INVESTING IN VALUE, SHARING RISK

FINANCING HIGHER EDUCATION THROUGH INCOME SHARE AGREEMENTS

Miguel Palacios, Tonio DeSorrento, and Andrew P. Kelly

AEI Series on Reinventing Financial Aid

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CENTER ON HIGHER EDUCATION REFORM

AMERICAN ENTERPRISE INSTITUTE

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Executive Summary

Income Share Agreements (ISAs) are financial instruments for the private financing of higher education. With an ISA, an investor or other organization provides a student with financing for higher education in exchange for a percentage of the student's future income for a defined period of time after the student finishes school. Unlike a loan, there is no principal balance to repay with an ISA: depending on the level of success after school, the student may ultimately pay more or less than the amount financed.

ISAs are better suited for student financing than traditional student loans. Investing in higher education is risky, meaning the outcome of investing in students is highly uncertain. Loans are not ideal for financing an individual's education because they cap payments to the lender while forcing the student to bear too much risk. On the lender side, this means that the private student-loan lenders undersupply credit (even for students with good prospects) without some kind of government guaranty or subsidy. On the student side, traditional private student loans force students to bear significant risk of financial ruin if their educational investment does not pay off and they do not earn enough income to repay their debt with interest.

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In capital markets, risky investments are typically funded with equity instruments where the investor shares in the profit (and the loss) of an investment. Borrowing from this payment structure (but without the ownership aspects of traditional equity instruments), an ISA has students pay more if they are successful in exchange for paying less if their educational investment does not pan out. This provides strong downside protections for students while making it easier for students of all backgrounds to obtain financing compared to the undersupply of credit that occurs with traditional private student loans.

In addition, because ISA investors earn a profit only when a student is successful, they offer students better terms for programs that are expected to be of high value and have strong incentives to support students both during school and after graduation. This process gives students strong signals about which programs and fields are most likely to help them be successful. It would also help stem tuition inflation and improve the efficiency of the higher education system by rewarding high-quality, low-cost programs.

In short, ISAs offer the following virtues:

- They make financing available to students of all backgrounds for worthwhile educational programs without requiring a government guaranty or subsidy.
- They offer students strong repayment protections similar to the income-based repayment option for federal student loans.
- They improve the efficiency of the higher education system by channeling students to high-quality, low-cost programs.
- They help students navigate to programs that will

help them find a job and succeed in the workforce.

- Because no taxpayer dollars are put at risk, ISAs open a space for innovative educational providers who are currently shut out of the federal financial aid process through accreditation and other regulatory barriers.

- ISA investors have strong incentives to support the students they have funded during school—via advising, mentoring, and career counseling—as well as after graduation.

The federal student loan system was created decades ago as an attempt to address some of the failures with private student loans described above. Because federal loans are available with essentially no underwriting criteria, students of all backgrounds have access to the credit they need to go to school. And, more recently, programs such as income-based repayment provide students with strong protections against the downside risk of investing in higher education.

Nevertheless, federal student loans help undergraduate students only up to the Stafford loan limits, leaving many students with only private loans or Parent PLUS loans above those limits, both of which are highly problematic. In addition, because they are available to students with virtually no assessment of the students' ability to repay, federal loans likely exacerbate problems with overborrowing, putting students and taxpayers at risk and contributing to tuition inflation.

Federal student loans have become an essential component of student access to higher education. Still, for many students, federal loans are inadequate for their financing needs, and simply raising federal loan limits risks exacerbating issues with overborrowing and tuition inflation. Therefore, students need access to additional financing tools they can effectively pair with federal student loans to meet their higher education financing needs. ISAs are not currently a full substitute for federal student aid programs, but they can help correct some of the existing system's shortcomings and improve student outcomes. As ISAs take root and expand, policymakers will have opportunities to think more expansively about their role in higher education finance.

Therefore, policymakers should take the following steps to facilitate the growth of ISAs as a new financing option for students:

1. **Legal Clarity.** There is significant legal uncertainty regarding the treatment of ISA contracts. Although some small firms are testing this market, this uncertainty has made it difficult to attract investors and has prevented the market from developing on a larger scale. Congress should take steps to provide legal clarity regarding the treatment of these contracts.

2. **Loan Limits.** Instead of allowing students and parents to borrow up to an institution's cost of attendance through federal PLUS loans, policymakers should put reasonable loan limits in place for federal student loans and implement reforms that allow ISAs and state-based Pay It Forward arrangements (which are essentially state-funded ISAs) to emerge. These reforms would give students a suite of robust financing options to take advantage of without the downsides of unlimited borrowing through the federal program.

3. **Interaction with Federal Student Loans.** Congress should make several modifications to federal student loans to both simplify and improve the repayment process for students while eliminating barriers that would make it difficult for students to pair federal loans with other financing tools such as ISAs and Pay It Forward arrangements.

4. **Data.** Policymakers should repeal the ban on student unit records and allow for the collection and dissemination of data on the labor market outcomes of graduates from different institutions and fields of study, without infringing on student privacy. Markets function much more effectively with good data, and right now there is a dearth of information available on the outcomes at different postsecondary programs.

Investing in Value, Sharing Risk: Financing Higher Education through Income Share Agreements

Miguel Palacios, Tonio DeSorrento, and Andrew P. Kelly

Mounting student debt and rising tuition costs have combined to put student financial aid reform on the national agenda. The amount of federal student loan debt outstanding reached $1 trillion in summer 2013, fueled by increases in enrollment and skyrocketing college tuition prices.[1] If you add in private student loans, the debt number is even larger. The average borrower now owes $25,000, and delinquency rates reached 12 percent in 2013.[2] We can put that number in context by noting that delinquency rates on home mortgages at the height of the housing crisis were less than 10 percent.[3] The Consumer Financial Protection Bureau estimates that 22 percent of federal loan borrowers who have entered repayment are either in default or forbearance.[4]

Despite the panicked rhetoric, student debt is not a problem in and of itself. It becomes a problem when the economic returns to the program financed by the debt are not large enough to pay it off. Unfortunately for graduates, debt loads have been growing at the same time good-paying jobs have been harder to find. To be sure, these troubles have much to do with the Great Recession. But some evidence indicates a longer-term trend as well. In a recent analysis of Census Bureau data, three economists from the Federal Reserve Bank of New York found that the underemployment rate for recent college graduates has grown steadily since 2001. The share of underemployed graduates working part-time or low-skilled jobs has also grown over that time, while the proportion working in high-wage positions has declined.[5]

Numbers such as these have spawned talk of a "student loan bubble" and raised questions about the sustainability of our traditional approach to student finance. Federal student loans are not subject to underwriting, meaning students can borrow to attend any accredited program they wish, regardless of the likely return on that investment. Undergraduates are subject to strict loan limits, meaning they must often use federal loans given to their parents and private loans to supplement their aid package. Under the federal PLUS program, parents of college students who pass a minimal credit check are eligible to borrow an unlimited amount up to the cost of attendance, again without reference to the program in question. And when students finish school or drop out, the usual 10-year repayment plan for federal loans demands the largest portion of their monthly income at the beginning of their career, when they are least able to afford it. Income-based repayment (IBR) programs can help alleviate some of these repayment issues, but they do nothing to help students avoid bad investments in the first place, and they entail costs for the federal government.

