Financially Sustainable Student Loan Programs: The Management of Risk in the Quest for Private Capital♦

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The steeply increasing costs of higher education, propelled by the combined trajectories of rising per-student costs and rising enrollments, have outrun the availability of public resources in almost every country. This has led most countries to search for non-governmental revenues to help support the ever-increasing costs of their higher educational enterprises. Such nongovernmental (private) revenue can come from the entrepreneurial activities of the university (e.g., selling or leasing assets) or of a department, school, or faculty member (e.g., contract research or revenue-supported instruction). It can come from philanthropy, either in the form of returns on past philanthropy (endowment) or current giving, restricted or unrestricted. But the form of private revenue that is most financially significant and sustainable, least disruptive to instruction (indeed, it probably enhances the quality of instruction), and supportable on grounds of both efficiency and equity is *cost-sharing*.

Cost-sharing is both a statement of fact—that the costs of higher education are shared by governments (or taxpayers), parents, students, and philanthropists—and a term that describes a worldwide policy shift of the cost of instruction and student living from a predominant or even exclusive reliance on government to reliance on a combination of government, parents (or extended families), and students. As documented by Johnstone (1986, 2004, 2006a), this shift may take the form of tuition fees being introduced where instruction was formerly free (as in many countries in Europe or in the postcommunist world) or being increased at rates well above the increase in underlying costs in countries where tuition has long been accepted (as in the United States, Canada, and many Asian countries). The shift can take the form of introducing fees for food, lodging, or supplies that used to be heavily subsidized or even provided free by the government. It can also take the form of a policy-induced shift from highly subsidized public institutions to much less subsidized, tuition-dependent private colleges and universities (whether non-profit or for-profit). Finally (or additionally), the shift of costs from government to students can take the form of shifting financial assistance from grants to loans, or from highly subsidized loans (that is, a combination of a *true loan* and an *effective grant* in the form of embedded interest subsidies) to less-subsidized or even unsubsidized loans (Johnstone 2006b).[1]

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[1] This is true even when the loan is in the form of a *deferred tuition fee* to be repaid as an income-contingent loan (as in Australia or the United Kingdom). In such a case, the cost shift from government to students can take the form of provisions of the repayment obligation (e.g., a higher percentage of income

The Need for Student Loan Programs

The increasingly accepted notion that a portion of this nongovernmental revenue is appropriately borne by the student rather than—or in addition to—the parents creates a need for ways to allow much or most of this student-borne share of costs to be deferred into the future, when the person is likely to have entered the full-time workforce (presumably aided by his or her higher education) and is able to begin repaying a portion of the costs that were advanced by the government or the private capital market (or by a combination of both in ways we discuss in this paper). More and more countries are looking to student loan programs as a way to allow, or require, students to bear a portion of the costs of their higher education (Johnstone 2005; Woodhall 2002; Ziderman and Albrecht 1995).

At the same time, student loan programs in many countries—especially low income or developing countries—have not been financially sustainable, at least not at the levels required to promote widespread participation. The *financial sustainability* of a student loan requires that the subsidy costs of student lending be held to levels that governments can afford and that the loans be made available mainly from the private capital market rather than, like the subsidies, coming entirely from hard-pressed government budgets.

It is important to note the differences and the interconnection between these two dimensions of financial sustainability. The first dimension—*affordability*—is a function of the availability of public finds and the extent of the need for subsidization, or the extent to which public funds are required to cover losses from (a) borrowers who fulfill their repayment obligation but at an ultimate effective rate of interest that fails to cover the underlying cost of money plus the cost of administration and servicing, and/or (b) borrowers who fail to fulfill their contractual obligation (i.e., who default) out of inability or unwillingness to repay. The less subsidization, the more financially sustainable the student loan program, especially in low-income countries that have the most steeply rising cost trajectories, the most limited tax capacities, and the most politically and socially compelling alternative needs competing for scarce public revenues.

