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POLICY PAPER SERIES

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A Policy Proposal**

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ABSTRACT

Risk-Sharing in Higher Education: A Policy Proposal*

As concerns over growing levels of student loan debt continue to mount for both students and taxpayers, many have called for an improved accountability system in the U.S. higher education system. In this policy brief, I discuss the many flaws in our current system, and outline how a system known as “risk-sharing” could drastically improve incentives and outcomes. I present a framework for how risk-sharing could be structured, and illustrate the distributional impacts (both positive and negative) across the higher education landscape.

JEL Classification: I2, I22, I23, I28

Keywords: higher education, accountability, risk sharing

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Problem Statement

Attending and graduating from college is arguably the best investment in one's financial future an individual can make. While the anticipated return more than justifies the investment for the average person, attending college is still a "risky" investment in the sense that not everyone receives the same financial return, and some are worse off after considering the cost of schooling and time spent out of the labor force. This return depends on many factors: some that the student controls (effort, major choice, etc.), some that the school controls (teaching quality, investment in job placement services), and also on factors beyond anyone's control (e.g. the overall health of the labor market and pure luck). Currently, only 60% of students who have entered the repayment phase of their student loans are making any progress paying down their principal balance 3 years after entering repayment, meaning that a sizable proportion of loan balances are stagnant or growing due to accrued interest.

As it stands now, institutions have little to no direct financial incentive to care about the outcomes of their students once they leave school. While I believe that the vast majority of institutions and programs do try to provide their students the best possible education, there have been a number of high profile cases of schools acting in bad faith through deceptive marketing and fraudulent behavior.¹ The current system of accountability in higher education is both easy to "game" and in general is ill-equipped to incentivize investment in student and punish bad actors. Furthermore, it is important to state that there need not to be fraudulent intent or even poor teaching for institutions to be responsible for some share of the blame when their students do not succeed. There are many ways, both small and large, that schools can help or hinder their students' financial success. Given that the current national student loan debt sits at \$1.3 trillion, backed by taxpayer dollars, there is an overwhelming public interest in ensuring that this money is spent appropriately, and on programs which have proven they actually provide a positive return on a students' investment.

In a well-functioning market, a "skin in the game" incentive system would be less critical because market forces would drive out any institutional bad actors and force the remaining schools to operate efficiently and in their students' best interest. However, the market for higher education is far from perfect, characterized by a substantial lack of consumer information about the differences between schools, their likely labor market outcomes, and the realities of taking out large amounts of student debt. These problems are particularly acute among first-generation college students and those from disadvantaged backgrounds, who often do not have the family or high school resources necessary to make the best informed decision about their postsecondary schooling.

¹ <https://www.washingtonpost.com/news/grade-point/wp/2016/09/29/feds-found-widespread-fraud-at-cornithian-colleges-why-are-students-still-paying-the-price/>

The current accountability system, described in greater detail below, is flawed in three main ways. First, only schools which are near to the penalty threshold are incentivized in any way, and this represents a relatively small proportion of schools. Second, the loss of Title IV funding for schools which fall on the wrong side of the threshold is a blunt and severe penalty, akin to using a sledgehammer when a scalpel is ideal. Finally, the all-or-nothing penalty produces a large incentive for schools to find ways to game or manipulate the system. The proposal outlined below addresses these main concerns, and also makes some other minor tweaks which I believe will better identify truly poor-performing schools (such as replacing the default rate with the repayment rate as the key accountability metric).

In designing my proposal, I started with the following basic premises:

- The ideal risk-sharing system would be simple in its design to promote both transparency and ease of implementation.
- It should provide incentives to all, or at least a large proportion of schools.
- If an institution is not subject to penalties it should be for objective reasons such as high performance, and not subjective reasons such as its non-profit status.
- It should be difficult or impossible for institutions to game or manipulate the system.
- The potential for unintended consequences (such as tuition increases or the selective admission of students based on credit-worthiness) should be minimized, both through a penalty and bonus structure.