In response, reform-minded federal policymakers have typically focused on "fixing" student loan policies. But perhaps it is better to think more creatively about the way we finance higher education. Enter Income Share Agreements (ISAs), financial instruments for the private financing of higher education.[6] With an ISA, investors provide students with financing for higher education in exchange for a percentage of their future income for a defined period of time after they finish school. Unlike a loan, there is no principal balance to repay with an ISA: depending on the student's level of success after school, the individual may ultimately pay more or less than the amount financed.

Traditional student loans are problematic as a tool for financing higher education. Without government

intervention, private lenders will not supply enough credit, and at a relatively high cost, even to students with good prospects. The fixed-payment structure of traditional student loans also provides little protection to students who struggle during repayment. In contrast, ISAs would provide students with sufficient financing based on their future potential rather than their family circumstances, repayment protections similar to the IBR option available for federal student loans, and clear signals to students upfront about the expected value of the program they are pursuing.

The growth of ISAs as an option for students would translate into more opportunities and better protections for students pursuing higher education, particularly students from lower-income households. Also, by driving students toward institutions and programs that are likely to provide them with good educational value, this tool will help stem tuition inflation because it will reward high-quality, low-cost programs while limiting the generosity or availability of financing to low-performing programs. For the same reason, this option will also help students choose a program that is likely to lead to a job after graduation.

In contrast, the existing system of student loans does none of these things. A student can get the same federal loan for any accredited program, regardless of how likely the student is to be successful. Parent PLUS loans allow families to borrow up to the cost of attendance, placing no pressure on institutions to keep tuition low and fueling the college cost spiral. Students struggling today with these ever-increasing tuition costs and the potential for severe repayment burdens would benefit from a different financing tool that is better aligned with their interests. Compared to the current system, ISAs could be a welcome addition to higher education finance.

This paper discusses the shortcomings of traditional student loans and the reasons that income-based financing instruments are better suited for students' needs. The central point is that if we want to ensure that talented students, regardless of their backgrounds, have access to the education that will give them the skills to succeed in the labor force, ISAs are a worthwhile alternative to the traditional approach. They provide the necessary resources, shield students from hardship if they do not succeed, and provide an incentive for graduates to choose a degree and institution that will increase their likelihood of success. Although the development of ISAs requires minimal, if any, resources from government, government regulation and policy can serve as barriers to the growth of innovative new products. This paper identifies current barriers and recommends a number of steps policymakers can take to foster the development of this financing option.

Market and Government Failure in the Financing of Education

Individuals pursue higher education for many reasons. The enjoyment of learning and the value of the college experience are good reasons by themselves. For most students, though, education is primarily an investment in human capital that increases their future earning potential. In the 2012 Survey of American Freshman administered by the University of California, Los Angeles, a survey conducted every year for the past five decades, 88 percent of incoming students reported they enrolled in college to better their job prospects—a record high.[7] Society also benefits from higher rates of educational attainment—both in terms of increased tax revenues and contributions to civic and social life—although the magnitude of these benefits is still a matter of debate.

To the degree that an educational program provides public benefits, society should provide subsidies in line with those benefits. Following that logic, some countries provide public higher education for free or at a very low cost. Yet, given budgetary constraints, these countries are forced to tightly ration access, partially defeating their effort to promote investment in higher education. In contrast, America's postsecondary system is open access, serving any student with a high school degree, and features many private institutions. The result is a system where a large fraction of the population benefits, but not enough to cover the full costs of most programs, and as a result most students have to pay the difference through tuition and other fees.[8] Although some students may be able to pay these costs out of pocket, many, if not most, cannot afford to do so. In these cases it makes sense for the student to finance some or all of the remaining costs,

assuming the student's expected future earnings will be high enough to repay the amounts financed without undue financial hardship.

The traditional mechanism used for this purpose is fixed-payment student loans, similar to a loan someone might take for a mortgage or a car. Unfortunately, however, student financing is much riskier; lenders and students have a difficult time knowing, a priori, what the likely outcome is. This uncertainty means that student loans are poorly suited for this task.

An example will help clarify. Consider Claire, a low-income, high-achieving high school senior who plans to major in business administration at Local Institute. Local Institute costs $10,000 a year, an extraordinarily high amount given her family's means. In a world without federally subsidized loans, Claire funds her education with a traditional private loan (say, principal of $10,000, interest rate of 6.8 percent, 120 monthly payments).

What happens to Claire after graduation? She will have to pay about $120 monthly for 10 years. If her starting salary is surprisingly high, then paying $120 will be easy, and Claire will enjoy most of the fruits of her investment. On the other hand, if her starting salary is surprisingly low, then the loan's fixed payments become a burden; Claire invested heavily in her education and is now in a tough spot. She might have to file for bankruptcy, with all the associated costs, and still might not be able to discharge this particular loan, as student loans are not treated the same way as other loans under the law. And that is if Claire can get a loan at all. Lenders, recognizing that Claire might not be able to repay, will either not make credit available at all, will ask for a relatively high amount of interest, or, as frequently occurs, require a creditworthy co-signer. Even if she can get credit, Claire might decide that it is better to start working than to take such a risk. What could have been a worthwhile investment in education never takes place.

This example illustrates why, absent government intervention, loans available to students will be relatively expensive or not available at all and why the willingness of students to invest in education is less than what would be optimal. In addition, although some would argue that this is a good thing—that we currently have an oversupply of credit and too many students going to college at too high a price—we should note that in the absence of government intervention, the credit constraints associated with private loans lead to an *undersupply* of credit, meaning that many students qualified to attend college would not be able to obtain financing. But even when the investment does take place, the fixed-payment structure of student loans forces students to bear all the risk of financial ruin should their educational investment not pan out.

