From Income-based Repayment Plans to an Income-based Loan System

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Executive Summary and Recommendations

This paper argues for a more comprehensive, income-based loan system than exists now – one that promotes not only access and completion, but also choices of colleges and programs that will enable students to repay their loans without financial hardship. In this system, student loan decisions and policies are tied to expected or actual income throughout the loan cycle – from student guidance and loan origination to loan management in college and final repayment after college. At the front end of this cycle, the paper recommends: (1) a new generation of guidance systems based on choice architecture, and (2) risk-based loan terms, including loan caps, interest rates, and insurance requirements that nudge students toward lower-risk and higher-value investments at manageable loan levels. Once these students are in a college and program, the paper also recommends nudging them to stay on track by replacing today's Satisfactory Academic Progress (SAP) policies with a feedback system that takes into account the requirements of success in the chosen program and career. At the back end of the loan cycle, the paper calls for a universal, income-based repayment plan with a new type of forgiveness provision for financial losses due to systemic risks beyond the control of institutions and students. The paper also suggests a way to ensure that educational institutions share some of the risk that student loans involve, and recommends operating the federal loan portfolio as an unsubsidized loan system, with existing subsidies transferred to grant programs that are better targeted to the neediest students. The paper concludes by recommending a risk-management data infrastructure to support the proposed loan system.

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Only about a quarter of students who take out federal student loans take the kind that allows income-contingent repayment. The rest take conventional loans that require fixed payments, typically for ten years. In view of the difficulties that many students have launching careers and making monthly payments in the early years, several experts have proposed making all federal student loans income-contingent. Income-contingent loans solve the problems that flow from the rigidity of fixed repayment schedules, and reduce loan delinquency and default rates. They also reduce the costs of collecting and managing student debt.

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However, income-contingent repayment is not a silver bullet. It does not fully address problems of high debt-to-income ratios– problems that arise when students borrow substantially more than manageable with the incomes typically earned by graduates of their programs. Income-contingent repayment is also problematic for managing the "systemic" risks that college graduates face, that is the risks of major economic downturns and structural shifts in the labor market. High debt-to-income ratios and systemic risks represent especially significant challenges for today's students, because they face rising tuition costs, declining real earnings for graduates with only a bachelor's degree, and increasing credentialing requirements. Many of them will need to borrow for graduate school, and some will want to obtain additional credentials

over the course of their careers to remain competitive in the labor market. They may not be able to, however, if they are carrying high debt loads well beyond their first credential, with or without income-contingent protections.

Income-contingent repayment systems also do not fully address the problems facing older, "post-traditional" students, including dislocated workers. Slightly over a third of all student loans are owed by borrowers who are 40 or older, and the average outstanding loan balance for those aged 40-49 was, in 2011, $26,000.[1] Older students are often taking bigger gambles to obtain new skills, face shorter repayment periods before retirement, and have different financial tradeoffs in paying loans or saving more for retirement. In addition, income-contingent repayment plans also risk discouraging additional investments in education, even though such investments often yield high payoffs. Finally, income-contingent repayment plans, depending on their terms, run the risk of significant financial losses due to loan forgiveness. Such losses would require increased government subsidies or raising interest rates on all loans.

The problems this paper addresses, however, go well beyond the weaknesses of income-contingent repayment plans. They include the failure of all the existing federal student loan programs to realize their potential to help students achieve their educational goals at a reasonable cost. In particular, today's system fails to help students think about their investments in postsecondary education in terms of economic value and risk management.

To address these problems, the paper argues for a more comprehensive, income-based loan system. By comprehensive, we mean a system that ties student loan decisions to expected or actual income *throughout the loan cycle* – from student guidance and loan origination to loan management while in college and final repayment after college. At the "front-end" of the process, this system uses "expected income" – a projection of likely future earnings given the student's institution, major and past performance – to ensure that students do not borrow more than they will be able to repay without financial hardship. Tying loans to expected income should also incent institutions to limit program tuition such that, if debt-financed, the typical graduate will be able to repay the loan without hardship.

During college, this system maintains the link to expected income by basing "satisfactory academic progress" on predictors of the student success needed to complete programs, transition to employment, and achieve expected incomes. At the "back-end," it uses actual income to adjust loan payments, in much the way current and proposed income-contingent repayment systems do, except that forgiveness would apply only to that portion of a student's loan that reflects "systemic" risk factors — developments beyond the control of students or institutions, such as economic downturns and major shifts in the demand for certain skills.

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The paper discusses how this system would promote not only access and completion, but also economic advancement, economic value, affordability, and improved risk management. It also explores how the proposed system could operate as a true loan program — one that achieves these public goals without subsidies, so that more government funding can flow to means-tested grant programs such as Pell Grants.

More generally, the paper advances the following argument. First, if students had better information about the alternative returns that different institutions and programs offer them, *and* they had financial incentives to act on that information, they and the public would be better off. The students would be better off because they would be more likely to achieve their educational goals and less likely to have difficulty repaying their loans. The public would be better off because the student loan portfolio would not need subsidies, more money would be available for grants to low-income students, and the student loan system would encourage institutional efficiency and price restraint. Second, the proposed loan system — with its expanded goals and income-based approach to all stages of the loan cycle — provides such information and incentives.[2]

Student Loan Goals

Any proposal for redesigning the federal student loan system should start with a clear statement of the goals involved. We propose three goals that underlie our subsequent recommendations for redesigning the system.