The second dimension of financial sustainability—the *ability to tap private capital markets* rather than government budgets for student loans—is more complex. In theory as well as practice (as in the U.S. Stafford Loan programs), the amounts originally lent may come largely or entirely from banks and other private sources of savings yet may obligate the government to very considerable subsidies (in-school interest subsidies and subsidies during repayment) and as guarantor for loans in default. Thus, what may seem like private lending with no immediate impact on the government budget may be indistinguishable in proper accounting terms from a considerable public expenditure, albeit in the form of future and contingent liabilities rather than current expenditures. On the other hand, a loan that requires little or no subsidization (i.e., with a repayment flow sufficient to cover the cost of money plus the cost of administration and servicing) and carries no risk of default to the lender (because of sufficient collateral by the borrower or a co-signer) could be made directly by the government rather than by a bank or other

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required for student debt amortization) that require most borrowers to repay in full, with all but the very lowest low earners simply repaying for longer periods of time.

private lender and could be treated not as an expenditure but rather as a government investment. In theory, then, the financial sustainability of a student loan program could by ensured by eliminating, or at least minimizing, government subsidization and somehow eliminating the element of risk. Tapping into the private capital market would then be easy, whether the student loans were originated by banks, by a government agency, or even by a university and then sold to banks or other institutions that comprise the private capital market.

However, there is always an element of risk, at least in generally available student lending, beyond that which can reasonably be expected to be covered by lenders or parental co-signers and which then presents governments with some element of at least contingent liability. The present values of these liabilities are akin to ordinary government expenditures and are thus impediments to financial sustainability, especially in low-income countries that are experiencing the most steeply rising higher educational costs and the most strained public budgets.

This paper is about managing the high level of risk involved in student lending—above and beyond reducing the level of subsidization—so that the private capital market can be accessed and the high volume of student loans does not have to be treated as a simple government expenditure, with the attendant limitations and opportunity costs.[2]

Criteria for Financially Sustainable and Successful Student Loan Programs

To serve the nearly universal policy of expanding participation in higher education and shifting some costs to the student, loan programs need to be—

1. *Generally available*: Student loans should be available to all academically prepared students who need a loan to pursue postsecondary studies, without regard to the wealth or creditworthiness of their parents or to their individual career and earnings prospects.[3] It is the heightened risk of lending, which is enhanced by this requirement for general availability, that increases the cost of

[2] Our use of the term *student loans* is applicable to all obligations to repay in the future, whether the obligation is a fixed schedule of repayments or an obligation to repay a portion of future earnings or income (i.e., whether the obligation is a *conventional mortgage-type loan* or an *income-contingent* loan). We refer to the obligation as a *loan* whether it is openly acknowledged to be such or is referred to by some euphemism, such as a *financing scheme* or a *graduate tax* (possibly to disguise the fact that the obligation is, in truth, a loan). It is also a loan whether the borrowed funds pass through the hands of the student and are paid to the institution as a tuition fee or are paid directly to the institution and the repayment obligation incurred through matriculation or graduation or both. Australia's Higher Education Contribution Scheme, Scotland's Income Contingent Obligation to the Scottish University Endowment Fund, and Ethiopia's Graduate Tax are all, for the purpose of this analysis, *student loans*.

[3] A qualification to this criterion is that very high levels of essentially *discretionary debt*—such as might be required for students to declare themselves financially independent of their parents or to pursue costly advanced professional programs—can properly be restricted to students with higher-paying career prospects.

lending and limits access to the larger private capital market—and creates the problems addressed in this paper.

2. *Sufficient*: It follows from the above that at least the maximum student loan amount should be sufficient to enable the student—after reasonable allowances for parental contributions, other forms of financial assistance, and possibly some term-time and summer earnings—to participate in an appropriate form of postsecondary education without unacceptable personal deprivation, an unacceptable work schedule (e.g., more than 20 hours a week), or unacceptable parental sacrifice (e.g., spending retirement assets on children's postsecondary education). From the standpoint of a higher education system or a country, *sufficiency* also means the provision of a sufficient number of student loans to achieve the system's or country's goals for participation in higher education.

3. *Need-based:* Some means-testing or targeting should be employed to minimize student borrowing that is not required for the desired enrollment behavior but that merely replaces an expected parental contribution (if called for) or is simply invested by the non-needy student borrower at a more favorable rate of interest than is charged on the loan.

4. *Minimally subsidized*: Most, if not all, student loan programs that meet all the above criteria will require some continuing government subsidization. However, subsidization that goes beyond what is necessary to secure sufficient capitalization and maintain reasonable interest rates (e.g., at levels of government borrowing or creditworthy consumer debt) is revenue that—by definition and like all government expenditures—has an *opportunity cost* in the forgoing of other competing expenditures, such as more grants, additional capacity, or higher quality of existing institutions of higher education.

5. *Collectable* (i.e., able to minimize default and other forms of nonrepayment): For reasons discussed below, generally available student loans have a high incidence of nonrepayment. But much of the high rate of default in many countries is attributable to bad lender practices—mainly by government agencies as lenders—and is thus, in theory, amenable to correction through a better legal framework and better lender practices.