Students struggling today with these ever-increasing tuition costs and the potential for severe repayment burdens would benefit from a different financing tool that is better aligned with their interests.

The basic problem is, of course, the level of uncertainty that surrounds investments in higher education and the intangible nature of human capital. To understand this uncertainty better, consider the contrast between investing in education and investing in a tangible asset such as a house. Whereas a house is relatively easy to value using prices of similar properties available nearby and historic transaction prices for the same house, the value of college is far less certain. No comparable transaction can be used to arrive at a precise estimate.[9] Some students fail to complete their studies, others' skills become obsolete, and many choose career paths with low earning potential. Furthermore, whereas students have enjoyed the benefits of living in a home or a particular neighborhood for most of their lives and therefore understand those benefits, those same students have no personal experience with the benefits of additional education a priori.

A second source of uncertainty stems from the illiquidity of an educational investment. If a homeowner cannot continue making mortgage payments, the owner has the option to sell the home. Moreover, the lender is able to hold the house as collateral for the loan so that if the owner refuses to sell it, the lender can take possession. By contrast (fortunately), students cannot

sell themselves or offer themselves as collateral for an investment in their human capital.

The difficulty of valuing the investment and the illiquid nature of the asset make student loans very risky for borrowers. Not surprisingly, private student loans have not played a significant role in the financing of higher education.[10] Private student loans represented less than 7 percent of the $112 billion in student loan originations in 2010–11. Even this number overstates the extent of the private student loan market, however, because 90 percent of these loans were co-signed, making them less like student loans (which would be provided on the basis of each student's future earning potential) and more like unsecured consumer debt that is only available to families with good credit.[11] Unless these underlying market failures are addressed, the involvement of private capital in financing higher education will remain small.

These issues have been discussed for more than half a century, and measures to address them have been proposed at least since the 1950s.[12] ISAs were laid out as an alternative by Milton Friedman in 1955, yet the federal government chose to introduce subsidized loans instead, and they became the main means for financing higher education.[13]

Federal loans do provide access to financing where the private market would not, and they now feature back-end protections such as income-based repayment. Unfortunately, federal loans leave other problems unaddressed while introducing new issues. These issues are as follows:

- **Credit Constraints.** Because any eligible student can get federal student loans for an eligible program, federal loans help ensure that students have access to loan capital regardless of family background. Nevertheless, for undergraduates, this is only true up to the loan limits for federal Stafford loans, which for most dependent students are fairly low.[14] Thus students frequently cannot obtain enough financing through Stafford loans to pay for their program and must resort to private loans or, through their parents, federal Parent PLUS loans. Parent PLUS loans are particularly problematic. They carry high interest rates, offer few protections, and allow parents to borrow up to the cost of attendance but have no aggregate limit. So long as they have a child in college and pass a credit check, parents can borrow an unlimited amount in PLUS loans. These loose underwriting criteria can lead many parents to borrow more than they will be able to repay and provide little incentive to keep tuition prices low.[15]

- **Risk.** The IBR program, an option for federal student loans, helps protect students from the downside risk of investing in higher education. It provides protection against both liquidity risk—the possibility that a student may not be able to afford monthly payments at a given point—and income risk—the possibility that a student's education will never generate enough income for the student to pay the loan and interest without undue financial hardship. IBR is essentially a partial implementation of Milton Friedman's idea.

  Because of its current structure and complexity, however, IBR is both underused by many students who could benefit from it, particularly low income ones, and overly generous to graduate students with high debts.[16] Under the federal Grad PLUS loan program, students can borrow up to the cost of attendance with no aggregate limit, and these loans qualify for IBR and loan forgiveness. As such, current policy benefits high-income, high-debt borrowers more than those with low incomes and less debt.[17] Efforts to simplify and expand IBR while also making the program fiscally sustainable are worthwhile and will help students. Nonetheless, even with these reforms, because IBR is only available for federal Stafford loans and Grad PLUS loans, undergraduate students would still face significant downside risk for any non-Stafford loans they take to cover costs above Stafford limits.

- **Value.** Federal student loans, even those with the IBR option, do not give students much information about the expected value of a program they are pursuing. In addition, because credit is provided without any underwriting based on the

economic viability of the student's chosen program, federal loans can enable students to borrow more than they will be able to repay in the future.

Although it is tempting to suggest that simply raising federal loan limits would address the issues with credit constraints and risk, doing so would also lead to more of the overborrowing and tuition inflation that is already a problem today as long as those limits are not related to the viability of the student's chosen program.

Federal student loans are important, but the problems discussed here remain unsolved. As such, policymakers need to think more creatively about new financial aid options that can provide necessary funding while also avoiding many of the flaws of the current student loan system. In particular, Friedman's ideas about ISAs are worth a second look.

Income Share Agreements

Entrepreneurs raise capital for risky projects all the time. They simultaneously attract funding and reduce their own risk by offering investors a share in the profits generated by the investment. In the event that the investment does well, the financial success compensates the investor for the additional risk taken at the start. Given the uncertainty involved in an educational investment, a student's situation is similar to that of the entrepreneur's. An instrument that allows investors to share in the success of students (as well as in their failures) would help prospective students attract necessary funding and provide far better protections in the event that an educational investment does not pay off.

ISAs are the analogous instrument for students. With ISAs, investors or other organizations provide students with financing for higher education in exchange for a percentage of their future income for a defined period of time after they finish school. Unlike a loan, there is no principal balance to repay: depending on the student's level of success after school, the individual may ultimately pay more or less than the amount financed. Therefore, the amount the student pays, and the amount the investor receives, depends on the student's income over the time period.

Following on Claire's example, instead of taking a loan, she could take an ISA, agreeing to pay 10 percent of her income for 10 years after graduation. With that ISA, if her starting salary is surprisingly high, her payments will also be higher. Yet, because her income is high, she can afford to make those payments. On the other hand, if her starting salary is surprisingly low, then her ISA payments will be surprisingly lower as well. In this case Claire invested heavily in her education, but the terms of her ISA will never require her to pay more than 10 percent of her income. She will make 120 payments, large or small, after which she will no longer have any obligation.

These loose underwriting criteria can lead many parents to borrow more than they will be able to repay and provide little incentive to keep tuition prices low.