1. Access, Completion, and Economic Advancement

Since the 1960's, federal student financial aid has focused on expanding access to postsecondary education, including access for students facing financial barriers to attending top-flight institutions. Grant programs addressed the needs of low-income students, while loan programs addressed broader issues of affordability, liquidity, and credit that both low- and middle-income students faced. Underlying these programs was an assumption that higher education "pays off" for the vast majority of students who attend accredited programs and institutions. Student grants and loans were viewed as ways to finance up-front expenses whose value would be realized only gradually over many years. If there were a perceived problem, it was not one of value, but of financing the growing investments needed to expand access and facilitate social mobility in the face of rising college tuitions, stagnant family incomes, and increasing economic inequality.[3]

Strategies for promoting access assume that once admitted to a college or university, most students will graduate. However, only 55 percent of students at two- and four-year institutions graduate in three or six years. Moreover, many non-completers leave with large debts.[4] Because high rates of non-completion undermine efforts to increase the proportion of adult Americans with postsecondary credentials — and the skills they imply — there has been much discussion of how to improve completion rates, but little corresponding change in student loan programs. Thus, we favor extending the traditional goal of access to access *and* completion.

Higher education has long been considered the major avenue for economic advancement and social and economic mobility. However, the impact of higher education on economic mobility is weakening, as more students participate in postsecondary education and high-income students attend more selective institutions that yield higher returns compared to the schools attended by low-income students. One form this problem takes is "under-matching," the all-too-common practice of students choosing institutions that charge lower prices but offer lower value, even though they could gain admission to more selective institutions. Conversely, some students pay high prices to attend institutions — often for-profit schools or tuition-dependent private non-profit schools —

whose graduates achieve relatively high earnings, but still end up realizing lower value than they could have gotten elsewhere.

The mobility problem is reinforced by "loan aversion" among low-income families. Students from low-income backgrounds find it especially hard to obtain good information about value, unlike price. To the extent that they attend low-value institutions while higher-income youth attend higher-value ones, higher education contributes nothing to relative mobility. Thus, we favor expanding the goal of access and completion to access, completion and economic advancement.

2. Economic Value, Affordability and Risk Management

For students going deeply into debt to finance their education, the critical question is not just whether they graduate, but whether they earn enough after graduation to pay off their loans and manage such downside risks as economic recessions and structural shifts in the returns to their education. We do not assume that all students seek to maximize their future earnings, much less should do so, but we believe that they and taxpayers share a goal of student borrowers at least breaking even on the debt-financed portion of their investment. That requires that students graduate with the kinds of knowledge, skills and credentials needed to earn enough money to repay their loans without personal hardship and without making such unwise trade-offs as not saving for retirement.

These concerns lead us to recommend that the goals of the federal student loan system include promoting economic value, affordability and risk management. As defined by Brad Hershbein, economic value is achieved when the "total discounted stream of benefits (higher earnings over a defined repayment period) is greater than the total stream of costs including tuition and fees, other costs of attendance and foregone earnings." [5] In contrast, affordability addresses whether students can finance the costs "at a specific time, particularly in early career when earnings tend to be low, would require giving up the consumption of other goods and services that the individual is unwilling to forgo." [5] These could be goods and services they value (e.g., healthcare, housing) or forgoing other critical investments (e.g., further education, retirement). According to these two definitions, some investments can provide economic value but not be affordable, while others can be affordable but not provide economic value. Risks, defined as uncertainties with significant economic consequences, can be managed several ways, including through income-based repayment plans and income insurance.

The economic value, affordability, and risk management challenges of any educational investment vary significantly by student. Prudent borrowing requires knowing the likelihood that people "like me"—people with similar goals, work experience, educational backgrounds and abilities, opportunity costs and region of work and residence—will graduate from a specific program at a specific institution and subsequently earn enough to exceed the full costs and be affordable "to me."

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Prudent borrowing also requires knowing the tradeoffs that students are willing and able to make to finance their educations. Knowing these is critical for the large and growing numbers of "post-traditional" students who face special challenges to realizing a full return on their investment, including less time to reap the rewards. Thus we favor a full "life cycle" approach to guiding student investments, realizing that older students will face different tradeoffs for retirement savings and healthcare costs than traditional students. Finally, prudent borrowing requires an analysis of the personal risks that must be managed, especially one's particular vulnerability to economic downturns and structural shifts in labor markets.

Some proponents of income-based repayment deny there is an economic value or debt crisis in the student loan system, and argue that almost all risks can be managed through income-contingent repayment. One reason is that they

compare average loan levels to the average expected lifetime earnings of college graduates, and emphasize that a small percent of undergraduates borrow more than $50,000.[6] For them, college is a sound investment and likely will remain so for almost all students into the foreseeable future, even in the face of rising loan amounts. Consequently, loan affordability problems are not a matter of debt size relative to future earnings but rather of the timing and rigidity of the conventional loan's repayment schedule, especially in the early years. And these problems, they argue, can be solved by making all repayment plans income-contingent.

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We agree that the repayment affordability problem can be eased through use of income-based repayment. However, we doubt it can be eliminated. A major reason is that aggregate figures on average lifetime earnings mask wide variations by school, major, and age at the time of graduation.[7] In the words of economists Christopher Avery and Sarah Turner, "from a financial perspective, enrolling in college is equivalent to signing up for a lottery with large expected gains…but also a lottery with significant probabilities of both larger positive, and smaller or even negative, returns."[8] These wide variations can also be seen in state studies on the distribution of loan burdens as measured by debt-to-income ratios and the relatively high ratios for students enrolled in humanities and social science programs. These studies also suggest that students with high levels of debt are delaying entry into graduate programs.[9]

In addition, there is growing evidence of stagnation and decline in the earnings of college graduates in general and especially of those with B.A. degrees and lower.[10] How can

that be, given that the well-advertised "premium" for attending college remains high?[11] The answer is that the earnings of high school graduates have been declining. As one recent report notes, "Because of declining earnings among high school graduates, pursuing a BA remains a good investment (on average) despite rising tuition, but the absence of growth in college graduates' earnings, combined with rising tuition, means the investment carries increased risk of financial distress."[12] This risk, combined with the major earnings bump that a post-graduate degree provides, probably explains the recent surge in post-graduate education, especially among the graduates of liberal arts programs.