6. *Able to tap the private capital markets*: This criterion is related to both the sufficiency of private savings (clearly less abundant in very poor countries) and the abundance of reliable financial intermediaries to channel private savings into socially and economically worthwhile investments. As discussed above, the inability to tap private savings is often due to high levels of risk involved in generally available student lending, without government guarantees or sufficient co-signers; this situation is exacerbated in developing countries that implement poorly designed student loan programs in government agencies with inadequate lender practices. Hence, many low-income countries rely on tax funds not only for subsidies (which are generally excessive) but also for the loans themselves, so that student loans compete with all the other claims on the government's budget.

   The difficulty in the developing and transitional worlds in tapping private capital markets does not arise in the United States, where banks have long supplied the

capital for the very extensive—and mainly government-guaranteed (i.e., risk-free)—U.S. student loan programs. In fact, U.S. student loan programs are even more reliant on the primary private capital markets—pension funds, insurance companies, corporate reserves, and even equity funds—through the secondary markets that purchase the notes in large bundles from banks and other direct lenders.

The financial sustainability and sufficiency of generally available student loans depend on all the qualities listed above. In other words, student loans that are minimally subsidized, need-based, and collectible are generally able to tap private capital markets and thus to be provided in sufficient volume to achieve the twin goals of enhancing both participation and cost-sharing.

Such generally available student loans are integral to higher education finance (i.e., to widespread participation and to students bearing a share of the underlying costs of instruction or the expenses of student living or both) in many countries, including the United States, Canada, the United Kingdom, the Netherlands, Germany, Sweden, Norway, Australia, New Zealand, South Africa, Kenya, Tanzania, Japan, China, Thailand, Korea, and the Philippines (Johnstone 2005; Usher 2005; Woodhall 2002; Ziderman and Albrecht 1995).

At the same time, many countries have tried unsuccessfully (or successfully for a limited period) to establish generally available, sufficient, and financially sustainable student loan programs. The lender in most cases is the government or a public agency. Too often, the discounted value of the repayment stream is totally insufficient to cover the cost of the money plus the administration and collection costs, not to mention losses from nonrepayment or default. These losses—which are frequently very great, especially in developing countries—leave many governments unable to provide loans in sufficient numbers or amounts to meet the dual objectives of widening participation and effecting real cost-sharing.

However, even if the criteria of minimal subsidization and reasonably minimal levels of default were to be met, new loan revenue could still be insufficient if the funds had to come from the public treasury. In other words, regardless of the government's success in establishing a student loan agency, holding subsidization to some politically reasonable minimum, and managing to collect a significant portion of repayments, the actual loan capital needs to tap the country's (or, better yet, the world's) capital markets rather than relying on tax revenues.[4]

Accessing the Private Capital Market

The adequacy and financial sustainability of a student loan program, then, requires both that the subsidy costs (including the costs of any government guarantees) be

[4] In theory, a student loan (or any other credit-worthy loan) could be given by the government and be booked as an asset rather than an expenditure. However, because of the default risk of student loans, government accounting rules such as those imposed by the World Bank, the International Monetary Fund (IMF), and even the Euro Zone require that the full amount of the loan be entered as an expenditure (essentially failing to recognize any significant asset value).

minimized, or at least held to an amount that the government and its tax revenues can support, and that the *true loan* amounts—that is, the portions of the loans that are reasonably likely to be recovered—can tap the private capital market, which is the repository of most savings and thus the appropriate ultimate source of all loans. Although the two requirements are related, the limited availability of student loans (whether in number or amount) in many low- or moderate-income and transitional countries is as likely to be due to the difficulty of accessing the private capital market as to the limitations of government budgets per se.

The inability to access private capital, in turn, is due mainly to the very high default rates (more accurately, the high *anticipated* default rates) inherent in most generally available student lending. Student loans in the United States that have full government guarantees as well as mortality and disability insurance (and thus have virtually no risk of nonrepayment) are obviously sound assets and have virtually unlimited access to private capital. Any bank will make such a loan, provided the rate of interest covers the cost of capital (i.e., what the bank must pay to attract savings) plus the cost of administration and collection—or a government subsidy makes up any interest shortfall. Even if the individual loan notes have a discounted present repayment stream that is insufficient to cover their costs, as assets they have considerable value and can be sold in bundles by the original lender (the government, the higher education institution, or the originating bank) to any source of primary capital, such as a pension fund or insurance company, at an appropriate discount.

