weighted salary (USD)	Weighted salary (EUR, 1EUR = 1,3USD)	Salary percentage increase	Employed at three months (%)
1	London Business School	U.K.	142340	109492	124	81
5	Insead	France / Singapore	139941	107647	102	79
6	IE Business School	Spain	139458	107275	159	89
11	Iese Business School	Spain	128891	99147	136	86
15	IMD	Switzerland	140320	107938	86	88
18	HEC Paris	France	122086	93912	104	89
19	Esade Business School	Spain	122825	94481	126	81
21	University of Cambridge: Judge	U.K.	125690	96685	110	89
24	Lancaster University Management School	U.K.	112214	86318	131	78
25	Rotterdam School of Management, Erasmus University	Netherlands	113595	87381	102	85
26	Cranfield School of Management	U.K.	133886	102989	89	95
32	Imperial College Business School	U.K.	120306	92543	107	85
38	SDA Bocconi	Italy	103560	79662	105	85
40	Manchester Business School	U.K.	111150	85500	91	93
41	City University: Cass	U.K.	120632	92794	83	93
42	Warwick Business School	U.K.	110700	85154	86	89
51	University of Strathclyde Business School	U.K.	109994	84611	106	91
73	Aston Business School	U.K.	93717	72090	90	77
74	Durham Business School	U.K.	95662	73586	84	90
75	Birmingham Business School	U.K.	90161	69355	97	98
87	University of Bath School of Management	U.K.	103640	79723	69	95
87	Vlerick Leuven Gent Management School	Belgium	97677	75136	65	65
89	University of Edinburgh Business School	U.K.	98256	75582	73	89
89	Bradford School of Management/TiasNimbas Business School	U.K. / Netherlands / Germany	96993	74610	85	86
94	Hult International Business School	U.S.A. / U.K. / U.A.E. / China	98644	75880	87	73
97	EM Lyon Business School	France	91122	70094	69	81
98	University College Dublin: Smurfit	Ireland	99456	76505	64	96

Source: Financial Times (2010), http://rankings.ft.com/businessschoolrankings/global-mba-rankings

EMPLOYMENT RATES ARE STRONGLY HIGHER AMONGST GRADUATED WORKERS. It is worth to look at the main characteristics of the total employment rates (as the percentage of the working age population), and the employment rate of high educated workers (Table 39). In those countries, where employment rates are relatively low, the high educated workers have higher advantage in employment. In central and in south European countries, employment rate of graduated people is 20 percentage points higher in average than total employment rate. Looking at the graduated employment rates, the minimum is around 77-80 percents (Italy, Hungary, Spain), and the maximum is near to 87-88 percents (Slovenia, Netherlands, Denmark, Germany, Sweden, Austria), which signs relative homogeneity in graduated employment rates.

Table 45. Employment rates by the highest level of education attained in European countries, sorted in descending order by total employment rates

	Employment rates				
Country	Upper secondary and post-secondary non-tertiary education	Tertiary education	Total	Difference: Upper secondary - Total	Difference: Tertiary education - Total
Switzerland	80.3	89.2	79.2	1.1	10,0
Iceland	79.5	88.2	78.3	1.2	9,9
Netherlands	80.9	87.6	77.0	3.9	10,6
Norway	80.3	89.9	76.4	3.9	13,5
Denmark	78.6	87.3	75.7	2.9	11,6
Sweden	78.7	87.0	72.2	6.5	14,8
Austria	76.6	86.1	71.6	5.0	14,5
Germany	74.6	87.0	70.9	3.7	16,1
United Kingdom	72.4	84.2	69.9	2.5	14,3
Cyprus	72.5	84.8	69.9	2.6	14,9
Finland	71.9	84.4	68.7	3.2	15,7
Slovenia	70.0	88.1	67.5	2.5	20,6
Portugal	66.3	84.3	66.3	0.0	18,0
Czech Republic	71.3	82.0	65.4	5.9	16,6
Luxembourg	65.8	83.8	65.2	0.6	18,6
France	68.3	80.0	64.2	4.1	15,8
Estonia	66.3	82.1	63.5	2.8	18,6
Bulgaria	70.0	85.5	62.6	7.4	22,9
Ireland	64.3	80.7	61.8	2.5	18,9
Belgium	65.4	81.9	61.6	3.8	20,3
Greece	60.4	81.6	61.2	-0.8	20,4
Latvia	64.6	82.3	60.9	3.7	21,4
Slovakia	67.1	80.3	60.2	6.9	20,1
Lithuania	61.9	85.9	60.1	1.8	25,8
Spain	62.6	79.0	59.8	2.8	19,2
Poland	62.7	83.7	59.3	3.4	24,4
Romania	62.2	84.1	58.6	3.6	25,5
Italy	66.5	77.0	57.5	9.0	19,5
Croatia	60.3	81.1	56.6	3.7	24,5
Hungary	61.6	78.1	55.4	6.2	22,7
Malta	72.7	83.4	54.9	17.8	28,5
Turkey	48.8	70.5	44.3	4.5	26,2

Former Yugoslav Republic of Macedonia. the	49.9	70.6	43.3	6.6	27,3
EU (27 countries)	*69.1*	*82.9*	*64.6*	*4.5*	*18,3*
EU (15 countries)	*69.5*	*82.8*	*65.9*	*3.6*	*16,9*

Source: Eurostat (2010)

According to Eurostat (2009), "in half of the Bologna countries, the unemployment rate of low-educated people is higher than 16 %, while it was a third less for highly educated people (6 %) and stood at 10 % for the medium category. Figures within the EU-27 were either quite similar or higher." The unemployment rates of graduates are different in each field of study. The field of humanities, arts and languages appears to be the field most affected by unemployment Eurostat (2009). There is also verification mismatch in the Bologna Area, this affects a quarter of tertiary graduates in the European Union, more than 20% of graduates aged between 25 and 34 are employed below their skill level, especially in Cyprus, Ireland and Spain.

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