In view of all this, we recommend that it be a formal goal of federal student loan policy to enhance the ability of borrowers to obtain good value from their loan-financed investments in higher education, to promote affordable loans, and to enable students, institutions, and lenders to better manage the risks they face. Achieving this goal will require a more comprehensive income-based system that 1) aligns the loan terms at the "front end" of the loan process with expected future income, and 2) transitions that alignment to one with actual income at the "back end," through an income-contingent repayment scheme that limits loan forgiveness due to "systemic" adjustments.

3. Portfolio Self-Sufficiency

There is no consensus on whether the federal student loan system should be subsidized by the taxpayer, break even, or generate a surplus — even enough surplus to offset the growing cost of student grants. There is also no consensus on how the performance of the loan system, including government subsidies, should be reported in the federal budget.[13] We think the student loan system should operate as a separate, public-private entity that has the flexibility to set loan terms and manage investment risks without government subsidy and without any expectation for making a "profit." The governing principle should be to set loan terms and manage the loan portfolio in ways that achieve the first two goals above and to manage portfolio risk without relying on government subsidies or bailouts, taking into account the need to cover losses associated with forgiving repayment shortfalls due to systemic risk adjustment. Similarly, interest rates should reflect the federal government's borrowing costs, the costs of administering the loan program, and the repayment risks in the student loan portfolio.

Defining Student Eligibility and Coverage

Debates about income-contingent loan systems include debates about the student populations that should be eligible for and covered by them. Most current and proposed

models, including international ones, differ in two important ways. The first concerns whether the system should be "universal." That is, should it cover all students, regardless of income or other characteristics, and should it apply to all the types of institutions and programs covered under the existing student aid system, including undergraduate, graduate and professional programs? The second way concerns whether there should be different income-contingent programs within the larger system for different segments of students and institutions, with different features reflecting different goals and risk factors. This model has been adopted by Australia and is evident in the current mix of income-contingent programs in the United States. We favor a single, comprehensive income-based system that is universal without segmentation, with the same design features applying to all students across all types of institutions and programs now eligible for federal student aid, including those in graduate and professional programs.

Income-Contingent Repayment Systems

How can the goals we have recommended be best achieved in a system that features universal student eligibility without government subsidies? One promising way is a more comprehensive income-based loan system that builds on the strengths of income-contingent repayment models but addresses their weaknesses, and that reflects the experiences of other countries.

Income-contingent loan repayment systems, as they have been implemented or proposed in the United States, focus mainly on the traditional goals of access and participation. They do this by making rising tuition and loan amounts manageable and by reducing the risk of default. They do that in turn by making repayment contingent on actual "discretionary" income over an extended repayment period (more than the standard 10 years) and offering forgiveness of any balance under certain conditions. Some models treat the forgiven portion as taxable income; some provide more generous forgiveness provisions for students entering lower-paid public service careers. Models vary also as to whether they recommend or assume the need for government subsidies or profits for offsetting student grants in the federal budget.

Weaknesses of Income-based Repayment Systems
All of these models, however, exhibit one or more of the following weaknesses:

- **Price Escalation and Over-Borrowing**
  Student loan programs may enable and encourage tuition escalation within the American higher education system that, unlike the case in other countries, has few government or market-based mechanisms to limit prices, especially at private institutions. Income-based repayment risks making this problem worse by increasing the willingness of students to over-borrow because they don't fear financial hardship while repaying their loans and may have a portion forgiven.

- **Moral Hazard**
  Generous deferment and forgiveness terms (e.g., low minimum payments, subsidized interest rates, caps on interest accumulation, forbearance provisions) may reduce incentives for students to make informed investment decisions, work hard to complete college and realize returns from their education, and repay their loans as quickly as possible. Widespread use of income-based repayment may increase the debt burden stemming from accrued interest. This likelihood is suggested by evidence that minimum payment provisions in consumer credit cards affect repayment behavior in ways that result in higher interest payments and debt loads.[14]

- **Debt Aversion**
  Income-based repayment systems may not provide sufficient incentives and assurances to low-income students to overcome their aversion to debt financing of higher education. Overcoming such debt aversion will require substantial government subsidies that would do more good if used to expand grant programs — programs that have proven effective at increasing participation by low-income students. Although international research has shown that the implementation of income-contingent loan systems in other countries has not resulted in lower levels of participation among low-income students, the debate continues.[15]

- **Institutional Incentives**
  Income-based repayment may not only shift more risk from students to government, but also from institutions to government, thereby reducing institutional incentives to ensure that students complete programs and earn sufficient income to repay their loans. Income-based repayment may reduce the likelihood of student loan defaults due to insufficient income, and thereby lower institutional default rates. Income-based repayment would relieve the pressure on many institutions now at risk of losing access due to excessive defaults rates, including many that serve high concentrations of low-income students.