Financial sustainability for a generally available student loan program does not require repayments to cover all the costs of lending, including the cost of defaults. Generally available student loans are usually too small and require too much in servicing and collection expenses (aside from any risk of default) to require the student borrowers to cover these costs. Government (taxpayer) subsidies are appropriate to supplement borrower repayments and lessen some such costs, and governments and parents can shoulder some or all of the costs of default.[5] At the same time, large or unnecessary government subsidies and *avoidable* costs of default call into question the need for cost-sharing, which aims to require students (rather than taxpayers or parents) to bear a portion of the underlying costs. Parents may not be able to or may not choose to co-sign loans (i.e., to bear all or a major part of the risk of nonrepayment). Thus, as long as generally available student lending is to serve the dual and somewhat contradictory aims of (1) expanding participation in higher education and (2) shifting a portion of the cost to the student, these costs must be carefully assigned among government and other parties, especially the high but uncertain cost of default or nonrepayment.

The Costs of Student Lending

The costs of student lending include four components: (1) the cost of capital itself; (2) the costs of administration and collection; (3) any subsidy that the government

[5] Ryan Hahn of the Institute for Higher Eduction Policy points out the irony that some government interest rate subsidization—particularly in the absence of government guarantees—may keep interest rates sufficiently reasonable to ensure a broad mix of borrower participation, in the absence of which *high risk takers*, who are most likely to default, might participate disproportionately and actually increase losses and government costs.

or other third party wants to contribute to reduce the repayment burden of the borrower or otherwise affect the borrower's behavior; and (4) the costs of defaults and all other forms of non-repayment (e.g., death, disability, incarceration, or outright disappearance). Let us look at each, keeping in mind the theme of this paper, which is the management of risk in order to better access private capital and lower the need for government to be the lender and to hold the loans on its books.

1. ***The cost of capital:*** The cost of obtaining savings, or *purchasing power for hire,* is a function of the productivity of these savings invested by the borrower (i.e., the rate of return) relative to what the savers can make with their money invested in other ways, as well as of the supply of such savings and the projected erosion of the purchasing power of these savings when they are returned by the borrower (i.e., the best estimate of future inflation).

2. ***The cost of administration:*** The cost of administration includes the costs of holding the purchasing power, negotiating with potential savers and borrowers, estimating the likely inflation, calculating the likely incidence of non-repayment, servicing or collecting the repayments, and performing other functions of private banking. In government-sponsored student loan programs, much of this administration is shifted to institutions of higher education; to employers (which may be required by law to collect at the point of wage and salary payment); or to other government agencies, such as those charged with taxing and monitoring income and earnings. Regardless of who is paying, the administrative costs associated with student lending will always be high because of (a) the small size of the individual loans; (b) the costs associated with keeping track of highly mobile students through the in-school, grace, and early repayment years (especially as graduates search for employment); (c) the long repayment periods; and (d) the costs associated with collecting loans that are frequently in arrears but short of default. These costs are especially high in very low income countries with inadequate employment, tax, and credit records (Johnstone 2005; Ziderman and Albrecht, 1995).

3. ***The cost of government or other third party subsidies*:** Subsidy costs may include the rather small subsidies needed to compensate for the higher administration and collection costs of student lending to bring the interest rates on student borrowing (excluding any premium for nonrepayment) within range of creditworthy consumer debt or even of general government borrowing. However, subsidies in the form of repayment forgiveness may be considerably higher and more expensive in pursuit of goals that are unrelated to student lending per se. These goals may include the encouragement of postgraduate practice in certain socially valuable venues (United States and other countries) or may simply aim to encourage retention and program completion (South Africa).[6] Or the seemingly excessive subsidies and their attendant taxpayer costs may be more akin to grants given to mollify students or politicians who dislike cost-sharing to begin with.

[6] A typical provision would be to forgive some percentage (e.g., 20 percent) of the principal amount owed for each year that the student borrower, say, teaches or teaches in a remote village, so that the entire loan is converted to a grant after five years of the targeted practice or targeted venue.

Such costs (those that are unrelated to the cost of providing a true student loan program) may or may not be cost-effective expenditures in support of these other public goals; but they should not be included in estimates of the costs of student loans.

