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Benjamin M. Leff

Heather Hughes

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STUDENT LOAN DERIVATIVES: IMPROVING ON INCOME-BASED  
APPROACHES TO FINANCING LAW SCHOOL

BENJAMIN M. LEFF\* &amp; HEATHER HUGHES\*\*†

## I. INTRODUCTION

**E**XTENSIVE, public discussion surrounds the high cost of legal education and student debt levels, yet very few critics of degree-cost show creativity in thinking about the optimal mechanism for funding a legal education. In recent years, numerous policy-makers, investors, and academics have been searching for ways to tie students' financing obligations to post-graduate income rather than interest rates.<sup>1</sup> The federal government currently offers income-based repayment options for student loan borrowers.<sup>2</sup> Private investors and policymakers advocate for so-called income-share agreements: agreements under which investors provide capital to students in exchange for a share of students' future incomes. These

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\* Professor, American University, Washington College of Law.

\*\* Professor, American University, Washington College of Law.

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1. For example, Senator Marco Rubio and Representative Tom Petri proposed legislation in 2014 that would make what they call "income share agreements" enforceable. *See* Investing in Student Success Act, H.R. 4436, 113th Cong. (2d Sess. 2014). Similar legislation was introduced in the House in 2015 by Representatives Todd Young and Jared Polis that modified some provisions of the Rubio/Petri legislation. *See* Investing in Student Success Act, H.R. 3432, 114th Cong. (1st Sess. 2015).

2. In 1993, Congress enacted a program under which student borrowers could limit their loan repayments to a fixed percentage of their income, with the ability for any remaining balance on their loans to be forgiven after twenty-five years. *See* Omnibus Budget Reconciliation Act of 1993, 20 U.S.C. §§ 1087a, 4021 (2012). The current version of this program, called Pay As You Earn (PAYE), permits borrowers to limit repayment to 10% of income after an exemption of 150% of the federal poverty level. *See* Income-Contingent Repayment Plans, 34 C.F.R. § 685.209(a) (2016). Graduates who have been employed by nonprofit or government employers can have the remaining balance of their loans forgiven after ten years. *See* Public Service Loan Forgiveness Program, 34 C.F.R. § 685.219 (2012). Graduates who have a remaining balance on their loans left after twenty years can have it forgiven regardless of the character of their employer. *See id.* § 685.209(a)(6). *See generally* JASON DELISLE & ALEXANDER HOLT, NEW AM. EDUC., ZERO MARGINAL COST: MEASURING SUBSIDIES FOR GRADUATE EDUCATION IN THE PUBLIC SERVICE LOAN FORGIVENESS PROGRAM 3 (2014) [hereinafter DELISLE & HOLT, ZERO MARGINAL COST], available at [https://static.newamerica.org/attachments/759-zero-marginal-cost/ZeroMarginalCost\\_140910\\_DelisleHolt.pdf](https://static.newamerica.org/attachments/759-zero-marginal-cost/ZeroMarginalCost_140910_DelisleHolt.pdf) [<https://perma.cc/9YJE-JLW8>]; John R. Brooks, *Income-Driven Repayment and the Public Financing of Higher Education*, 104 GEO. L.J. 229 (2016).

existing approaches to income-based finance are problematic. The government programs create incentives for students to over-borrow and schools to overcharge by focusing government funds on those students who borrow the most,<sup>3</sup> and some fear the government programs may not continue to be available.<sup>4</sup> Private “income-share agreements”—which were traditionally called “human capital contracts”<sup>5</sup>—face legal and practical problems as investors make initial investments to fund students’ education that they then must recover from the student’s income under contracts that may be practically difficult—and legally problematic—to enforce.<sup>6</sup>

This Article introduces a new and innovative approach to financing law school: the Income-Based Repayment Swap (IBR Swap). The IBR Swap combines structural and financial advantages of derivatives with the appeal of income-based approaches to financing law school.<sup>7</sup> The IBR Swap uses a derivative structure to enable income-based payment for education that does not (1) rely on taxpayer subsidies or (2) implicate the practical and legal impediments associated with human capital contracts.<sup>8</sup> IBR Swaps coordinate with existing, traditional student loans such that the investors who provide the IBR Swap to students do not have to provide up-front capital as part of the transaction. Instead, every month an institutional counterparty makes a fixed payment to a student that the student uses to pay off student loans; the student makes a reciprocal payment to the institutional counterparty of a percentage of income.

Because the IBR Swap does not involve an initial disbursement to the student, it solves two sets of problems that plague human capital contracts.<sup>9</sup> First, because no capital is initially placed at risk, the cost of collec-

3. See, e.g., DELISLE & HOLT, ZERO MARGINAL COST, *supra* note 2, at 2.

4. See, e.g., Josh Mitchell, *Student-Debt Forgiveness Plans Skyrocket, Raising Fears over Costs, Higher Tuition*, WALL ST. J., Apr. 22, 2014, <http://www.wsj.com/articles/SB10001424052702303887804579503894256072308> [<https://perma.cc/N7AM-JBVW>]. Others are more optimistic about governmental IBR programs’ contribution to the education-financing problem. See, e.g., Kevin Carey, *A Quiet Revolution in Helping Lift the Burden of Student Debt*, N.Y. TIMES, Jan. 24, 2015, [http://www.nytimes.com/2015/01/25/upshot/a-quiet-revolution-in-helping-lift-the-burden-of-student-debt.html?\\_r=0](http://www.nytimes.com/2015/01/25/upshot/a-quiet-revolution-in-helping-lift-the-burden-of-student-debt.html?_r=0) [<https://perma.cc/B324-TT8N>].