- **Government Subsidies**
  Income-based repayment as one option among several in the current federal loan system creates significant adverse selection problems because it encourages students with larger and less manageable loans to choose this option. Making it the only option would reduce these problems but risk requiring higher levels of government subsidy to retain the proposed level of repayment protections (what some have called the insurance effects), especially for high-risk students attending institutions and programs with high loan default rates. Higher subsidies may also be required to ensure repayment protection during major economic downturns and industry- or occupation-specific declines in employment. The distribution of subsidies also may shift from lower- to higher-income students, and thereby reduce public support for federal grants to low-income students.

Lessons from Abroad

Most proposals for income-contingent loan systems in the United States draw heavily from the Australian system and systems it has influenced, especially in New Zealand and the United Kingdom. Johnstone and colleagues[16] provide the most comprehensive framework for understanding the purpose, features, and performance of student loan systems in other countries, and they wisely take into account the context of higher education funding and delivery. Our examination of other countries builds on their insights, and yields the following observations.[17]

- **Price Controls**
  All three countries deliver most of their higher education services through publicly funded and regulated institutions over which the national governments have considerable pricing control. This stands in contrast to the United States, where a larger portion of colleges and universities are private and where regulatory authority is shared by federal and state governments and independent accreditation organizations. Any future expansion of an income-based system in the United States cannot rely on similar price controls, and would begin from a starting point of much higher tuition prices than in other developed countries with such systems. This may require new types of incentives for restraining prices and ensuring affordable loans.

- **Cost Sharing, Variable Tuition and Loan Caps**
  The Australian and New Zealand systems were implemented as part of a cost-sharing strategy that asked students and parents to finance a larger share of the private benefits they were receiving from their higher education, and to pay higher tuition than others if the programs they pursued typically led to higher incomes. The result was the creation of a tiered tuition structure that sets higher tuition and loan caps for programs like medicine and business. By contrast, the United States sets the same loan caps for all students regardless of program, and the proposed income-based repayment models do not change that. Differential loan caps represent a way for income-based loan programs in the United States to shape pricing in the future, but this would require dealing with the differences between the United States and these other countries in how and when students enter specific programs.

- **Debt Aversion and Low-Income Student Participation**
  The Australian and New Zealand systems were designed to expand broad-based participation in higher education with an emphasis on traditional students and higher-level degrees. Other programs promote access by low-income populations through maintenance grants and targeted institutional incentives. International research has found only limited impacts of income-contingent loans on low-income student participation.[18] However, this finding may not be generalizable to the United States because of major differences in the low-income populations, student maintenance supports and social welfare policies that provide other types of assistance.

- **Public Subsidies**
  Australia's income-contingent loan system was implemented as part of a cost-sharing strategy that asked students for the first time to pay a substantial share of the costs of higher education. Consequently, this system retains a strong public subsidy that includes interest subsidies and the assumption that some debt will not be repaid. In addition, current subsidy estimates in Australia and other countries with income-contingent systems do not take into account the subsidies involved in forgiveness because repayment is life-long and the first cohort of students is still in its prime working ages. There is no clear consensus in the United States that an income-based repayment system should be underwritten in ways that entail a significant public subsidy, an issue that will have to be addressed eventually.

Applying Choice Architecture to Loan Systems

Income-based repayment systems in the United States and other countries focus attention on managing financial risks at the "back end" of the loan – during repayment. However, they do not address how to manage risks at the "front-end," during consumer guidance and loan origination. In developing recommendations for managing these risks, we draw heavily from lessons in behavioral economics, especially those regarding the main components of "choice architecture," including frames, anchors, feedback systems and financial incentives.[19]

> **"Behavioral economists have shown that people make different decisions based on how information and options are presented or *framed*."**

Frames

Behavioral economists have shown that people make different decisions based on how information and options are presented or "framed," including the terminology used and whether decisions are presented in gain or loss terms. They note that there are no "neutral" frames of reference when providing information about investment decisions, including those about higher education. Higher-education expenses are currently framed as largely risk-free investments that will pay off for students over their lifetimes. We suggest that higher education investments be framed as one part of financial planning and risk management over the full life-cycle. This is important because today's "post-traditional" students are a diverse lot facing different financial constraints and planning horizons.

This framing should be designed to further the goals of economic value, affordability and risk management described earlier. That requires framing that emphasizes the link to expected future income and the risks to it that must be managed through income-contingent repayment and systemic risk strategies. It also requires taking into account students' different and changing goals and preferences, pathways, market conditions and personal risk profiles. This framing should be designed to promote access as well as economic advancement, by addressing "loan aversion" and focusing attention on "value" rather than "cost".

Anchors

Decision anchors (such as comparison benchmarks) provide critical "rules of thumb" for novice investors, especially when the potential value of investments and their associated risks are difficult to determine.[20] In an income-based loan system that features a life-cycle approach to financial planning, student guidance would provide anchors that maintain students' "line of sight" between their expected financial investments (including loans) and expected future income (including the risks involved in completing their programs and achieving and maintaining that income). These anchors should be designed to emphasize value (expected income relative to cost) rather than cost alone, to offset a short-term focus on costs, and to discourage loan aversion and under-matching. Such value anchors could involve benchmarks for acceptable "debt-to-income" ratios for different stages in the life cycle. Affordability anchors could provide benchmarks for how much students could afford to pay each month at different stages of their life cycle, just as with mortgage guidelines.

These anchors would offer context for interpreting consumer information on expected incomes and costs for different institutions and programs and for understanding the implications for value and affordability. Presentations of such information should emphasize the reality of financial risks that must be managed. They could do this by showing the wide variation and uncertainty in estimated value within and across programs and institutions. They also should show the probability of losses that could result in unmanageable debts and loan defaults—what some have called "tail risks." This additional information -- beyond "central tendency" measures such as means and medians – would help offset the tendency, especially pronounced in inexperienced investors, to be overconfident and to under-estimate the likelihood of undesired outcomes.