This type of financing option has a number of strengths:

- **Equality of Opportunity.** ISAs would provide students with funding based on their potential to be successful in a particular program, not based on their family's economic circumstances or the presence of a co-signer. Therefore, students of all backgrounds can get the financing they need for programs that are worthwhile. This would provide students who have reached the federal loan limits but need additional financing with a better option than high-interest-rate private loans. It might also appeal to students who wish to finance the entire cost of their education through an ISA because they value the simplicity of having a single, simple contract with strong protections. Finally, unlike the previous guaranteed loan program (the Federal Family Education Loan Program) or direct federal loans, ISAs require no federal subsidy or guaranty to serve students from all backgrounds.

- **Strong Protections for Students.** Unlike fixed-payment private loans that offer few protections to students during repayment, ISAs manage the inherent risk of a student's future income by transferring part of that risk from the student to the investor. Students are protected from the risk that their higher education investment will not pay off; the investors instead bear that risk, which is appropriate because, much like insurance, investors can pool risk and diversify it. More concretely, as with the current IBR option, students are ensured that their payments are affordable and will not last longer than the defined term. Thus students who end up doing poorly ultimately receive a subsidy because they do not fully repay the amount that was given to them.[18] These risk protections are particularly important to low-income families, who tend to be extremely risk- and debt-averse.[19]

With ISAs, investors or other organizations provide students with financing for higher education in exchange for a percentage of their future income for a defined period of time after they finish school.

- **Information about Value.** Students often have difficulty assessing the quality of educational programs and institutions, which is partly why many poor-performing programs are able to survive. Many students also choose courses of study without good information about the job prospects in their chosen field. This has created an odd status quo where the benefits of higher education are being questioned while, at the same time, some form of higher education is seen as more important than ever for success in the workforce.

  The resolution of this paradox is that higher education is important and valuable, but not from any institution or program and not at any price. Students need tools that will support them in choosing programs that will provide good educational value.

  ISAs can send useful signals to students about the value investors expect a particular program to provide. Think again of prospective student Claire: suppose she can attend Good Institute, where she can finance the tuition for a degree by committing to pay 5 percent of her income for 10 years after graduation, or she can attend Mediocre School, where she can finance the tuition for a similar degree by committing to pay 10 percent of her income for 10 years. Faced with these options, Claire has a strong incentive to attend Good Institute instead of Mediocre School, even if Good Institute has higher tuition.[20] In addition, there might be a third option, Worthless Program, for which she would not be able to obtain an ISA at all, putting pressure on such programs to improve their quality or go out of business.

  The information that ISAs would reveal about value is where they are particularly useful when compared to current options such as federal and private loans, including those with IBR protections. As in the example in the previous paragraph, ISAs would help students choose degree programs that are economically valuable and that will lead to successful careers. This value component would also help hold higher education institutions accountable: an institution that is raising tuition without improving the economic prospects of its students would appear relatively expensive to students comparing ISA terms for various schools. By rewarding high-quality, low-cost programs, ISAs would improve the efficiency of educational delivery, lowering costs for students and making public spending on programs such as Pell Grants go further than it does now.

- **Innovation.** Because taxpayer dollars are not being put at risk with ISAs, a wider range of educational providers could take advantage of these financing tools, including many that are currently shut out of federal financial aid programs because of regulatory barriers such as accreditation. Investors would have little incentive to

invest in low-quality providers, and this self-interest would help ensure quality control. Providers who have great confidence in the value of their product could invest as well, giving them an additional incentive to ensure their graduates perform well in the labor force. A market financed by ISAs would allow for more higher education innovation and competition than the status quo.

- **Student Support.** Because ISAs shift the risk of failure off of students and onto the investor, individuals or organizations providing ISA financing to students should have a strong incentive to provide counseling and support to students throughout the process, both before and after graduation, to help students be successful in their education and their chosen career.

Potential ISA Models

The ISA concept could be put to use in a number of ways, including the following:

- **Profit-Seeking Funds.** Some funds will be established on purely economic grounds. ISA funds that are established for profit-seeking purposes could invest directly in students, could partner with particular schools (as done by Lumni in Latin America), or could establish platforms through which individuals could invest in students on a peer-to-peer basis (as Upstart and Pave do in the United States).[21]

- **Altruistic Funds.** Other funds may be established on more altruistic grounds. Some investors will be interested in certain fields of study, others in certain types of students, and perhaps others in certain schools. For example:

    - *Fields of Study.* Altruistic investors who are particularly interested in supporting humanities graduates might establish a fund to finance humanities students. This is more effective than a scholarship fund because students who are successful re-seed the fund for future students. Even if the fund is subsidized so that the payback rates do not fully cover the amounts provided to students, such a fund would allow far more students to be financed than a scholarship fund, where no money is returned.

    - *Disadvantaged Students.* Altruistic investors may wish to establish nonprofit funds dedicated to investing in disadvantaged students. Such a fund could establish relationships with students early to make them aware that financing is available to go to college and then provide supports to help them navigate applying for college, completing college, and establishing themselves in the workforce. Students who are not successful would be fully protected by the payment structure of the ISA, which would actually provide a subsidy to these low-income graduates. And if the fund is set up on a nonprofit basis, then the proceeds from successful graduates would be entirely dedicated to funding future disadvantaged students. The US nonprofit 13th Avenue, for example, follows this model.

    - *Alumni Funds.* One type of fund that might be of particular interest to universities is the alumni fund. Alumni tend to be loyal to their alma maters and are an important source of funding for their schools. By giving money to their schools, alumni are sharing their success with the institution and its future students. Alumni may be willing to contribute to the funding of prospective students of their alma mater, and many may be willing to do so on a subsidized basis (in other words., demanding a lower percentage of income than might be the case in the market).[22]

- **Pay It Forward.** Policymakers and analysts in a number of states have proposed state-funded ISA plans. Oregon, the pioneer in this area, proposed a Pay It Forward (PIF) program. Under PIF, students attending public universities would pay a certain percentage of income back to a state fund

for a defined period after graduation in lieu of paying tuition and fees upfront. Oregon's PIF proposal made national news in 2013. We discuss some of the strengths and weaknesses of these PIF proposals in the next section.[23]

- **Educational Programs.** Some educational programs may wish to directly charge students a percentage of their income instead of a flat tuition amount, providing them with a clear signal that the school is willing to invest in their success. This approach may be particularly appealing for nontraditional programs that have the potential to serve students well but do not currently have access to federal financial aid because of regulatory barriers.

Common Concerns

We now address concerns that frequently surface when discussing ISAs.

