



# EDUCATION WITHOUT LOANS

Some schools are offering to  
buy a share of students' future  
income in exchange for  
funding their education.

By Tim Sablik

**T**he cost of college has been rising. After adjusting for inflation, the average tuition for a private four-year school in 2019-2020 is about twice what it was three decades ago. For public four-year schools, tuition nearly tripled over the same period.

Scholarships and other need-based aid mitigate some of the costs of higher education, but the majority of young adults who attend college end up taking out loans. Over the last two decades, the total amount of outstanding student debt in the country has marched steadily upward, increasing nearly fivefold to more than \$1 trillion after adjusting for inflation. (See chart.)

It is true that for many, college is a worthwhile investment even despite these costs. College graduates earn more on average and also tend to be less susceptible to disruptions in the economy. But taking on debt to go to college is risky. Most of the benefits of a higher education only accrue to students who graduate, but monthly loan payments come due whether a student finishes or not. This burden can weigh heaviest on those least equipped to pay: Research from the Richmond Fed has found that poorer students were about 27 percent more likely to drop out of college than wealthier students.

Many policymakers and economists worry that rising student debt could be forcing even those who graduate and find jobs to delay other big milestones like buying a home or getting married. (See “Are the Kids All Right?” *Econ Focus*, Third/Fourth Quarter 2016.) There are also signs that a growing number of student loan recipients are struggling to keep up with monthly payments. Consumer debt delinquencies have generally trended down since the Great Recession, with the exception of student loans, which now have a higher rate of severe delinquency than mortgages, auto loans, or credit cards. (See chart.)

In 2015, Mitchell Daniels, Purdue University president and former governor of Indiana, addressed Congress about this growing student debt crisis. “Student debt obligations are a modern form of indentured servitude,” Daniels

declared. “The personal implications of the debt can be harsh throughout a borrower’s life. The demands of loan payments, especially private loans, are normally unsympathetic to periods of unemployment or underemployment, serious illness, or new life callings.”

In his testimony, Daniels called on colleges and the federal government to explore alternative funding mechanisms for higher education that did not leave students saddled with debt. One idea he highlighted that has since seen growing implementation, including at Purdue, is the income share agreement, or ISA.

## Buying a Share in Human Capital

ISAs provide students with funding to cover their education expenses in exchange for a portion of their income once they start working. Under a typical contract, recipients pledge to pay a fixed percentage of their incomes for a set period of time up to an agreed cap. For example, a student who has \$10,000 of his or her tuition covered through an ISA might agree to repay 5 percent of his or her monthly income for the next 120 months (10 years), up to a maximum of \$20,000. ISAs typically also have a minimum income threshold before payments kick in; if the recipient earns less than the minimum, he or she pays nothing. This means that ISAs offer students more downside protection than a traditional loan.

This downside protection is what attracted Andrew Hoyler to Purdue’s “Back a Boiler” ISA program, which launched in the fall of 2016. Hoyler, who graduated from Purdue’s professional flight program in 2017, signed up for Back a Boiler in his senior year. He received \$21,263 in reduced tuition and flight fees in exchange for agreeing to repay 7.83 percent of his monthly income for 104 months, or until he had paid back 2.5 times the amount he originally received. Now a pilot for PSA Airlines, a subsidiary of American Airlines, he has been making payments on his ISA for about 30 months.

“Starting pilot pay is not very high, so I knew I would

ILLUSTRATION: TIMOTHY COOK

not have much discretionary income my first few years after graduation,” Hoyler said in an email. “ISAs provide a safety net if I find myself out of work. If I reach the end of the payment term before I finish paying things off, the ISA is forgiven with no questions asked.”

Hoyler is particularly grateful to have that safety net now, as the airline industry is being rocked by the COVID-19 outbreak. “The ISA is giving me a sense of relief. If I find myself furloughed, my payments stop with zero interest,” he says.

Proponents of ISAs argue that in addition to protecting students from the downside risk of not earning enough to make monthly loan payments, ISAs also align incentives between students and schools in a way that traditional loans do not. When students take out loans for education, the school gets paid whether or not the students later succeed in the job market. But if a school enters into an ISA with its students, it only succeeds if its students succeed.