Finally, students should be given more personalized projections of expected income and costs based on their own risk factors. This would require two types of risk indexes (summary indicators combining multiple risk factors) that could be used to estimate program completion and future income from different institutions and programs. The first is a personalized student readiness index that summarizes the personal risks students face when investing in higher education, given their risk attributes, including academic readiness, level of expected engagement (e.g., working part time), and other factors impacting completion and transition to employment.

The second is a composite index that captures the *combined* risks involved when students with certain student readiness

characteristics choose among institutions and programs whose graduation rates and employment outcomes vary for students like them.[21] This type of index would be an improvement over the current use of such risk groups as Pell-Grant recipients, which mask very important within-group differences. It would also be an improvement over other approaches to risk indexes, because risk is viewed as a combination of student characteristics and the outcomes achieved by specific institutions and programs for students with those characteristics.

The use of these economic value and affordability anchors in combination with comparative information on institutions and programs related to these benchmarks and personalized for students through risk indexes, would provide the basis for far better consumer guidance than now available. We discuss this later under consumer guidance in income-based loan systems.

Feedback Mechanisms

Feedback and self-control mechanisms are especially helpful when an investment's returns become clear only far in the future, and when the investor's behavior in the meantime will affect those returns. This is certainly the case in higher education, given the importance of student engagement, course grades and high-quality internships. Thus, an effective choice architecture will include continual feedback that helps students manage their behavior and risks. For example, simple, online dashboards and icons could be used to communicate whether students are "on-track" or "off-track", given changing risk conditions and personalized risk profiles. All this suggests a major redesign of current Satisfactory Academic Progress requirements and other feedback and control mechanisms in student financing programs, an issue we address below.

Incentives

The federal government has made great strides in presenting students with comparable information on institutions and programs, including tuition and other costs of attendance, although comparative earnings data remains unavailable. Yet, as Beckie Supiano notes in the Jan. 27, 2014 issue of the Chronicle of Higher Education, students often ignore such information, especially if it concerns long-term outcomes, like graduation rates – in contrast to price. In short, a choice architecture designed to assist students invest wisely in – and borrow prudently for – higher education should include financial incentives that work in concert with an improved benchmarking and feedback system. By using choice architecture that includes financial incentives, the federal government could do much more to help students make

prudent decisions – ones that focus less on cost and more on value. They could also help them manage the entire loan process, from origination to final repayment.

Recommendations for a Comprehensive Income-based Loan System

To address the goals discussed earlier, we propose a comprehensive income-based loan system that employs choice architecture to address the needs of all students, including "post-traditional" ones. This system includes an income-contingent repayment scheme without forgiveness, but with systemic risk adjustments to compensate for economic downturns and shifts in labor market demand. Most importantly, it ties student loan decisions to expected or actual income throughout the loan cycle—from student guidance and loan origination to final repayment after college, as depicted in Figure 1. This proposed system assumes that students may move through this loan cycle several times before retirement.

Figure 1: Income-based System Loan Cycle
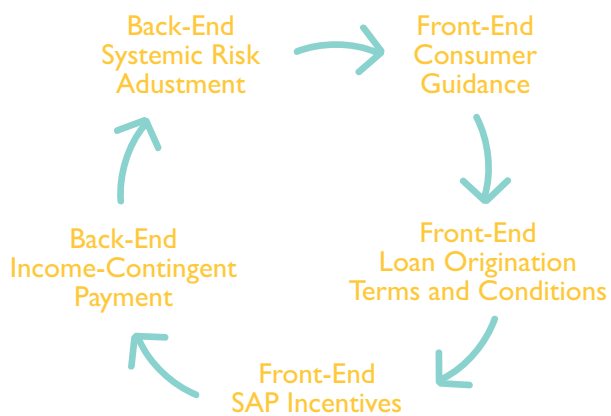
Consumer Guidance

Choice architecture involving personalized risk indexes as well as decision frames and anchors should be incorporated into all types of career and education guidance systems. With regard to student loan systems, it should inform the design of the loan application process such that all students see how their investments relate to economic value and affordability benchmarks, and receive clear warnings when their choices involve ill-advised risks. We also suggest that all students, especially those considering high-risk loans, be given information on alternative institutions and programs that offer better value for students like them. Such information

would help offset loan avoidance in cases where lower prices are associated with lower value, and assist student borrowers to obtain better loan terms. There would have to be a national system for collecting and sharing the relevant information, something we discuss briefly at the end of the paper.

Originating Loan Terms

Choice architecture includes salient and timely financial incentives to affect investment decisions. We propose three types of financial incentives—loan caps, interest rates, and insurance requirements – that would vary according to the risk indexes described above.

Currently, federal loan terms, established through legislation and regulation, set arbitrary caps on the amounts all students may borrow—caps that must be increased periodically as tuition and related costs rise. To shift the focus to value while protecting against excessive debt, we recommend following the examples of Australia and New Zealand by making the loan cap variable based on expected future income and related risks in achieving that income.

Although the Australian system has served as a model for income-contingent repayment plans in the United States, its "front-end," has attracted far less attention. Examination of its originating loan terms reveals that loan amounts are based in good part on the expected incomes associated with graduation from different categories or "bands" of programs. To be sure, it would be hard to implement such a tiered system in the United States. One problem is the fixed and arbitrary thresholds represented by the boundaries of the four bands. Another is that different institutions and programs provide widely variable value for different types of students. However, we could improve upon this approach.