Ethical Implications for the Relationship between Student and Investor. Some analysts have argued that ISAs are a form of indentured servitude. This is not the case, however, because students are committing only a percentage of their future earnings, rather than making a promise of future services. Students are able to make their own career choices and employment decisions at all times, including if they choose not to work at all or to change their course of study.

If we flip the logic on its head, we can say that a loan obligation also entitles a lender to a share of a student's future earnings, a share that grows and causes hardship when the student's earnings are low. Thus, a traditional, fixed-payment student loan, particularly one that is extremely difficult to discharge in bankruptcy, more severely restricts a student's freedom than an ISA. Graduates who are struggling to repay their loans could face years or decades of hardship and limited job choices, whereas graduates with ISAs can make whatever choices they want, including taking entrepreneurial risks that may pay off in the future but that might not have been possible in the presence of student loan debt.

Is Economic Success the Sole Value of Higher Education? A student's economic success is *not* the only source of value for education. As mentioned earlier, an educational program can be valued for a variety of reasons, including the benefits it provides to society and the fact that it increases the earnings potential of its graduates (or a combination of these reasons). Yet, students will often need to come up with some financing to cover tuition, fees, and room and board. When this happens, students should have a robust set of financing options to help cover remaining costs—options that are available to students on the basis of future potential, not their family's economic circumstances.

If a program is not expected to generate enough future income to cover its cost to the student, the student should carefully consider the virtues of that program. The student might value the program for its own sake and might be willing to spend money without expecting financial return. From a public policy standpoint, however, there is no compelling reason to provide an additional subsidy beyond what may have already been provided to account for the program's public benefits, simply to ensure access to a program that does not provide a positive return on investment.

Would ISAs Discriminate against Women, Minorities, or Low-Income Students? The law in the United States is fairly clear on this topic, and it would prevent overt discrimination against certain groups on the basis of their gender or race. A more illuminating question is whether ISAs would discriminate against women or minorities more than the current loan programs do. After all, even when everyone receives the same interest rate, loans discriminate intensely on the dimension that really matters: affordability. Under a loan program with the same terms for all borrowers, a group who earns less than another despite having identical qualifications ends up with proportionally lower income after paying off that loan than the other group. To the extent that any systematic difference in income between two groups is unfair, loans in effect amplify the unfairness. If ISAs pool groups with similar qualifications but different income potential, then ISAs will partially address the unfairness that loans amplify.

Would ISAs Just "Cream" the Best Students and Institutions? Skeptics could argue that ISAs would only fund elite students and institutions. They would be right if elite institutions were the only economically sound higher education investment. We certainly believe and hope that is not the case. The argument for supporting broad access to higher education rests on the investment, both private and public, being economically sound. If it were not, then we would all be better off using those resources in other worthwhile investments such as early schooling, better nutrition, and wider access to health care. But the available evidence is that higher education *is* a worthwhile private investment at many different types of institutions, not just the elite ones. The alternative is quite depressing because it would imply that students from certain socioeconomic backgrounds cannot make a worthwhile investment in higher education. If the investment to earn a degree from a community college, a for-profit university, or an institution that targets minorities offers an economically sound degree, ISAs will eventually be available to back it.

This is where the value component of ISAs is significant: ISAs will provide funding on relatively expensive terms, or not at all, for programs that are not expected to generate outcomes commensurate with their costs, and similarly for students wishing to pursue programs where they are not expected to be successful. And this is exactly what we want. ISAs would help students navigate to institutions and programs where they are likely to be successful, which benefits the students and improves the efficiency of the education sector more generally.

Is There Potential for Adverse Selection in These Contracts? Adverse selection is always a concern when one party has better information than the other. To the extent that students know themselves and their future plans better than investors, adverse selection is a possibility: faced with identical contracts, students who know they will go into high-paying jobs will opt for traditional financing mechanisms, whereas students who plan on going into less lucrative fields will be attracted to ISAs. Given that students are often not very accurate in projecting their future income and typically have low levels of knowledge about the labor market, however, investors will most likely have better information than students about their future economic prospects in particular courses of study at particular institutions. The key feature that reduces the potential for adverse selection is that different students do not face identical contracts. Instead, investors will adjust the terms of ISAs on the basis of different circumstances, most notably in response to differences in the programs students are pursuing.

By rewarding high-quality, low-cost programs, ISAs would improve the efficiency of educational delivery, lowering costs for students and making public spending on programs such as Pell Grants go further than it does now.

As mentioned earlier, some states have recently proposed state-funded ISAs to help students attending institutions within the state. Under Oregon's PIF proposal, for example, every student will pay the same percentage of income back to the state during a predefined period of time.[24] Because students with such a broad range of future prospects are all given the same terms, those students who foresee higher incomes in the future will more likely seek to attend a university outside of Oregon, whereas those who foresee low incomes will stay. This situation could lead to persistent deficits in Oregon's PIF fund over the long term. Given that Oregon's PIF calls for a modest percentage of income from graduates, adverse selection might end up not being an issue. Yet policymakers would be wise to acknowledge the potential for adverse selection if the policy is not carefully designed.

Implications for Policymakers

ISAs have the potential to enhance the existing options students have to finance their education. Because these contracts do not require taxpayer dollars, there is little

risk to government coffers. If anything, to the extent that these contracts create an incentive for students to attend degree programs and institutions that are more likely to lead to future economic success, students and taxpayers will benefit. More broadly, a workforce better equipped to join the labor market will help the overall economy.

But ISAs can only grow if policy and regulation allow them to take root. In that spirit, we now turn to specific recommendations on the steps that policymakers would need to consider to enable the growth of ISAs as an alternative for higher education financing. These recommendations, by their nature, are much more specific than the ideas discussed previously. They provide a roadmap for policymakers interested in creating more space for ISAs.

Policy reforms in four major areas will facilitate the growth of ISA options for students. First, the legal treatment of ISAs needs to be clarified. Second, instead of allowing parents and graduate students to borrow up to institutional charges, policymakers should replace the PLUS program with the suggested policy changes that allow ISAs to emerge as an option for students. Third, policymakers should create a framework to deal with the interaction between ISAs and federal student loans. Fourth, data about the quality and labor market prospects of different programs should be made publicly available. We discuss each of these areas in turn.

Legal Clarity. Significant legal uncertainty exists regarding the treatment of ISAs. Although a small but growing number of firms are testing this market, this legal uncertainty has made it very difficult for any kind of market to develop on a larger scale. Congress should take steps to clarify the legal treatment of these contracts so their enforceability and boundaries are as clear as those for loans. Some specific recommendations are as follows.