“That alignment of interests is one of the strong points in favor of income share agreements,” says Mary-Claire Cartwright, vice president of information technology at the Purdue Research Foundation and program manager for Back a Boiler. “We want our students to feel like we are there to catch them if they don’t get off to a perfect launch after graduation.”

Purdue is not the only school that has recently started offering ISAs. Colorado Mountain College set up a program to provide funding for “DREAMers,” immigrants who came to the United States illegally as children and therefore don’t qualify for federal student loans. The University of Utah has an ISA program to help students finish their degrees when they might otherwise have to drop out for financial reasons.

ISAs have also gained traction at online skills training programs, including many coding academies such as General Assembly and Lambda School. Students receive an education in a technical subject, such as coding or user experience design, in exchange for signing on to an ISA. According to a 2019 survey by the website Course Report,

17 percent of boot camp graduates in 2019 used an ISA or some other form of deferred tuition.

Because most skills training programs like coding boot camps are built around the opportunity for students to get a well-paying job, they often tout the minimum income threshold protection of their ISAs. For example, Lambda School advertises that students “pay nothing” until they get a job paying at least \$50,000 a year. This is in line with the average salary for a coding boot camp graduate, nearly \$67,000, according to the Course Report survey. Lambda also promises to help students “hunt down jobs, nail interviews, and negotiate salary.”

“Coding boot camps are the prototypical use case for ISAs,” says Daniel Pianko, co-founder and managing director of University Ventures, an investment firm that funds companies looking to make higher education more accessible and affordable. ISAs help skills training programs signal to prospective students that they stand behind their product by “putting their money where their mouth is,” says Pianko.

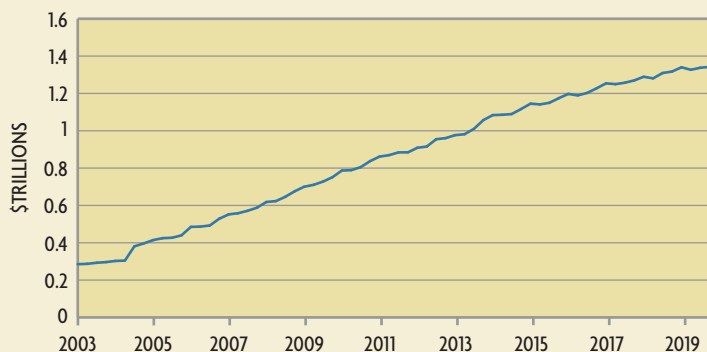
“If you’re going to school for a nursing or coding credential, you’re not doing it for fun; you want a job,” echoes Tonio DeSorrento, co-founder and CEO of Vemo Education, one of the companies backed by University Ventures. Vemo partners with schools, including Purdue, and online skills training academies to design, implement, and administer ISAs. “If you are choosing between schools, which one are you going to pick? The one that says, ‘Pay upfront and see what happens?’ Or the one that says, ‘Pay only if this works?’”

## Learning from the Past

While ISAs might seem like a relatively new innovation, the idea has actually been around for decades. Famed economist Milton Friedman first wrote about them in 1955. He argued that loans are not the ideal way to fund investments in human capital because they require students to shoulder too much of the risk. Failure to launch leaves recipients of student loans making payments on an investment that didn’t pan out. Moreover, it is difficult for students to offer

## The Rise of Student Debt

U.S. student loan balances, adjusted for inflation

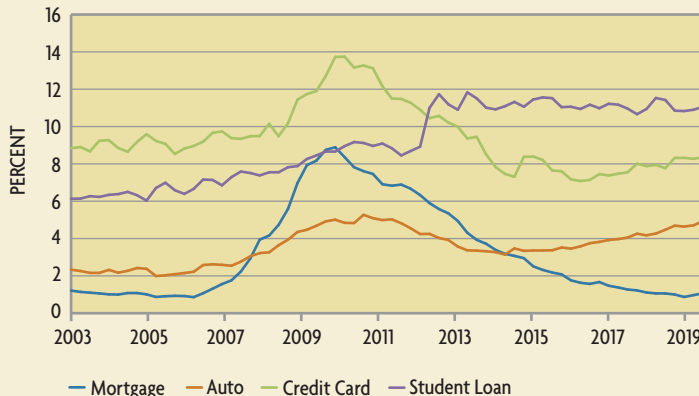


NOTE: Balances are in constant 2012 dollars. Inflation adjustment based on the PCE index.