One obvious way is to allow loan amounts and terms to vary according to the earnings projected for specific students in specific programs, that is, to employ an underwriting approach of the kind used with home mortgages. This variable approach could be implemented gradually. For example, variable loan caps could be phased in and pegged to expected earnings of students in specific programs at institutions adjusted by combined risk indexes. These variable caps could be built on top of guaranteed caps for all students that insure a minimum loan amount reflecting minimum expected earnings for all students for different levels of education. Skeptics worry that such an approach will deter some students from pursuing degrees in relatively low-paying but socially vital occupations like teaching and social work. These are valid concerns, but ones we believe can be addressed by encouraging institutions to align pricing with

value, especially when the programs cost less to operate because of lower faculty salaries and related costs.[22] Loan caps that vary with expected earnings also make sense in the context of the growing but little-noticed practice of institutions charging higher tuition or fees for their high-demand and more costly—but also more remunerative—programs.[23]

We think variable loan caps based on risk indexes would have a number of benefits for promoting economic advancement. Variable, risk-based caps would enable poor but talented students to borrow and invest more than current caps allow without driving them into the private loan market or leading them to settle for a less selective institution than they could otherwise attend. Similarly, the availability of lower-interest loans for attending higher-value schools and programs would discourage under-matching and thus facilitate social mobility.

> **"Currently, federal loan terms, established through legislation and regulation, set arbitrary caps on the amounts all students may borrow—caps that must be increased periodically as tuition and related costs rise."**

In short, we favor variable risk-based loan caps and loan pricing, including interest rates, all pegged to the expected ability of students to repay their loans. Importantly, however, the determination of repayment ability should be based on the *combined* risks for specific students enrolling in specific programs at specific institutions, rather than on the risk profiles of the students alone. This approach for setting interest rates would reward students for working hard to become college-ready (as evidenced in their student readiness index scores) by giving them more choices at lower interest rates because they would likely complete programs and earn expected incomes at a wide variety of institutions.

This approach also would "nudge" students who are less college-ready to choose institutions and programs where they have better chances of completing programs and earning the expected income. They would pay higher interest rates only if they chose to attend institutions with records of poor performance with students like them. Moreover, we would cap interest rates in

situations where students lacked realistic choice about what institution to attend (e.g., for proximity reasons) and the available institutions rate badly on performance measures.

In short, we believe that variable loan caps and terms have the potential to help many students make more prudent decisions about borrowing and investing in higher education. If true, they should obtain better loan terms than they would otherwise or could now. However, as an additional consumer safeguard, we also favor exploring some type of upper limit on interest payments relative to loan principal. Doing so could ensure that students never face interest payments that exceed their loan principals during the repayment period, as recommended in other income-based repayment system proposals.[24]

> **"We believe that variable loan caps and terms have the potential to help many students make more prudent decisions about borrowing and investing in higher education."**

Any such risk-based loan limits and pricing could be complemented by loan insurance.[25] Insurance would allow students with high-risk profiles to assume larger risks with higher potential returns while working to improve their risk profiles over time through demonstrated academic performance. This could work the way mortgage insurance does for qualified borrowers who do not have the up-front capital or credit rating to purchase their first choice in housing but have realistic plans to improve their financial situation and are willing to pay a small premium to take those risks. As discussed later, some students with qualified scores on composite risk indexes may choose to take out additional voluntary insurance offered for certain occupations and programs that are susceptible to upward and downward swings in demand, similar to what Shiller has proposed for income-based loan systems.[26]

Managing Loans During College:
Student Incentives and SAP

Recently, the financial services industry has harnessed the power of behavioral economics and "big data" analytics to design financing systems that enable and encourage risk reduction. One example is the move to "performance-based"

underwriting and pricing in auto insurance, where rate adjustments are now based on the behavior of drivers as measured through tracking devices. Another example is using financial incentives in employee healthcare plans to encourage the adoption of healthy lifestyles that reduce healthcare costs. By contrast, federal student loan policy sets fixed interest rates, fees, and loan maximums, with the only performance-based variations being the minimal requirement for maintaining Satisfactory Academic Progress (SAP).

Currently, federal student grant and loan policies provide guidelines for institutionally defined measures of SAP. These guidelines require institutions to set grade standards at a 2.0 GPA or higher, and time standards at no longer than 150 percent of the program's normal length. They also require that institutions inform students about when their progress will be evaluated against these standards and when they will be given "financial aid warnings" and put on probation. Our review of a representative cross-section of colleges and universities finds that the vast majority of institutions have SAP standards that are no higher than these federally mandated minimums.[27] The federal guidelines do not address whether students are at risk of not completing their program or of exceeding their federal loan limit at the pace they are progressing. They also say nothing about whether students are accumulating debt at a rate that will likely exceed guidelines or benchmarks for expected income-to-loan ratios.

Under our proposed system, institutions would be required to provide students feedback not just on their continued eligibility for student loans but on whether they are "on-track" for completing their programs and achieving expected incomes based on their performance to date. This feedback should include whether students are borrowing at rates that will lead to exceeding federal loan limits or benchmarks for expected income-to-loan ratios. This could be done by integrating SAP guidelines into more comprehensive student retention systems that use composite risk indexes to provide feedback to students and their counselors on whether they are at high, moderate or low-risk regarding program completion and achievement of acceptable income-to-loan ratios. In designing such a system, policymakers and institutions could draw on research that identifies predictors of completion and income, including GPA but not demographic or family background characteristics.[28] They could also draw on lessons from student retention services that focus on key behavioral indicators of student performance.[29]

As described earlier, feedback systems get better results when combined with salient and timely financial incentives. Some recent proposals argue that student loans should

provide stronger incentives for students to prepare well for postsecondary education and work hard in to get the most out of college. Others caution that students should have multiple opportunities to show they are college ready and have what it takes to complete college and pay back their loans—in a sense, to improve their student risk profiles.