4. ***The costs associated with the risk of nonrepayment***: Nonrepayment may be a function of lender error or ineptitude, willful default, uninsured death or disability, or inability to repay due to unemployment or other reasons. This is the cost of generally available student lending that is potentially the highest and most troublesome, as it can close off access to the private capital market and limit the annual volume of student lending to the amount the government can provide in a given year from taxes, current loan repayments, and general government borrowing. The incidence of default and other forms of nonrepayment on generally available student loans varies enormously by country, program, and borrower characteristics. Nonrepayment as a percentage of amounts originally borrowed (and before turning to co-signers and other guarantors) might range from a low near the prevailing rate of default on auto loans or consumer debt (say, 5–10 percent), to 30–40 percent on loans to the least creditworthy borrowers in otherwise well-administered loan programs, to rates as high as 50–70 percent or more on student loans in the most adverse circumstances, such as those that have plagued the many failed student loan programs in sub-Saharan Africa.

With the increasing globalization of capital flows, savings can and do (absent capital controls in such countries as China and Malaysia) flow to places where risk-adjusted returns are highest. Thus, the cost of capital alone (i.e., without country-specific adjustments for especially high risks of default or especially high costs of administration) is essentially a global cost. This global cost of capital is lowest where there are economies of scale and technology along with little or no risk; for example, in the sale of U.S. Treasury notes. The cost of administration for student lending is high for reasons given in #2, above. But the most significant and volatile costs are the risks associated with nonrepayment. This risk is due to a combination of factors, some of which are inherent in student lending and some in prevailing lender practices that might be substantially improved. The risk might also be a function of country- and culture-specific factors such as familiarity with credit, job and earnings prospects, and attitudes toward cost-sharing and student indebtedness in general.

Risk and Student Loans

The following are the major risk factors associated with student lending:

- ***The absence of collateral:*** The fundamental riskiness of student loans is due to the fact that unlike home mortgages, auto loans, and other forms of commercial debt, a student loan provides nothing for the lender to repossess in the event of nonrepayment. This is referred to in the human capital literature as the *capital market imperfection* of most forms of student lending.[7]

[7] The pure *equity* form of income-contingent student loans—in which a lender stands to make a great deal of money from students who pledge a percentage of their future earnings and go on after graduation to become very wealthy—is an exception, because the lender actually *owns* a share of the borrower's future

- ***The absence of a general credit culture:*** In highly industrialized countries, credit has become a normal means of making major purchases such as homes or automobiles and of running businesses, farms, and other small enterprises. In such cultures, *credit histories*, maintained by *credit agencies*, play a vital role in making cost-effective credit available to good risks and, conversely, keeping bad credit risks from borrowing and raising interest rates for everyone. Students typically have no credit histories, but when they begin repayment as young adults, they quickly learn the importance of maintaining a good credit history, without which automobile and home purchases and even credit cards may be out of reach. Student borrowers in countries that lack a credit culture may be more prone to default, as they may perceive less need for a good credit history.
- ***Students misunderstanding the nature of the repayment obligation:*** This may be due in part to the immaturity of the student at the time of borrowing or the considerable length of time between the original borrowing and the supposed beginning of the repayment obligation. Misunderstanding is also more likely when the original loan never passes through the student's hands but is simply recorded as a future obligation on a student's matriculation, as in Australia, New Zealand, and the United Kingdom. Finally, student misunderstanding and proclivity toward default are more likely when the lender (in most cases, the government) purposely obfuscates the repayment obligation in order to portray the student financing scheme as something other than a tuition fee and a loan because of its fear of student and other political opposition to any form of cost-sharing.
- ***The extreme mobility of students for a period of time after they leave the university:*** Students typically move around in search of first employment or simply because of wanderlust. For several years, they may not have regular employment and typically do not own a home or real property. They may be traveling abroad, leaving no forwarding address. In low-income countries, there may be few jobs, and many students may seek to emigrate, legally or illegally. Grace periods, during which repayments continue to be subsidized or deferred, are common in student loan programs and contribute to the problem of tracking.
- ***The absence of regular employment sufficient to handle the initial repayment obligation:*** This may be a factor in emerging or transitional economies where the university graduate labor market is very weak. In such cases, the student borrower might want to repay but cannot because of a lack of regular employment. This problem is a function of the health of the economy, the nature of the university degree, and the supply (frequently the oversupply) of university graduates. This cause of default is especially serious in certain developing countries that have very high youth unemployment together with (and partly as a consequence of) university degrees that have little connection to the needs of employers.

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earnings. This form of lending continues to fascinate economists and theoreticians, but so far it has never been successfully implemented in a widespread, generally available program of student loans.

- ***Other country-specific factors:*** Other factors might include extreme political instability or unusually high mortality, such as that in countries with a high incidence of HIV-AIDS.