SOURCE: New York Fed Consumer Credit Panel/Equifax; U.S. Bureau of Economic Analysis

## Student Loan Delinquencies Remain High

Percentage of loan balances that are 90+ days delinquent



SOURCE: New York Fed Consumer Credit Panel/Equifax

lenders collateral for education loans, meaning such loans will be scarce and expensive absent subsidies.

Friedman argued that in the market, companies typically do not rely on debt to fund risky investments. Instead, they issue equity, asking investors to share some of the downside risk in exchange for a share of the profits if the investment works out.

“The counterpart for education would be to ‘buy’ a share in an individual’s earning prospects: to advance him the funds needed to finance his training on condition that he agree to pay the lender a specified fraction of his future earnings,” Friedman wrote.

While Friedman saw no legal hurdles to creating these types of contracts, he acknowledged that there were a number of reasons why they hadn’t been widely adopted. Chief among them is the fact that ISAs are costlier to administer than debt. An ISA requires issuers to track borrowers’ incomes, potentially over long time horizons and across different employers and geographic locations. Borrowers, in turn, have an incentive to hide their income to reduce payments, making administration that much trickier.

This may be why early attempts to implement Friedman’s idea involved trying to graft some of the benefits of ISAs onto debt. In the 1970s, Yale University created the Tuition Postponement Option (TPO) with the help of Nobel Prize-winning economist James Tobin. The plan grouped student borrowers into cohorts who agreed to pay Yale a percentage of their future income until the entire cohort’s debt plus interest was repaid. Borrowers could buy their way out of the program early by paying 150 percent of their total award plus interest.

While the program somewhat resembled Friedman’s idea by tying payments to income, the fact that each individual was responsible for the collective debt of the group proved disastrous. Wealthier borrowers and those who had borrowed small amounts bought their way out of the program early. Those who remained in each cohort either failed to make payments or were left paying shares of their income for decades on a negatively amortizing principal. Yale stopped accepting new applicants for the program in the late 1970s and ultimately canceled remaining debts in the early 2000s.

“I think what people learned from the Yale program was that making someone’s payments contingent on what others pay is a bad idea,” says Miguel Palacios, a professor of finance at the University of Calgary. He has written extensively about ISAs and co-founded Lumni, a venture that finances ISAs across the Americas.

Successors to Yale’s program made payments tied to the individual but still tended to be based on debt. President Bill Clinton, a participant in Yale’s TPO, proposed the first income-based repayment plan in the United States for federal student loans. Today, recipients of federal student loans can qualify to make their monthly payments proportionate to income. On the surface, this allows federal loans to offer many of the same benefits



*Andrew Hoyler graduated from Purdue’s professional flight program with the help of the university’s ISA offering. “With the aviation industry currently in flux, the ISA is giving me a sense of relief. If I find myself furloughed, my payments stop with zero interest.”*

of ISAs to students. But like the Yale experiment, these plans are still susceptible to ballooning interest payments.

“If you experience hardship and have to make smaller payments on a loan, it can negatively amortize — it can get bigger,” says DeSorrento. Moreover, while income-driven repayment plans for federal loans allow borrowers who make regular payments to have their remaining balance forgiven after 20 or 25 years, the amount forgiven can be taxable as income. This would leave some borrowers who are unable to pay their loans with a hefty tax bill.

“ISAs don’t work that way,” says Pianko. “They’re not debt, so at the end of the payment period, any remaining obligation just expires.”

### Balancing Costs and Benefits

Given the many benefits ISAs offer students over debt and the fact that schools can use them to signal the quality of their programs, why has the idea been so slow to catch on since Friedman’s proposal? As he recognized at the time, it has to do with balancing costs to ensure that schools and other investors have enough incentive to offer ISAs.

“A fundamental difference between what Friedman wrote and how ISAs have actually been implemented is that Friedman was thinking about something that had no upper cap on repayments,” says Palacios. “So if Bill Gates had taken out an ISA while in school, the issuer would have made billions of dollars.”

That kind of upside would be one way to incentivize schools or private investors to offer ISAs, but most ISAs today do have a cap on total payments. While caps offer students additional protection, they limit how much investors can recoup from successful students to offset losses from students who end up paying back less. For some institutions, this might not be too big a concern.