These competing perspectives are best addressed by providing a more dynamic, performance-based loan system that allows students to constantly improve their loan terms and conditions, including removing any need for insurance, based on how well they do once enrolled. In short, we favor allowing students to improve their loan rates and conditions when they perform at high levels according to clearly defined criteria that are predictive of completion and future earnings for graduates of that institution and program. This would encourage students to work harder, which in turn would improve their educational outcomes and future earnings.[30]

Income-Contingent Repayment

As discussed earlier, income-contingent repayment systems take many forms. Some of the most promising recommendations have been developed by Dynarski and Kreisman (2013) and the New America Foundation (2013).[31] We build on many of their recommendations but with some key differences, especially on loan terms and forgiveness

- **Coverage and Eligibility**
  The universal and comprehensive loan system we are proposing is intended to be the only federal loan program available to students, regardless of income, type of institution, or whether the program is a graduate one. As described below, this would be an unsubsidized system with all current government subsidies moved to an expanded Pell Grant program.[32] This would greatly simplify the loan application and management processes, and allow closer alignment between federal loan and grant systems, including an expanded Pell Grant program.

- **Originating Loan Eligibility and Terms**
  All students should have access to unsubsidized federal loans at interest rates based on the costs to the government of borrowing the loan funds and administering the loans and on the risk of the student defaulting. We agree that loan rates should rise and fall in line with shifts in the government's borrowing costs. However, instead of standardized loan terms for all students regardless of risk differences, we favor variable loan terms, including risk-reflecting caps, interest rates,

and insurance requirements. We strongly doubt that an unsubsidized student loan system can be sustained without variable terms, an issue we discuss in greater detail under portfolio loan management below.

- **Discretionary Income Thresholds and Percent of Income Paid**
  We support proposals that set discretionary income thresholds benchmarked to the federal poverty level so that students do not begin making payment until their incomes exceed this threshold. Leading international models and consumer finance research support more progressive rate setting above the threshold, starting with a low percentage of income and rising progressively for those with higher incomes. This purpose is to counter the effects of low minimum payments for consumers who can afford to pay more without financial hardship. We agree with the progressive approach to setting repayment rates beyond the minimum discretionary income threshold.

- **Interest Rates and Payment Ceilings**
  We have proposed the design of an income-based system that is underwritten as a true loan program without subsidies. This will be difficult to do without charging real interest rates. Also, paying interest provides some incentive for students to repay loans faster, which enables them to make additional investments throughout their working lives. The only issue is whether these interest charges should be capped. We think that capping interest accumulation is better than forgiving loans and could provide a needed consumer safeguard in an income-based loan system.

- **Incentives for Additional and Early Payments**
  The Australian experiment with incentives for early repayment showed regressive impacts, with benefits going to higher income students who had the least need for loans from the beginning. We do not see any rationale for incentives for additional payments over and above the reduction of interest charges that students accrue over the life of the loan.

- **Repayment Time Periods**
  Most proposals argue that repayment time periods should be increased to 20-25 years, after which any forgiveness provisions would be applicable. We agree, but recommend exploration of unlimited repayment time periods consistent with our proposals on forgiveness.

- **Forgiveness Provisions**

  There is no consensus on forgiveness. Most leading proposals recommend full forgiveness without application of federal taxes on forgiven loan amounts. Others disagree, but propose upper limits on interest charges as a compromise. Some propose forgiveness for employment in public service careers. As discussed below, we are exploring a compromise between full forgiveness and no forgiveness, one that involves adjusting loan amounts during the loan repayment process for the negative impact of economic developments beyond the control of institutions and students. As discussed earlier, we propose other front-end features to address the lower returns for students in public service careers.

- **Subsidies**

  There is no general agreement on subsidies. As discussed earlier, we propose a true loan system without subsidies with all government subsidies shifted to federal grants including an expanded Pell Grant program.

> "Our proposal features loan insurance for all students that would enable forgiving the portion of student loans that prove difficult to repay due to what we call "systemic risk" factors that are beyond the control of students and the institutions they attend."

Systemic Risk Adjustment

One feature of many income-contingent repayment systems is forgiveness of unpaid loan balances after a certain number of years—with the loan system absorbing the losses regardless of cause. Another feature is earlier forgiveness of loans for students doing public service jobs. One problem with such forgiveness is that it creates incentives for students to extend their loan repayment periods and qualify for some loan forgiveness. If many students respond accordingly, the student loan system will be in danger of insolvency, especially if faced with higher-than-expected defaults due to economic

downturns or structural shifts in the demand for college-educated workers. If many students pursue public service careers, that too would put additional strain on the loan system.

This potential strain can be seen in recent estimates by the Consumer Financial Protection Bureau of the number of borrowers who are currently eligible for forgiveness. The Bureau estimates that about 25 percent of the United States workforce is currently working in industries that would make students eligible for forgiveness.[33] The potential losses from forgiveness for public service will likely increase over time because these industries include such growing ones as healthcare and education.