1. *"Ownership" by a Regulator.* ISAs need a regulatory parent at the federal level. Congress should authorize a regulator to oversee ISA providers and study the issues discussed previously. A major impediment to the growth of an ISA industry is regulatory uncertainty: not only are some of the rules uncertain, but even the *source* of any future rules is also uncertain.

   In choosing a regulator, Congress should consider where ISAs best fit—is an ISA more like a loan, an investment contract, or a hedging instrument? This regulator would develop relationships with industry participants and position itself to make carefully considered decisions consistent with its treatment of other regulated industries. As we conceive them, ISAs are best viewed as substitutes for student loans and other consumer credit products.

2. *Disclosures.* ISAs have disclosure needs not addressed by existing regulations, all of which were written with traditional loans in mind. Policymakers should formulate tailored disclosure guidelines that would help consumers understand ISAs, not force providers and consumers to translate debt terms in a nonuniform way.

   Specifically, the annual percentage rate cannot be estimated for ISAs, and the total cost of financing cannot be accurately estimated in advance. Policymakers should encourage ISA providers to emphasize instead key terms of ISAs, such as earnings and payments scenarios, the length of time of the income-sharing arrangement, any maximum payment amounts, and any prepayment mechanisms.

3. *Usury.* At the federal level, policymakers should make clear that the total cost of an ISA should not be used retrospectively to impute an interest rate for usury purposes and that any limits on the total cost of financing (full amount repaid, or expected to be repaid, by a borrower or ISA recipient) should be designed for ISAs with the distinct risk-sharing relationship of an ISA in mind.

   States, as a consumer protection measure, limit the amount of interest that can be charged by a lender in any given scenario. Usury limits, as they are called, cap the cost of borrowing below the amount the state deems unconscionable. Usury limits typically vary according to the type of credit extended (for example, payday

loan, personal loan, small-business loan), though the limits always refer to the particular allocation of risk between lenders and borrowers. In a lender-borrower relationship, given that student loans often survive bankruptcy, the group of borrowers who will end up paying more for their loans is the group that incurs late fees and cannot prepay the loan, most likely the least successful borrowers. As such, usury limits are seen as benefiting the borrowers least likely to be financially successful.

In an ISA, the allocation of risk across the ISA provider and ISA recipient is fundamentally different. Rather than relating as lender and borrower, under an ISA the provider and recipient of capital become partners. For instance, in the context of education financing, an ISA provider bears full repayment-period income risk with the student.[25] Unlike loans, the allocation of risk is such that payments are always affordable, and students who pay far more than they initially received will be doing so because they were very successful financially and can afford the payments.

Furthermore, these students' payments effectively subsidize less-successful graduates, something taken into account by investors when deciding the parameters of the contract—in particular, the percentage of income each graduate must pay upon graduation. A limit on the total payments that an ISA recipient could make—analogous to a usury limit for ISAs—benefits a different category of "borrower" than a cap on payments by a loan borrower. Capping ISA payments for successful graduates increases the percentage of income at which investors are willing to finance students. As a result, limits on the total payments that a successful graduate makes end up increasing the cost of ISAs for less-successful graduates while reducing the payments successful graduates make.

4. *Servicing.* A public agency such as the US Department of Education can provide support to allow for efficient servicing of ISAs that are being used to finance postsecondary education.

In contrast to a loan servicer, who simply collects and accounts for payments received and compares them to a known amortization schedule, an ISA servicer has more duties. Most significant, an ISA servicer must verify the ISA recipient's income each year, reconcile any overpayments or underpayments, and adjust the recipient's payment obligation for the following year. The servicer must rely on federal income tax return transcripts that could be received more than a year after the recipient earned the income being verified.

An ISA servicer cannot efficiently verify a recipient's income, particularly in real time, without the involvement of the recipient's employer or the involvement of a governmental agency that can withhold wages. The former is difficult because of privacy concerns and confusion with prohibitions on the assignment of wages. With data from the Internal Revenue Service or Social Security Administration, the Department of Education could provide ISA servicers with the information they require.

Instead, investors will adjust the terms of ISAs on the basis of different circumstances, most notably in response to differences in the programs students are pursuing.

5. *Treatment in Bankruptcy.* Most consumer debt is dischargeable in bankruptcy. Student loans are an exception, requiring the borrower to show an undue hardship to qualify for a discharge. ISA treatment in bankruptcy does not need to track that of loans. ISAs are designed to be affordable and should not be the cause of a graduate's bankruptcy. Unemployed graduates, for example, could fully perform on ISAs simply because they have no income and therefore no obligation—as opposed to loan borrowers, who would face fees, penalties, and negative amortization. As such, ISAs, particularly when used to fund higher education, should survive a graduate's bankruptcy.

6. *Taxation.* ISA participants need more certainty as to tax treatment. Congress can legislate an appropriate treatment or influence Internal Revenue Service interpretations of existing law to reduce uncertainty of tax treatment for ISA participants.

   Loans have an established tax treatment. The tax treatment tracks a loan's accounting treatment, where the first money paid on a typical amortizing loan is applied first toward accrued interest and then on the amount of outstanding principal. The amount of interest is predictable from the outset, and most of the interest is paid during the first half of the amortization period. Depending on the purpose of a loan, the interest paid may be deductible for a borrower. For a lender, interest from borrowers is taxed as ordinary income.

   Because ISA participants face some uncertainty regarding tax treatment of payments on the ISA, we recommend that ISAs be treated as open transactions, a class of transactions where participants book income or losses as they actually occur, not on expectations that they will occur. Payments received from graduates should be applied first as recoupment of the original investment because no set amount of profit is contracted for and the receipt of any profit is uncertain. Payments, if any, on an ISA in excess of the initial investment and servicing costs are actual realized profit and should be taxed as ordinary income.

Loan Limits. The federal student loan system currently offers credit without limit (up to an institution's cost of attendance) through the PLUS loan program, both for parents of dependent undergraduate students and for graduate students. Because this credit depends only in a limited way on the borrower's ability to repay, students, parents, and taxpayers are put at risk. The PLUS program also gives schools much more flexibility to raise tuition because students and parents can almost always obtain financing, regardless of the economic viability of the program pursued. Finally, the presence of virtually unlimited government credit makes it difficult for private-sector alternatives to federal loans to emerge.

Instead of allowing students and parents to borrow up to institutional charges, policymakers should put reasonable loan limits in place for federal student loans and replace the PLUS program with the suggested policy changes that allow ISAs to emerge as an option for students. In addition to federal, private, and other non-federal loans, these reforms would give students a suite of robust financing options to finance their higher education without the downsides of unlimited borrowing through the federal program.