Bearing the Risk of Student Lending

The key to securing private capital for generally available student lending is to cover the abnormally high risk in ways other than through an extremely high interest rate. The minimal risk involved in student lending that is not generally available (i.e., limited to students of known high ability, those with creditworthy parents who are willing to co-sign the note, or students in elite advanced professional programs such as medicine or advanced management) can be handled by the lender through a small interest premium like the one charged for auto or home loans, or consumer credit.

However, the risk of nonrepayment for student loans made without these tests of creditworthiness is too great to be handled through an interest premium. Generally available student loan programs need alternative ways to handle risk so they can tap the primary capital market for loans; this market is an important factor in the long-term viability of any program that depends on students paying some of the costs of their higher education.

The following are some alternatives for handling the risk of generally available student lending:

1. ***The government as direct lender:*** If the lender is the government or a public agency—as in many countries and in the U.S. Direct Student Loan Program—the government or agency will bear all the risk and will need an ongoing infusion of new capital to replenish losses from defaulted loans and from an insufficient spread between the interest on student loan notes and the interest rate on the government's own bonds.
2. ***The government as implicit lender:*** In the student loan schemes of Australia, Scotland, England, and Wales, the government funds universities from direct tax appropriations, a portion of which is set aside for each student as a *deferred fee* and which the government attempts to collect (with interest) from students after they have graduated or left the university. Most of these deferred tuition fee schemes include an obligation to pay a portion of the borrower's earnings or income rather than to repay a fixed amount per month; this has important consequences for the manageability of the repayments and the political acceptability of the obligation. With regard to the private capital market, potential purchasers may be reluctant to buy bundles of these relatively unfamiliar income-contingent repayment obligations except at a very high discount. The government would end up subsidizing this discount or would have to hold the notes itself and thus continue to be the major or even exclusive provider of capital from available tax resources.[8]

[8] This will change, at least in the more developed countries, as they accumulate more experience with income-contingent deferred obligations and learn how to predict with greater precision the appropriate discounted present value of the lifetime repayments from a bundle of such obligations. In fact, the United Kingdom announced in March 2007 that it will sell £6 billion of these student loans to the private sector.

3. ***The government as guarantor of private lending:*** Alternatively, the government can rely on banks or other private lenders to provide the needed capital and can agree to buy the uncollectible notes (with contractual provisions requiring private lenders to first make serious attempts to collect). This is the method used in the United States for the Stafford Federally Insured Student Loan program, under which most loan origination is done through private banks. The government guarantee also makes it possible for the banks to sell the high-value notes to secondary lenders in the larger private capital market, thus replenishing their own capital.

4. ***The government as guarantor of last resort:*** The government, or a funded public guarantor, could serve as a guarantor of last resort, being obligated to repay or write off the loan as uncollectible after the primary guarantors (such as parents as co-signers) had paid up to a contracted limit or been relieved of the obligation by a means test. In theory, this approach could overcome one of the objections to the requirement of parents as co-signers, in that low-income parents could immediately call on the government as guarantor if their child defaults on the loan.

5. ***A secondary lender:*** A secondary lender can purchase student loan notes (assets) in large bundles, with some knowledge of the nature of the borrowers and the collective credit risk, and at a sufficient discount to cover the inevitable losses. The government lender becomes a major subsidizer of the loans, with the subsidy going not to the interest rate or even a guarantee but to an up-front payment to pass the risk off to the new private holders of the notes. This is the model in which the government or a public entity is the lender but sells the notes (without a guarantee) to a bank or other private lender/collector at a substantial discount (i.e., risk premium) and thus needs a constant infusion of new public money.

6. ***Securitization:*** This form of tapping the primary capital market for student lending is similar to the sale of notes at a discount. In *securitization*, however, the originator of the loans (either a public agency or a bank) sells the student loans to an intermediary purchaser (frequently a special form of trust or *special purpose vehicle*) that then issues its own asset-based securities for sale in the private capital market, collateralized by the student loan notes. The value of the equity—from which new loans can be made—depends on the value of the notes as assets, which in turn depends on the repayment flows (a function of the interest rates on the notes) and on the aggregate likelihood of default (a function of collection capabilities and the presence or absence of guarantors or co-signers). In this method, the private capital market estimates the likely losses on the student loan notes to calculate the value of the equity; this estimation is similar to that used to calculate the appropriate discount for a direct purchase of the notes. The advantage of securitization is that the risk is essentially managed by the large numbers of revenue-producing notes and by the ability of the market to impose discipline in collection and servicing (Kendell and Fishman 1996).