The Current Accountability System

Although there are a handful of federal and state regulations² which are aimed at holding colleges accountable for their students' success/failure, by far the broadest regulation establishes a threshold based on an institution's cohort default rate (CDR) beyond which the institution is not eligible to receive Title IV funds (effectively barring their students from receiving federally back student loans). The current regulations are written using a three-year cohort default rate, which is the proportion of students who default on their loan within three years of leaving school.

Institutions which have a three-year CDR greater than 30% for three consecutive years, or above 40% in a single year, lose access to the federal student loan system for a subsequent three year period. This is a poorly designed system to encourage accountability for three main reasons. First, only a small handful of schools are near this threshold (Federal Student Aid, 2014), and thus it provides no incentive effect to improve outcomes for the vast majority of students. Second, the severe penalty has the potential to hurt students who may actually benefit from attending an institution sanctioned under these regulations. As with any policy, it is important to remember that there is a distribution of outcomes at every school, some students are

² See Hillman et al (2015) for an excellent recent summary of accountability policies, and an evaluation of one in Washington state.

made better off and others may not be. Just because a school has a high number of labor market “failures” does not mean that no one was helped. A better-designed policy would send a strong signal (via financial penalty) that such a school needs to institute reforms without cutting off access to federal loans to all potential new students. Finally, the discontinuous nature of the penalty produces a substantial incentive to attempt to game or manipulate the system in any way possible.

The proposal described below remedies these three problems by seeking to implement a system which incentivize all institutions, contains a penalty which is proportional to the “crime”, and minimizes the likelihood and ability to game the system.

Proposal

I propose a risk-sharing system where all institutions which receive Title IV funds will pay a penalty based on the student loan repayment rate of former students, and will be eligible for a bonus based on the performance of at-risk student groups (e.g. students who receive a Pell Grant).

Penalty: 5% of balances not making progress on the principal balance two years after entering repayment

The penalty provides incentives to all institutions to further invest in their students’ success. This is important because under the current accountability system no such direct incentives exist for the overwhelming majority of institutions. I considered and analyzed a number of different penalty schemes, but settled on this particular one for its simplicity, transparency, and the fact that the penalty is directly proportional to the harm felt by students who are unable to repay their loans and the taxpayers who shoulder the burden.

The simple math of the penalty means that it will rise as the amount that students borrow increases and the repayment rate decreases. Institutions will be incentivized to reduce their penalty then by investing in one of three main areas: (1) reducing the time taken to obtain a degree, (2) improving graduation rates, and (3) improving the job prospects of their students. By basing the metric and penalties on the dollars in non-repayment, the rules can be made more straightforward (and thus easier to identify and enforce) without the need to create the numerous exceptions and complications in current state and federal accountability systems. One virtue of this risk-sharing system is that the government is not mandating any specific reform, an important point because the reforms that might help a large urban university and a rural community college are likely quite different.

Repayment rates are chosen as they represent a much better metric of a loan portfolio’s overall health relative to the default rate, which effectively only captures the worst-case scenario.

Furthermore, repayment rates are much more difficult for an institution to game or manipulate.³ The 5% penalty was arrived at by examining the burden at each university, and in an attempt to minimize the likelihood of any unintended consequences (described more below). This 5% figure is not written in stone, and depending on other aspects of the risk-sharing system it would be reasonable to revise it upward or downward. For instance, if default rates (which I recommend against) are chosen as the key metric instead of repayment rates the penalty would need to be much greater than 5% to have sufficient incentive effects.

The penalty should be paid by all institutions, regardless of sector or non/for profit status. Implementing a risk-sharing penalty like the one described above provides protection from political interference in the regulation of institutions. There are high and low-performing institutions in each sector, therefore all institutions should be judged by the same objective criteria. Such a market-based system allows schools to stand on their own merits.