Interactions with Federal Student Loans. Policymakers should also consider the potential interactions between ISA arrangements and the federal student loan system, in particular the IBR option for federal loans.

For example, if students have private ISA or state-based PIF options available to them in addition to federal student loans, many students may use both options to finance their education. They may also use different financing tools at different points in their lives but with overlapping repayment periods. As the IBR option becomes more prominent (and potentially central) in the repayment of federal student loans, policymakers should consider how the repayment terms of IBR as currently constituted could interact with ISAs and PIF plans to create unaffordable payments or other unintended consequences.

As mentioned earlier, the effort to move to a simplified and fiscally sustainable IBR system as the primary repayment method has merits in its own right and would benefit students. Nevertheless, it could also do more to manage the interaction between federal student loans and ISA and PIF arrangements. A recent proposal by Representatives Tom Petri (R-WI) and Jared Polis (D-CO)—the ExCEL Act, which would make IBR universal and use the tax withholding system for repayment—is a starting point, but it would require further modifications, including the following:

1. Instead of having all students pay a fixed percentage of income under IBR regardless of how much they borrow, have students pay an incrementally higher percentage of income the more they borrow, again with limits on how much could be borrowed (and a corresponding limit on the percentage of income committed). For example, using hypothetical numbers, assume an individual

uses an ISA for a $20,000 educational expense and agrees to pay 7 percent of income. Assume that at a later point the student takes out a $2,500 federal student loan to cover other educational expenses. If the individual then uses the IBR repayment option, he or she could end up paying between 17 and 22 percent of discretionary income (depending on the IBR option the individual is eligible for), even for this small amount borrowed through a federal loan. Instead, we argue that recognizing that the federal student loan is small, IBR payments should also be small to reflect the amount of debt. In this example, the student might pay 8 percent of discretionary income in total instead of 17 or 22 percent, with 7 percent going to the ISA and 1 percent going to repay the student's federal loan. The student would pay the 7 percent for the entire term of the ISA contract but would only pay the additional 1 percent for as long as it takes the individual to repay the $2,500 borrowed in federal student loans.

This plan would allow a student, for example, to use an ISA for one educational expense but then also borrow federal student loans at some point for other expenses without facing an extremely large increase in the percentage of income committed, even when borrowing a small amount of federal loan dollars. This is also more natural and intuitive because it means that people commit more of their postgraduation income to student loan repayment the more they borrow, which is how other financial products work, and it provides helpful incentives for students to consider how much they are borrowing.

Consider another hypothetical example. A student takes out a PIF contract through the state of Oregon to cover tuition and fees, committing 5 percent of her income, and then borrows $5,000 from the federal student loan system to cover other related expenses, committing an additional 2 percent of income. This student would pay 7 percent of income in total. Five percent would go to the state of Oregon every year, and 2 percent would be used for income-based repayment of the student's federal loans. If she took out more than $5,000, the percentage of her income spent on repayment would increase.

2. Policymakers should consider making the repayment framework within the Petri-Polis plan, which uses the employer withholding system, available for ISAs and PIF arrangements. In return, ISA investors or the state sponsoring the PIF plan can pay a fee. This would allow for a much simpler interaction between these various financing arrangements and would provide a single way for students to repay their educational investments. It would also reduce servicing costs significantly, provide a single process for interfacing with the employer withholding system, and allow the student and the federal government to manage the program more simply. In the PIF example we provide, the state of Oregon would pay a fee to the federal government for every contract serviced, and the Department of Education would simply transfer the 5 percent collected on behalf of Oregon to the state each year. The situation would be similar with ISAs.

3. The repayment obligation for ISAs, PIF arrangements, and the IBR option for federal student loans should be based on the individual's income, not full joint income, in the case of married individuals who file jointly. One way to do this would be to use the individual's earnings plus half of any joint income to determine the individual's obligation when married and filing jointly.

   If these changes are not made and the IBR repayment formula continues to be based on full joint income for married individuals filing jointly, then there may be many circumstances where a couple, one of whom is repaying a federal loan through IBR and the other is paying an ISA, could end up paying a significant and unaffordable percentage of their income. This acts as a significant marriage penalty and could place a severe burden on that household. Using the earlier example, consider a situation where an individual with a federal student loan being repaid through IBR marries an individual with an ISA or PIF contract

that requires 7 percent of income. If the couple chooses to file jointly, they could end up paying 17 to 22 percent of income, depending on circumstances, if they have to pay their IBR obligation on the basis of joint income and then have to pay an ISA or PIF obligation on top of that.

Basing the obligation of these instruments on individual income is far simpler, is consistent with the notion that these are investments in an individual's human capital, and avoids the possibility of placing severe repayment burdens on people who choose to marry. It is also not without precedent: the three countries with the most developed income-contingent student loan systems—Australia, New Zealand, and Great Britain—all define the obligation for their loans in terms of individual income.

Data. Policymakers should foster efforts to collect data about the labor market results of graduates from different institutions and fields of study and disseminate those data among students, parents, and the public in general, and without infringing on student privacy. Markets function much more effectively with good data, and right now there is a dearth of good data available on outcomes for higher education institutions. Policymakers should start by repealing the federal ban on the collection of student unit record data and considering policy proposals that call for the collection and dissemination of such data (for example, the Student Right to Know Before You Go Act introduced by Senators Ron Wyden (D-OR) and Marco Rubio (R-FL)).

Conclusion

Traditional student loans create almost as many problems as they solve in financing higher education. Without government intervention, private lenders will not supply enough credit, even to students with good prospects. The federal student loan system was created decades ago as an attempt to address this market failure, and because federal loans are available with essentially no underwriting criteria, students of all backgrounds have access to some of the credit they need to go to school. More recently, programs such as income-based repayment provide students with strong protections against the downside risk of investing in higher education.

Nonetheless, federal student loans help undergraduate students only up to the Stafford loan limits, leaving many students with just private loans or Parent PLUS loans above those limits, both of which can lead to overborrowing and allow poor-performing programs to survive.