7. ***A co-signer or co-signers:*** The most direct and prevalent guarantor of student loans in much of the world is a co-signer, usually a parent or other family member who has assets that can be cost-effectively seized in the event the student borrower defaults. This requirement does not meet a strict test of *general availability*—many students do not have parents or relatives with sufficient assets to serve as co-signers, and besides,

the widespread seizure of family assets to collect student loans is not politically feasible. However, several variants exist on the theme of co-signer as guarantor.

7.1. ***A "soft" co-signer:*** In theory, a "soft" co-signatory contract could be drawn that would obligate the parents not to a full repayment of the defaulted loan but to steering the collection authorities to the borrower who is in arrears. In addition to the addition of some potentially useful *parental moral suasion*, such a provision might help lenders recover payments that would otherwise be lost because they do not know the borrower's current whereabouts.

7.2. ***A means-tested co-signatory requirement:*** A means-tested co-signatory requirement would require a "hard" obligation from more affluent parents while freeing parents who could prove financial hardship from the obligation or moving it to the government as guarantor.

7.3. ***Employer as co-signer:*** A current or prospective employer could serve as a co-signer, obligating the borrowing student to a period of employment after graduation. This arrangement would primarily help more creditworthy students who could find potential employers willing to assume the obligation; thus, it falls short of facilitating generally available student loans *(*Kirshstein et al. 2004).

7.4. ***Fellow borrowers as co-signers on conventional student loans:*** Student borrowers might, at least in theory, have fellow borrowers as co-signers. In this untested model (similar to the soft parental co-signatory model), the fellow borrower or borrowers would be co-signers not because they will necessarily be in a position to assume a defaulted obligation or have property that can be confiscated or wages that can be attached, but because they are likely to know the whereabouts of the defaulting borrower. These special co-signers would be liable, insofar as they could, to help track the defaulting borrower. Although there would be little or no direct recovery from the co-signers, such a provision (as yet untested) might help surmount one source of student default risk: the extreme mobility of student borrowers in the immediate postgraduation years.

7.5. ***Fellow borrowers as co-signers in mutualized income-contingent student loans:*** In the so-called mutualized income-contingent student loan scheme, each borrower joins a cohort (e.g., all borrowers who graduate and enter into repayment status in the same year), all of whom are obligated to repay some percentage of their income or earnings until the collective debt of the entire cohort is repaid. High earners contribute more to the amortization of the collective indebtedness, low earners contribute much less; and the debt is repaid as a collective (mutualized) obligation. The scheme would include a legally enforceable obligation to repay the amount due even if it is very low, but such a provision would inevitably be ambiguous about whether the low payments (which prolong the discharge of the cohort obligation and add to the repayment burdens of the high earners) are the result of low-paying jobs, failure to report earnings, unemployment, voluntary withdrawal from the workforce, or behavior that would more nearly coincide with default. The prospect of adverse selection (i.e., the likelihood that potential high earners would avoid participation while

potential low earners would overparticipate) and the general uncertainty of the scheme make capital market participation unlikely.[9]

8. ***The higher education institution:*** Another potential guarantor is the institution itself. However, public institutions would simply retain the risk for the taxpayer, and few, if any, private institutions have the resources to consider the massive contingent liability of large-scale student loan guarantees. This method was tried in China, but the institutions simply refused to lend without sufficient parental guarantors to reduce the institution's risk to nothing (in which case the purpose of the scheme—to lend to those who really need the money—is essentially lost).

   However, several Latin American loan programs are experimenting with involving the higher education institution in a guarantee role. In Chile, under the newest government student loan program (Crédito de la Ley 20.027 para Financiamento de Estudios de Educación Superior), the higher education institution, whether public or private, must guarantee the student loan during the in-school and grace periods. In Mexico, under the Sociedad de Formento a la Educación Superior (SOFES) program, private universities must assume the loan after nine months of default.

9. ***International Finance Corporation as partner in risk assumption:*** A number of innovative risk-sharing initiatives are under way that would allow the private sector to provide student loan capital without a full government guarantee (and generally without government subsidization). Many of them involve the International Finance Corporation (IFC), the private sector arm of the World Bank (Perkinson 2006). Several examples are given below. All involve selective institutions (some private) and thus do not strictly meet the criterion of general availability. Furthermore, these loan programs depend on a development agency (the IFC) whose support cannot be relied upon indefinitely. Nevertheless, the plans are available on the basis of need to all students in these institutions, and they seem to successfully tap the private capital market by absorbing risk, via partnerships, for a potentially significant number of students.