Bonus: A bonus will be paid to each institution for each at-risk student (e.g. Pell recipient) who successfully graduates and repays their student loans.⁴

Arguably the biggest social benefit of higher education is its ability to enhance economic mobility for the poorest members of society. The bonus component of my risk-sharing proposal accomplishes two goals. First, it is a market-based solution which will reward the institutions which are making the best use of the generous Title IV funds from the government. Second, it substantially reduces any potential perverse incentive created by the risk-sharing penalty to credit-rate students and only offer admission to students likely to repay their loans.⁵

One important caveat is that the true disincentive for schools to accept fewer low-income applicants is likely less than the perceived disincentive. Say, for example, that the gap in repayment rates between the highest and lowest family income categories is 40% nationally. However, this gap within each school is considerably lower, on average about half. In other words, students from disadvantaged backgrounds who attend Harvard are very likely to succeed, and students from higher socioeconomic backgrounds who attend nonselective schools are not that much more likely to succeed than their low-income classmates. So while there is still an achievement gap, it requires less of a financial bonus to actuarially eliminate the gap than most people realize. That being said, a bonus is still needed, and it is critically important that schools

³ Since a student only defaults if they make no payments for 270 consecutive days, a school could pay only \$1 of a student's loan every 9 months to keep them out of technical default. To accomplish the same thing with repayment rates as the key metric, an institution would need to pay \$1 plus all interest payments.

⁴ If a student receiving Pell Grants did not take out any student loans, then some other performance threshold should be used, such as if they are gainfully employed. Collecting these data will likely require the creation of a student unit-record system, which would allow for substantially better evaluation of the education quality provided by each institution.

⁵ Without a bonus system, this would be a serious concern, particularly given evidence of past behavioral responses pointed out in Kelchen and Stedrak (2016)

be made aware of the bonus's purpose, since decision-making is made on the basis of perceived risk rather than actual risk.

Great care should be taken when defining who is eligible for a bonus payment to ensure that institutions are not able to game the new regulations. For instance, a bonus based solely on graduating at-risk students could create an incentive to reduce graduation standards and confer degrees to students who have not gained any actual skills. Implementing a risk-adjustment or value added formula based on admissions criteria such as the admissions rate or SAT scores could induce schools to manipulate these metrics.⁶

The specific amount of the bonus payment obviously depends on the particular criteria used to evaluate success. Since data are not available to me on my preferred metric (repayment/gainful employment of Pell students), I cannot provide a dollar figure which should be paid for each success. However, I would recommend that the figure be tied to the number of successes nationally and the total penalty revenue and costs associated with the risk sharing system. For example, if you wish for the entire program to be revenue neutral, and the penalty generate \$X, costs \$Y in administrative expenses, and there are Z student successes, then each institution would be paid $(\$X-\$Y)/Z$ for every student success.

It should be noted that having a bonus system effectively controls for changes in the business cycle, meaning that the risk-sharing framework should work equally well in both good economic times and recessions. Money is just being redistributed to the institutions which are making the best use of their resources. Without a bonus, schools will be penalized for macroeconomic factors out of their control. I have analyzed penalty structures which can account for these macroeconomic shifts, but they are somewhat more complex to implement.

What Risk-Sharing Incentivizes

The risk-sharing system described above is designed to charge schools a penalty which is directly proportional to the loan burden shouldered by their former students who have not succeeded in the labor market. There are thus two main mechanisms that will determine the penalty (and that schools will be incentivized to address), the amount of money that students borrow, and the labor market prospects of former students. Critics of risk-sharing are right to point out that schools do not have complete control over these aspects. The counterargument is that risk-sharing proponents do not assume they do; the system described here prescribes only a 5% penalty for a fraction of the student body (those who are not paying down any of their principal balance). If institutions want to take credit for the wage gains that a degree from their institutions offers to the average student, they should also be willing to accept a small fraction of responsibility (in this case 1/20th) for the students who do not succeed.