“We work with schools that intentionally offer ISAs to students who are high risk and might not succeed because they want to try to help them,” says DeSorrento. “The vast majority of Vemo’s ISA programs are subsidized by the schools.”

These subsidies might be partially offset by the increased prestige and enrollment ISAs generate for a school, something that Vemo estimates for its school

IMAGE: ANDREW HOYLER



partners. Schools might also regard some degree of losses on ISAs as consistent with their missions, treating the ISAs as analogous to financial aid that recipients may or may not pay back. Purdue's ISA, for example, is funded by money from donors. Any ISA payments they receive go to fund additional ISAs or other affordability programs. Private training academies, as for-profit institutions, are less likely to be able to rely on donors to fund their ISAs.

The decision of how to fund contracts in the short term could affect how well the ISAs align the interests of school and students. For example, online coding academy Lambda School works with Edly, an online marketplace for the sale of ISA contracts to investors. This provides Lambda with some operating capital upfront while it awaits student payments. While Lambda has indicated that it still finances some of its operations itself, retaining "skin in the game," some critics have argued that selling ISAs to private investors weakens the alignment of incentives between Lambda and its students.

"The institution still has an incentive to serve its students well because if the investors who put money in the program don't see returns, then those investors will not continue financing the ISAs," says Palacios. Indeed, Lambda says that the advances it receives from investors adjust based on how well its graduates do in the job market. "But that link is weaker than if the institution's money was directly on the line," Palacios adds.

"Schools should have significant skin in the game," agrees Pianko. "It makes sense for schools to work with investors to get some capital up front to provide services to students. But the key is structuring the ISAs so that the school retains the first-loss piece. In the case of University Ventures, we require any schools we finance to keep a large portion of the risk. If the students don't have the economic success they hoped for, then the school doesn't get paid as much."

It remains to be seen whether the institutions now offering ISAs can balance the costs in a way that sustains their program over the long term while maintaining the benefits of risk-sharing and downside protection for students. Although ISAs are now offered at a growing number of colleges and vocational training programs, these programs are only a few years old at this point.

### The Future of Education Finance?

While proponents of ISAs would like to see them become more widespread in educational finance, there are a few factors that may keep them a niche option, at least for now.

Student loans have a well-established regulatory and

legal framework, but lawmakers are still deciding how best to allow innovation in ISAs while protecting students from predatory agreements. In July 2019, Sen. Todd Young (R-Ind.) introduced a bipartisan bill to legally define ISAs and establish requirements for a "qualified ISA," including caps on the share of income lenders can charge and the duration of contracts. The bill has yet to progress any further. As long as the regulatory environment remains murky, investors and schools may be hesitant about ISAs.

On the other hand, Vemo has seen significant growth since it entered the market in 2016 with Purdue. Today, the company reports that it works with more than 75 schools and training programs to offer ISAs. DeSorrento believes that if those schools succeed with ISAs and start to attract students because of those programs, it will put competitive pressure on more schools to offer ISAs as well. That said, students and educators acknowledge that ISAs aren't right for everyone.

"If you are going into a six-figure job right after school, a traditional loan would likely be better," says Hoyler.

Purdue presents students with comparisons showing how much they could expect to pay under an ISA versus a loan, allowing them to decide which financial instrument is right for them. According to Cartwright, the school has funded more than 1,200 ISA contracts so far.

"Our program is not a substitute for federal student loans," says Cartwright. "We are targeting students who have exhausted their grants, scholarships, and federal student loans and who might otherwise need a parent to take on a Parent PLUS loan or go to the private loan market."

Indeed, most proponents of ISAs see it as unlikely, at least for now, that the agreements become the dominant vehicle for financing education. For one thing, federal student loans, unlike privately offered ISAs, are federally subsidized. But for students who don't qualify for such loans or have exhausted them, ISAs may be an attractive alternative. Others, like Palacios, also welcome the fact that Friedman's original idea has influenced the federal loan system through the introduction of income-based repayment.

"The other component from ISAs that I think government loans should incorporate is the idea that someone should have skin in the game when it comes to how students perform after leaving school," says Palacios.

Wherever ISAs go from here, they have already sparked bipartisan interest in looking at ways to offer better financial protections for students and incentives for educators as well as expanding access to higher education and skills training, which are increasingly in demand today. EF

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