   9.1. ***The Sampoerna Foundation in Indonesia:*** One of the most innovative programs is the risk-sharing scheme in Indonesia involving the Sampoerna Foundation, Bank Internasional Indonesia (BII), and the IFC, which extends loans to needy students in selected state and private universities. The foundation provided funds to cover the setup costs and the first losses on the portfolio of loans, while the BII and IFC agreed to jointly guarantee losses in excess of the specified first loss threshold. In this way, Sampoerna's contribution of US$2.75 million is being leveraged by seven to permit the loan portfolio to reach $20 million over the next four years and to extend loans to 20,000 students. Loans range from 10 million Rupiah (US$1,083) to 100 million Rupiah ($10,830) for 6 to 36 months, with an

[9] This was the method used by the first strictly private income-contingent loan plan in the early 1970s, the Yale [University] Plan for Tuition Postponement. The university abandoned the plan because of a combination of factors, including adverse selection, the difficulty of competing with government-guaranteed and -subsidized student loan programs, and the inability to access private capital. For a full description of the Yale Plan and other early income-contingent loan experiments, see Johnstone (1972).

interest rate of 12.9 percent, which is significantly lower than the prevailing consumer loan rate. The first loans were made in January 2007.

9.2. ***Finem in Mexico:*** The IFC is also working with Finem, a private nonbank financial institution in Mexico that it co-owns (18 percent) with a Mexican company (82 percent). The IFC has invested a 10-year senior loan facility of up to $15 million to be used for student loans originating at the university level to lower- and middle-income students. The project aims to show investors and financial institutions that education financing can be good business. Under this program, Finem has a reserve fund that covers the risks up to 5 percent of the loans, and the universities agree to buy back loans that are more than 90 days overdue.

9.3. ***Sociedad de Formento a la Education Superior:*** The Finem initiative was modeled in part on the experience of the Sociedad de Formento a la Education Superior (SOFES), a government-sponsored student loan program established by a group of 40 private universities Mexico supported by a loan from the World Bank. Risk is shared among co-signers (when available)[10] and universities (which must assume the loan from SOFES after nine months of default). The loans carry a 2 percent real interest rate, and monthly interest payments must be made during the in-school years. Repayment of the capital begins six months after graduation and must be made on a monthly basis for a period not exceeding two times the period during which the student received the loan (Canton and Blom 2004).

Bearing the Risk: Layering the Guarantors

The examples above illustrate the need in many cases to *layer* the bearers of risk and involve multiple actors: students, parents, government, the private sector, and higher education institutions. The most obvious first guarantors (provided there are secondary guarantors and an effective means test) are parents, with the government and/or some kind of foundation assuming the risk for students whose parents cannot do so. The risk of student loans derives from uncertainty—about the ability of the lender (especially a new government lender) to perform responsibly and the lack of experience with borrower behavior in countries that are attempting to inaugurate cost-sharing and student loans for the first time. A development agency such as the World Bank might appropriately serve as a backup guarantor (subordinate to parents, extended families, or employers as first guarantors) for a limited number of years or a limited number of borrower cohorts to get beyond this uncertainty and allow the government, or a local private foundation or group of institutions, to assume the role of guarantor. The World Bank's International Finance Corporation has begun to play this role on a limited scale; other development agencies might also look for ways to help lessen the risk in developing countries that are establishing or reestablishing a student loan program.

This paper began with a reminder of the imperative of cost-sharing, especially in developing countries that are experiencing the pressures of (1) high and very rapidly

[10] To balance the equity and efficiency goals of SOFES, students with co-signers are eligible for larger loans than students without a guarantee.

increasing costs of higher education; (2) limits on government's ability to tax; and (3) a long list of socially and politically compelling competing needs for government funding. Particularly in the low-income and most of the so-called transitional countries, measures that allow students to bear a portion of the costs of their higher education (i.e., student loans) are almost essential.

For student loans to be financially sustainable, they must offer a high rate of recovery and be able to tap into the private capital market. These two requirements rest on two others: (1) a reduced risk of default and (2) a guarantor or guarantors to bear that risk. Student loan programs must access private capital sources and relieve government operating budgets of the burden of providing both capital and whatever subsidies are deemed necessary. We have outlined a number of sources that can participate in this risk bearing in order to expand private capital participation and, therefore, the volume of student lending. Like the design and administration of student loan programs themselves, the process of expanding the capital sources is a work in process. We hope this paper is helpful as nations, universities, foundations, and international development agencies work to expand participation in higher education.

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