⁶ See <https://www.insidehighered.com/news/2008/10/15/baylor> for one of many examples of how colleges game the metrics used in common ranking systems.

But what specifically is a risk-sharing system hoping to accomplish? Generally speaking, any policy which impacts the amount of debt students have or the quality of their job after leaving school. The nature of the penalty is that the government does not presume to know what is best for each school, and that the ideal reforms at a rural community college and an urban private school are likely very different. Listed below are three broad areas which schools would likely try to target.

Time to degree

Only 44% of students who eventually graduate earn a Bachelor's degree within four years, and 24% take more than six years (NCES, 2011). This can be improved through investments in academic advising, as many students (particularly first generation college students) find it difficult to navigate the often sprawling academic bureaucracy. Temple University recently created Fly in 4,⁷ a promising attempt to improve on-time graduation by targeting advising and also students who work while enrolled (a majority of students nationally, and a key factor in time to degree).

Sometimes the length of time to get a degree is mechanically under the university's control. For instance, most would consider a two-year degree to require 60 credits (4 semesters of 15 credit hours). However, a majority of Associate's Degree programs require at least 65 or 66 credits to obtain a degree, two full classes above the norm of 60. Many of these programs require more than 70 credits.⁸ This growth in required classes has been seen even in general education programs, where it is difficult to argue that the extra courses serve a crucial role in students' future careers. Depending on the state and specific program, this could be due accreditation regulations or institution-level bureaucracy. Longer programs increase the likelihood of student default both because of larger student loans taken out and a lower probability of graduation.

Graduation Rates

Only 60% of first-time full-time students graduate with a four-year degree within 6 years of first enrolling. The numbers for part-time students and those returning to school later in life are much worse. Among the leading determinants of default on student loans is not how much money was borrowed, but whether a degree was earned (Gross et al, 2009). In fact, default rates are considerably higher among individuals with less than \$5,000 in debt than among those with greater than \$100,000 (Lee, 2013). Put another way, it is far preferable to be a 22 year old college graduate with \$30,000 in debt (the national average) rather than a 22 year old with no degree, but only \$5,000 in debt. For these reasons, institutions would be strongly incentivized

⁷ <https://www.insidehighered.com/news/2016/02/01/temple-u-offers-grant-exchange-students-agreeing-work-less-study-more>

⁸ See Johnson et al. (2012)

under a risk-sharing system to invest in programs which increase retention and graduation rates. A model example of such efforts would be Georgia State University.⁹

Labor Market Competitiveness

A college degree has become almost a de facto requirement for most middle class and higher jobs. While the average return is high, not all colleges provide the same level of labor market success. In a wide variety of fields, a key to securing a good job after graduating is having a high quality internship in a student's junior or senior year. But for most faculty members, building a relationship with local/regional employers is time consuming and requires a different skill set than all other academic tasks. If an institution's current students are unable to find gainful employment (and subsequently unable to repay their loans), investments in internships and career counseling would be among the types of policies incentivized under a risk-sharing program.

Additionally, there are enormous differences in earnings across different majors.¹⁰ For example, the median graduate with and degree in economics earns roughly \$1 million more over their lifetime¹¹ than the median college graduate with a management degree. There are many students whose education does not pay off until very late in life or ever.¹² Yet students and parents, in particular more vulnerable students and parents, often do not have the facts necessary to make arguably the most important financial decisions in life: 1) which school to attend and 2) what major to select. Providing labor market and student loan outcomes, in an easy to understand format, at the institution and program level would enable students to make informed decisions and could drastically lower the number of future loan defaults. While the financial return of a particular major or institution should certainly not be the only, or even the top considerations of prospective students (the world would be a very boring place if it were populated with only economists and engineers), they should at a minimum be made aware of the implications of these important decisions.