We favor a compromise between systems that do and do not provide forgiveness. Our proposal features loan insurance for all students that would enable forgiving the portion of student loans that prove difficult to repay due to what we call "systemic risk" factors that are beyond the control of students and the institutions they attend.[34] This insurance would be added at the time of loan origination much the way default insurance was added by federal guarantee agencies in the past.

Students also would be able to take out additional loan insurance based on higher than average risks. This would work similarly to what Shiller envisions for adjusting loan terms using indexes that estimate future shortfalls in earnings due to economic downturns and structural shifts in demand for specific skills. For example, the loan system could use indexes to determine what portion of future loans could be forgiven based on the impact of a severe economic downturn that had significant and measurable impacts on similar groups of students attending similar programs and institutions.

Institutional Risk Sharing

Institutions of higher education now share the risks that student loans involve in one main way: they can be ruled ineligible for federal student financial aid, including Pell grants, if they exceed upper limits on student default rates. Historically, this risk was serious only for for-profit institutions with high two-year default rates. However, the new three-year default limits scheduled for implementation in 2014 mean that a far more institutions, including community colleges, will soon face similar risks.[35]

Income-based repayment systems greatly reduce such institutional risks because student defaults decline dramatically in the face of better debt collection mechanisms (e.g., automatic payments through the tax system) and flexible repayment and forgiveness terms. On the other hand, such risk reduction

eliminates the institutional incentives to make sure students are taking out affordable loans, making appropriate progress toward completion and achieving expected levels of earnings.

Therefore, we propose an alternative approach for risk-sharing that holds institutions accountable for minimal performance on the two major drivers of loan repayment: (1) time to credential as measured by on-time completion rates, and (2) the economic value of the credentials they offer relative to tuition and fees as measured by actual income-to-tuition-paid ratios.[36] This approach would avoid the problem that institutions cannot control the size of the loan as long as the loan is under the threshold for total costs of enrollment.[37] However, it would require adjustments of institutional performance based on the students they serve and the programs they offer -- and maybe also the labor markets where they place students. As described below, this will require risk indexes that can be used to adjust institutional and program expectations, especially for those serving the highest-risk students.

These adjustment methods could also be used to provide incentives to institutions that exceed expectations, as recommended in many federal student financial aid reform proposals. They could build on lessons learned from performance management systems used in workforce development to offer both sanctions and incentives based on the participants served and labor market conditions. This work should be informed by research identifying the strengths and weaknesses of these systems and their implications for adjusting performance expectations in higher education.[38]

Loan Portfolio Management: Meeting Goals without Subsidies

Income-based loan systems raise serious questions about underwriting policies, especially regarding loan caps, interest rates, insurance requirements and forgiveness terms involving systemic risk adjustments. The challenges concern how to achieve the three goals proposed earlier, including how to price loans in a way that maintains a balanced loan portfolio. They also raise questions about reporting policy. We recommend public reporting of portfolio performance regarding all the system's goals. That in turn will foster better loan portfolio risk management.[39] Finally, we think there should be more attention given to how governments calculate subsidies and report the performance of unsubsidized loan systems to the public and financial markets. There is growing debate about this in the United States[40] and other countries with income-contingent repayment systems.

Maintaining a universal, unsubsidized federal loan system that covers both low- and high-risk students should not be difficult in the short-term because of the federal government's ability to borrow at exceptionally low rates. In the long run, however, these advantages may well diminish if the loan system applies standardized loan terms to all students and if rising costs of loan forgiveness result in higher interest rates to cover those losses. At that point it is likely that private, for-profit and non-profit lenders will partner with institutions and start offering more competitive loan terms to low-risk students. Similarly, social entrepreneurs may launch non-profit loan funds for selected low-risk students. Such developments may force the federal loan system to raise interest rates to cover the higher-risk students remaining in the pool.

One way to prevent this would be to prohibit private lenders from participating in the student loan market or to discourage them by making their loans dischargeable in bankruptcy. A more promising alternative may be to encourage competition in the student loan market by allowing the federal loan system more flexibility, including to vary loan terms according to repayment risk and to explore new methods of portfolio risk management.[41] We think this second option should be tested, including allowing competitors to access the national risk management data infrastructure described very briefly below. Such competition would promote the kinds of financial innovations envisioned by Shiller.[42] It also would allow private partners to develop supplemental loan products such as insurance and loan management applications.

Risk Management Data Infrastructure

The loan system we have recommended would require an expanded data infrastructure. There is not room here to describe that infrastructure, but we can say that we envision an open national data platform of the kind that Shiller suggests for global risk management.[43] That platform could be coordinated with the data registry we recommend elsewhere for sharing comparable data on labor force credentials, including college degrees.[44]

Conclusions

This paper has argued that the widely recommended expansion of income-based repayment will not fix many of the federal student loan system's serious problems unless complemented by a more comprehensive income-based approach. Income-based repayment alone does not address the tendencies of students to over-borrow and under-match, the inclinations of

institutions to raise prices, and the likelihood of loan forgiveness to become very expensive. The more comprehensive income-based approach we propose incorporates the use of choice architecture, including variable, risked-based financial incentives that tie expected income to loan decisions throughout the loan cycle. We suggest that this risk be measured through composite risk indexes that combine student risk characteristics with the performance of institutions and programs serving similar students. That means that loan terms for the same individual would vary depending on the institution and program chosen. That in turn should "nudge" students and institutions to pay greater attention to value offered. We also propose a different approach to student loan forgiveness based on systemic risk adjustments that also rely on risk indexes. We do not know whether our specific proposals for underwriting loans under an income-base approach would work as intended, but we believe that they warrant further debate and investigation.

Endnotes

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