Therefore, students need access to additional financing tools—tools that overcome the underlying market failures associated with traditional student loans while increasing the information they need about the quality and likelihood of economic success offered by different programs—that they can effectively pair with federal student loans to meet their higher education financing needs. In light of this need, policymakers should take the steps outlined in this paper to facilitate the growth of ISAs and state-based PIF plans as new innovative financing options for students.[26]

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Notes

1. Rohit Chopra, "Student Loan Debt Swells, Federal Loans Now Top a Trillion," Consumer Financial Protection Bureau, July 17, 2013, www.consumerfinance.gov/newsroom/student-debt-swells-federal-loans-now-top-a-trillion/.

2. Emily Dai, "Student Loan Delinquencies Surge," Federal Reserve Bank of St. Louis, spring 2013, www.stlouisfed.org/publications/itv/articles/?id=2348.

3. Federal Reserve Bank of New York, "Quarterly Report on Household Debt and Credit," November, 2013, www.newyorkfed.org/householdcredit/2013-Q3/HHDC_2013Q3.pdf.

4. Rohit Chopra, "A Closer Look at the Trillion," Consumer Financial Protection Bureau (blog), August 5, 2013, www.consumerfinance.gov/blog/a-closer-look-at-the-trillion/.

5. Jaison Abel, Richard Deitz, and Yaqin Su, "Are Recent College Graduates Finding Good Jobs?" *Current Issues in Economics and Finance* 20, no. 1 (2014): 1–8, www.newyorkfed.org/research/current_issues/ci20-1.pdf.

6. We have also referred to ISAs as Human Capital Contracts (HCCs) in other writings.

7. John H. Pryor et al., *The American Freshman: National Norms Fall 2012* (Los Angeles: Higher Education Research Institute, 2012), www.heri.ucla.edu/monographs/theamericanfreshman2012.pdf.

8. This is appropriate because most students also benefit personally from their education, primarily through an expected increase in their future earnings.

9. Better market data would allow a rough estimate, hence one of the policy recommendations we make here. But even then, significant uncertainty will remain regarding the value of college for a particular student.

10. It is true that, until 2010, private-sector loan institutions played a significant role in the delivery of federal student loans through the Federal Family Education Loan Program. Nevertheless, loans made through this program were not truly private loans because private lenders received subsidies as well as a guaranty against default in exchange for making loans where the terms were largely set by the federal government.

11. See Consumer Financial Protection Bureau, *Private Student Loans*, http://files.consumerfinance.gov/f/201207_cfpb_Reports_Private-Student-Loans.pdf, pp. 9 and 26.

12. Bruce Johnstone offers a broad description of several proposals discussed by Congress in the 1960s in his book *New Patterns for College Lending: Income Contingent Loans* (New York: Columbia University Press, 1972). Most of them involved income-contingent loans and a tax that students would have to pay on graduation.

13. The idea shows up as a footnote in Milton Friedman and Simon Kuznets, *Income from Independent Professional Practice* (Cambridge, MA: National Bureau of Economic Research, 1945). Friedman later explored it more fully in "The Role of Government in Education," later reprinted in Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962).

14. For dependent undergraduate students, the annual borrowing limit is $5,500 in the first year, $6,500 in the second year, and $7,500 in other years, with an aggregate limit of $31,000.

15. For more information, see Rachel Fishman, "The Parent Trap," Higher Ed Watch, http://higheredwatch.newamerica.net/publications/policy/the_parent_trap.

16. See Ben Miller and Alex Holt, "The Scariest Student Loan Figure is $14,500," Higher Ed Watch, http://higheredwatch.newamerica.net/blogposts/2013/debt_dollars_need_context-89338.

17. Jason Delisle and Alex Holt, "Safety Net or Windfall: Examining Changes to Income-based Repayment for Federal Student Loans," New America Foundation, October 2012, http://edmoney.newamerica.net/sites/newamerica.net/files/policydocs/NAF_Income_Based_Repayment.pdf.

18. In more technical terms, ISAs satisfy a concept of dynamic equity rather than one of static equity. Needs-based subsidies correct an inequitable situation by considering a student's situation when that individual applies for the subsidy. A better policy aims to correct an inequitable situation throughout a student's life. For a more elaborate discussion of static equity and dynamic equity, see Hessel Oosterbeek, "Innovative Ways to Finance Education and Their Relation to Lifelong Learning," *Education Economics* 9, no. 3 (1998): 219–51. Also note that depending on the taxation treatment of ISAs, students would not face a tax burden as they would with an IBR.

19. Alisa Cunningham and Deborah Santiago, "Student Aversion to Borrowing: Who Borrows and Who Doesn't," Institute for Higher Education Policy, December 2008, www.ihep.org/assets/files/publications/s-z/studentaversiontoborrowing.pdf.

20. The fact that Claire can commit a lower percentage of her income to attend Good Institute, even though its tuition is higher, reveals that Claire can expect higher future earnings with a degree from Good Institute rather than with a degree from Mediocre Institute.

21. Pave, Upstart, and 13th Avenue (mentioned later) are organizations offering ISAs in the United States. Lumni offers ISAs in several Latin American countries, and has financed students in the US. See www.pave.com, www.upstart.com, www.13thavenuefunding.org, and www.lumni.net.

22. For example, Social Finance (or SoFi) has tapped into alumni networks to provide privately financed student loans. Alumni networks can be similarly tapped to provide funding via ISAs.

23. Oregon's PIF is an ISA for students attending Oregon's public universities funded by the state. In the original proposal, however, Oregon would not attempt to measure the value of attending different programs because it plans to collect the same percentage of income from everyone. For more details, see Douglas Belkin, "Oregon Explores Novel Way to Fund College," *Wall Street Journal*, July 3, 2013, http://online.wsj.com/news/articles/SB10001424127887324251504578582101593420808. For another view of Oregon's PIF, see http://hceoblogs.wordpress.com/2013/07/30/expert-opinion-professor-miguel-palacios-on-oregons-pay-it-forward-tuition-plan/.

24. For more information, see John Burbank, "Pay It Forward: Debt-Free Access to Higher Education," Economic Opportunity Institute, October 17, 2013, www.eoionline.org/education/higher-education/pay-it-forward-debt-free-access-to-higher-education-2/.

25. Whenever the recipient graduate has any remaining obligations to the ISA provider (for example, a 10-year repayment period), the ISA provider's return is aligned with the recipient's return. For example, if the recipient earns according to expectation for eight years, but due to a change in circumstances, earns very little the last two, the provider likely loses all profit from the deal. The provider and recipient bear the risk together, and win or lose (on earnings or profit) together.

26. For additional discussion on this topic, see Miguel Palacios Lleras, *Investing in Human Capital: A Capital Markets Approach to Student Funding* (Boston: Cambridge University Press, 2004).