Analysis

Data and Methodology

The data used in the subsequent analysis comes from two sources. The Integrated Postsecondary Education Data System (IPEDS) and the College Scorecard. The results presented in the first two tables are simply calculated based on the summary statistics of student

⁹ <http://www.theatlantic.com/education/archive/2013/09/georgia-state-improved-its-graduation-rate-by-22-points-in-10-years/279909/>. See also Webber and Ehrenberg (2010) and Webber (2012) for evidence that institutional spending on students impacts retention and graduation rates.

¹⁰ See Webber (2014)

¹¹ http://doug-webber.com/expected_all.pdf

¹² See Webber (2016)

debt reported by each institution. Most importantly, the risk-sharing penalty described above is calculated as

$$Penalty = Averageloan * \%loan * \%nonrepayment * .05$$

Where *averageloan* is the average loan balance of all students with loans at each institution, *%loan* is the percentage of students who receive student loans at each institution, and *%nonrepayment* is the nonrepayment rate. This is the best guess at the number of dollars which would be subject to a risk-sharing penalty, but it is important to note that it is not a perfect measure. If the typical student who fails to make progress on their principal loan balance takes out loans which are greater (less) the average loan, then the penalty will be underestimated (overestimated) in the tables below. With current data limitations, the true figure is impossible to know, however based on Lee (2013) there is good reason to believe that the students who default take out less than the average loan amount (often because they drop out), and thus these penalties are likely overstated for most institutions.

The estimates of the potential tuition increases produced below are generated by assuming that institutions will respond in a purely financially optimal way and will pass the entire risk-sharing penalty on to the student. In other words, it is assuming the worst-case scenario that risk-sharing will have no incentive effect whatsoever. While I do not believe this to be a reasonable assumption, it is useful to know what the upper bound of an unintended consequence is. Specifically, I model how institutions would respond if they set tuition in a monopolistically competitive framework (profit maximization).

In order to generate the institutional responses, I estimate the necessary parameters of each institutions' demand and marginal cost curves using IPEDS data on each institution from 1987-2015. This is accomplished by estimating institution-level cost functions via a panel data estimator to obtain the marginal cost, and inferring the tuition elasticity of demand from the ratio between marginal cost and net tuition. At this point, I need only add the estimated risk-sharing penalty to each institution's marginal cost curve, and calculate the difference between the old (observed) and new (simulated) tuition values.

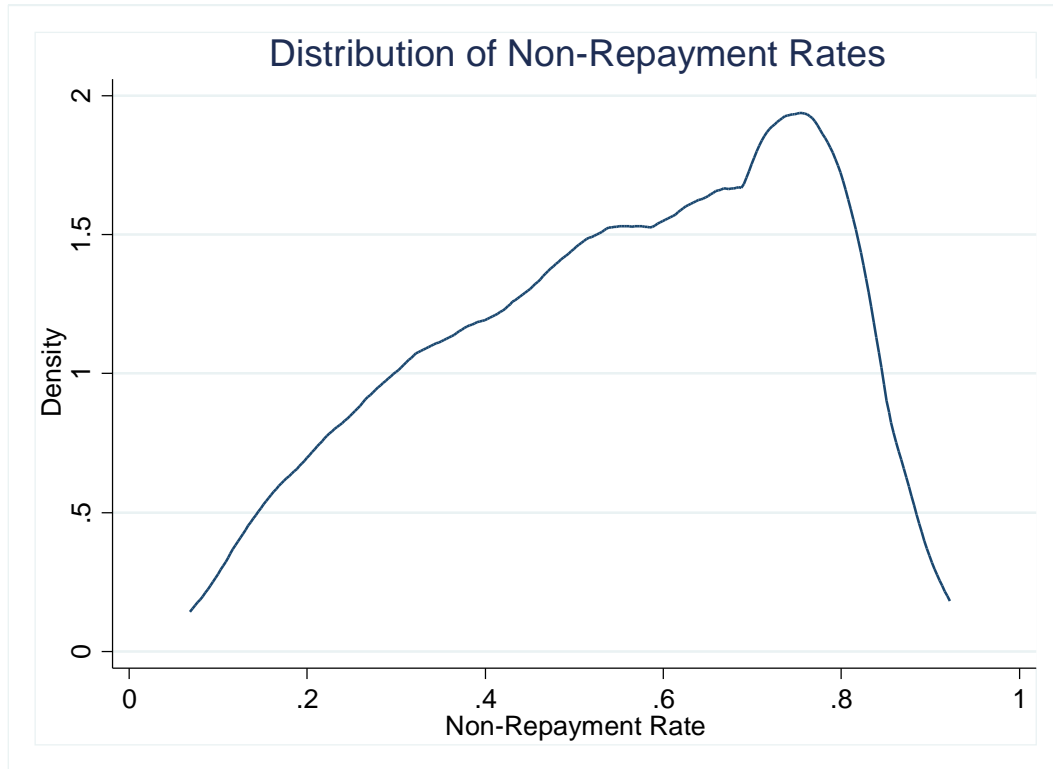
The technical details of this estimation are beyond the scope of this policy report, a version of this model is presented in Webber (2017). For the full technical details, please feel free to contact me.

Results

Figure 1 illustrates the wide range of students' debt outcomes by plotting a histogram of the nonrepayment rate for all institutions in my sample. In a way, this simple illustration is the impetus for a risk-sharing program. The large differences in students' outcomes across schools is at least strong suggestive evidence that some schools do a much better job at preparing their students for the labor market than others. Large disparities still exist even when detailed student

characteristics are controlled for, indicating that at least part of the differences are due to characteristics under the school's control.

Figure 1: Distribution of Nonrepayment Rates



The graph above presents the distribution of nonrepayment rates, the proportion of students who are not making progress paying down any part of their principal student loan balance. Source: Author's calculations using data from IPEDS and College Scorecard.

Table 1 presents some basic statistics on the magnitude of penalties paid by each institution. The median penalty would be approximately \$79,000, although the distribution is highly skewed. As the majority of institutions have students who perform well in the labor market, most institutions would see only small risk-sharing penalties. 25 percent of schools would pay less than \$27,000, and 75 percent of schools would pay less than \$230,000. However, the worst performing institutions, whose students are unable to find gainful employment yet are saddled with crippling levels of debt, will see substantial penalties.

Table 1: Distribution of Average Risk-Sharing Penalties

	10 th	25 th	50 th	75 th	90 th
Penalty	\$9,926	\$26,691	\$78,548	\$ 230,966	\$653,493

The numbers above present the proposed penalty paid by schools at the 10th, 25th, 50th, 75th, and 90th percentiles of the penalty distribution. Source: Author’s calculations using data from IPEDS and College Scorecard.

Since there is considerable variation in the size of institutions, a \$100,000 penalty would be very different for a large state flagship relative to a small community college. Table 2 presents the distribution of risk-sharing penalties in per-student terms. 75 percent of institutions would have a penalty which is less than 1 percent of their total education expenditures (most would have a penalty far below this level). It is very important to note that nearly every institution with a penalty which accounts for more than 1% of operating expenses is a small certificate/degree program with low enrollment and high tuition. For example, if a typical graduating class is 10 students, and 8 of them are unable to repay their loans, then the magnitude of the penalty will be small (because only 8 students are used to calculate the penalty), but because the school is small it will appear to be a large proportion of the budget. This is not a not a bad thing. If only 20% of students are able to make progress on their loans, the institution should be put under significant financial pressure to improve their outcomes.

Table 2: Proposed Risk-Sharing Penalty (Per FTE Student)

	10 th	25 th	50 th	75 th	90 th
Penalty	\$16	\$36	\$70	\$154	\$357

The numbers above present the proposed penalty in per-student terms for schools at the 10th, 25th, 50th, 75th, and 90th percentiles. Source: Author’s calculations using data from IPEDS and College Scorecard.

As is always the worry with any new policy or regulation, there is the potential for unintended negative consequences under a risk-sharing system. First, schools may attempt to shift the composition of their student body toward students who are likely to repay their student loans. The bonus system mentioned above should greatly mitigate this possibility. Furthermore, institutions do not have a large degree of latitude in the type of students they accept (they are limited by the types of students who actually apply). In other words, a rural low-level state school is not able to replace their low income students with Harvard quality (in both wealth and academic performance) students.

Another potential worry is that institutions might simply pass on the costs of risk-sharing to their students, raising tuition and not making additional investments in their students’ futures. Table 3 presents the results of an econometric simulation briefly described in the above section which attempts to estimate the tuition increase at each institutional type under this worst-case scenario. As shown in the table, the median projected tuition increases are quite small, and are robust to a number of different model assumptions.

Table 3: Median Annual Tuition Response to Risk-Sharing Penalties

	Public PhD	Public Masters	Public Bachelors	Public 2-year	Private PhD
Tuition Increase	\$16	\$25	\$14	\$14	\$8
	Private Masters	Private Bachelors	Private 2- year	For-Profit Bachelors	For-Profit 2- year
Tuition Increase	\$14	\$18	\$2	\$60	\$35

The figures above represent the median projected tuition increase from an econometric simulation of how institutions would respond to the risk-sharing penalty described in the text. These simulations assume a “worst-case” scenario in which institutions seek to maximize profits, and do not make any additional investments in their students’ labor market success. Source: Author’s calculations using data from IPEDS and College Scorecard, and the model from Webber (2017). Figures for other quantiles (e.g. 75th, 90th) are available upon request.

An alternative way that institutions could pass on risk-sharing costs to students, which would not be so readily apparent to the general population, is through a change to tuition discounting policies. Tuition discounting is the practice of awarding institutional aid/scholarships, resulting in most students paying a price below the posted tuition rate. This practice is traditionally progressive in nature, resulting in students from lower income families paying less than those from higher income backgrounds. In this way, institutions could pass on more of the costs to higher income students (by reducing their discount) without raising the official tuition level. Table 4 presents estimates of the median projected tuition increase if schools passed all costs onto only the top two family income categories (\$75,000-\$110,000 and \$110,000+). While it is purely speculative which method (if either) institutions might utilize, past behavior implies that non-profit institutions would be more likely to utilize tuition discounting (Table 4), while for-profit institutions would be more likely to raise tuition for all students via the monopolistic competition model (Table 3).

Table 4: Median Tuition Response to Risk-Sharing Penalties (Tuition Discount)

	Public PhD	Public Masters	Public Bachelors	Public 2-year	Private PhD
Top income category	\$50	\$77	\$42	\$47	\$28
2 nd Highest income category	\$25	\$39	\$21	\$24	\$14
	Private Masters	Private Bachelors	Private 2-year	For-Profit Bachelors	For-Profit 2-year
Top income category	\$55	\$39	\$8	\$261	\$164
2 nd Highest income category	\$27	\$20	\$4	\$130	\$82

The figures above represent the median projected tuition increase from an econometric simulation of how institutions would respond to the risk-sharing penalty described in the text using a tuition discounting method in which costs are passed on only to students from the top two family income categories (\$110,000+ and \$75,000-\$110,000). Schools are assumed to pass 2/3 of the cost onto students from the top category and the remaining 1/3 to students from the next highest category. These simulations assume a “worst-case” scenario in which institutions seek to maximize profits, and do not make any additional investments in their students’ labor market success. Source: Author’s calculations using data from IPEDS and College Scorecard, and the model from Webber (2017). Figures for other quantiles (e.g. 75th, 90th) are available upon request.

The overall message from the results in Tables 3 and 4 is that the risk of substantial tuition increases is minimal. Even under the unlikely assumption that institutions make no effort to improve outcomes for their students, tuition increases at most schools due to risk-sharing would appear to be negligible.

Finally, while the focus of this paper has been more on the need/design of risk-sharing penalties, Table 5 below shows what the distribution of net penalties would look like if a revenue-neutral bonus system were implemented as well. Here, a school’s bonus is determined by the number of students who receive a Pell grant repay their student loans (students who never had to borrow in the first place are counted as a success in this case).

Table 5: Proposed Net Risk-Sharing Penalty (Per FTE Student)

	10 th	25 th	50 th	75 th	90 th
Penalty	-\$70	-\$11	\$10	\$50	\$133

The numbers above present the proposed net penalties (bonus-penalty) in per-student terms for schools at the 10th, 25th, 50th, 75th, and 90th percentiles. Source: Author’s calculations using data from IPEDS and College Scorecard.

In this setting, the bonus/penalty structure acts as more of a redistribution within higher education away from schools whose students have poor loan outcomes and in favor of schools which do a disproportionately good job among Pell students.

Further Advice

There are many different ways that a risk-sharing system could be designed. With each decision comes a multitude of costs and benefits. While I view the proposal above to be the best system given the data available to me, it is likely that some details need to be tweaked due to any number of factors which I was either unable to consider or failed to think of. That being said, the dedicated policymakers who eventually implement risk-sharing should keep in mind the following guiding principles:

- (1) There is a sweet-spot for the magnitude of penalties/bonuses. If they are too small, there will be no positive incentive effect, if they are too large there are likely to be significant distortions in the market and students will wind up with fewer opportunities for educational advancement. A general rule of thumb would be that institutions that produce students who are performing well in the labor market should have a negligible penalty, while those who are unable to provide opportunities for their students should be subject to a penalty which is significant, but not entirely crippling.
- (2) There are costs to additional complexity. It is often tempting to add more complex rules in an attempt to achieve some goal (e.g. better targeting penalties or bonuses to the most deserving schools). The problem is that more precise targeting can cost more than it saves. With complexity comes extra monitoring costs on the part of the government and higher compliance costs on the part of the school. Take the FAFSA, it is a complicated form with 130 questions which millions of students fill out every year in order to arrive at a precise measure of how much aid they should be eligible for. However, evidence suggests that a form more than 90% shorter could arrive at nearly the same numbers. A similar argument can be made about much of our federal tax code. A simple risk-sharing program such as the one described above is easy to administer from the government's side and is easy to comply with from the institution's perspective. Furthermore, a transparent system makes it very clear what is being incentivized. An example of something I would be cautious of is using a complicated risk-adjusted or value-added metric rather than simple repayment rates. It is far easier for an institution to understand and target reforms based on "achieve a higher repayment rate" as opposed to "achieve a higher value-added score based on this regression model". If the regression model actually does a far better job at classifying schools, then maybe it is worthwhile, but small reductions in misclassification are not worth a large loss in simplicity and transparency.
- (3) When there is an opportunity to game the system, most will. This is another reason to avoid unnecessary complexity, it adds to the likelihood that schools will spend effort manipulating their penalty rather than on improving outcomes for their students (again, I refer you to our tax code). Examples where such problems could arise would be thresholds with substantially different penalties on either side, specifying that institutions in certain groups face different penalty burdens, or allowing institutions to retroactively

buy themselves down to a lower penalty. I am particularly wary of the latter suggestion, as it would allow for institutions to perfectly game the system, and likely kill any incentive power that risk-sharing might generate.

- (4) Some institutions and students may be hurt by risk-sharing, but in a well-designed system more will be helped. It is impossible for any public policy to have no downside, it is inevitable that some school might be unfairly penalized and decide to leave the Title IV system, making it more difficult for its students to obtain funding. For this reason, discussion of public policies often focuses on the costs to the few rather than the benefits to the many. Keep in mind that if a program which would hurt few, but help many, is not implemented, it is functionally the same as implementing a program which helps few but hurts many. In other words, please evaluate a risk-sharing program (and for that matter any public policy) on its overall benefit to the higher education market rather than a small segment of it.

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