5. See, e.g., Miguel Palacios, *Human Capital Contracts: “Equity-Like” Instruments for Financing Higher Education*, POL’Y ANALYSIS (Cato Inst., Wash., D.C.), Dec. 16, 2002 [hereinafter Palacios, *Human Capital Contracts*], at 1, 3–4, available at <http://object.cato.org/sites/cato.org/files/pubs/pdf/pa462.pdf> [<https://perma.cc/B5Y4-RDFN>].

6. For a further discussion of human capital contracts, see *infra* notes 12–29 and accompanying text.

7. Readers may find the IBR Swap concept relevant to higher education contexts beyond law school; the authors find it best to begin to think through the IBR Swap using the institutional context with which we are most familiar.

8. See *infra* notes 113–72 and accompanying text.

9. In this Article, we use the term *human capital contract* to describe a conventional income-share agreement, in which one party disburses funds to a student, and the student pays a percentage of future income to the disbursing party for

tion and risk of nonpayment decrease dramatically, reducing costs for all parties involved. Investors are not in the position of trying to enforce an unsecured payment obligation for return on a sizable initial investment. Rather, if students default on IBR Swaps, they are still obligated to lenders. Second, the unique structure of the IBR Swap reduces the legal uncertainty associated with human capital contracts. Because of the lack of initial disbursement, an IBR Swap is not debt and therefore is not subject to the regulations on debt or student loans. For the same reason, an IBR Swap is not “equity” in a person, as some have claimed about human capital contracts.<sup>10</sup> Because swaps are a recognized financial instrument category under current law, it is possible that IBR Swaps could become a reality without new legislation or other law reform.

But like other income-share agreements, IBR Swaps raise a host of serious concerns about differential treatment of prospective students based on criteria related to assumptions about earning power. Many object to human capital contracts on the grounds that they encourage a market which, if unregulated, might provide capital to men on more favorable terms than women and to students from more privileged backgrounds on more favorable terms than students from less privileged backgrounds, simply because investors believe that the more privileged student is a better investment. In addition, income-share agreements potentially obscure the non-financial value of higher education to the individual and the collective value of higher education to society.<sup>11</sup>

The IBR Swap does not alleviate these concerns. If anything, it compounds them by introducing a derivative structure that adds efficiency to the income-share agreement concept, potentially generating a market in financial instruments backed by student payment obligations. This Article presents the IBR Swap in order to incite critical consideration of both the potential and the limitations of private-market mechanisms for law school finance. As such, it should inspire critical assessment of what is the best and most impactful role for the government in ensuring access to law school.

Under current law, the IBR Swap structure removes some regulatory uncertainty and clears the way for a market in income-share agreements, even without new legislation. But ethical, distributional, and other questions surrounding the IBR Swap concept remain and warrant careful consideration. This Article merely begins the (daunting) task of thoroughly addressing all of the various regulatory tradeoffs that are triggered by moving from a debt-based system of financing higher education to one that interacts meaningfully with students’ post-graduate income. Nonetheless, we do identify and address several important regulatory challenges, and

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some period of time. We use the term *income-share agreement* to describe both human capital contracts and our innovation, the IBR Swap.

10. See *infra* note 146 and accompanying text.

11. See, e.g., Daniela Kraiem, *The Cost of Opportunity: Student Debt and Social Mobility*, 48 SUFFOLK U. L. REV. 689 (2015).

discuss one in some detail: the differential pricing of income-share agreements.

This Article proceeds in four parts. Part II introduces human capital contracts and presents the IBR Swap concept. It explains the IBR Swap and how it is structurally similar to existing swaps in the market. Part III presents the benefits of IBR Swaps, explaining how these contracts can—better than the current student loan model—align costs with benefits, generate information, discipline schools with respect to costs, and potentially enable the government to advance education accessibility at a lower cost to the taxpayer. Part IV considers the current legal state of affairs. Part V examines important issues that should be addressed in any future regulation of IBR Swaps and other income-share agreements.

## II. HUMAN CAPITAL CONTRACTS AND INCOME-BASED REPAYMENT SWAPS

### A. *Human Capital Contracts*

For more than half a century, economists have dreamed of a novel way to fund higher education. Instead of using traditional debt, private investors could provide capital to students in exchange for a percentage of each student's future earnings. A "human capital contract" is a kind of "equity-like" interest in a person's future earnings.<sup>12</sup> In a human capital contract, "a student who wants to attend college, but does not have the resources to do so, signs a contract with an investor in which he commits to pay [a percentage] of his income for [a period of time] after graduation in exchange for [an upfront payment] received today to pay for tuition fees and living expenses."<sup>13</sup>

Economists point to a footnote in a 1945 article by Milton Friedman and Simon Kuznets as the origin of the idea to use human capital contracts to finance higher education.<sup>14</sup> Friedman and Kuznets complained that "investment in training is not governed by the usual profit incentives" because investors could not capture the expected return on an investment in the education of stranger.<sup>15</sup> Because future income is so variable, advancing a student money to finance education is risky. The student may earn enough to pay you back with interest, but may well *not* earn enough and default on the obligation. If that happens, the lender has very little recourse, since the student has no property to offer as security in the case of default. Because of the variability of future income, debt is an ill-suited

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12. MIGUEL PALACIOS LLERAS, INVESTING IN HUMAN CAPITAL: A CAPITAL MARKETS APPROACH TO STUDENT FUNDING 1 (2004) [hereinafter PALACIOS, INVESTING IN HUMAN CAPITAL].

13. *Id.*

14. MILTON FRIEDMAN & SIMON KUZNETS, *Income in the Professions and in Other Pursuits*, in INCOME FROM INDEPENDENT PROFESSIONAL PRACTICE 62, 90 n.20 (1945).

15. *Id.* at 89.

mechanism for financing education.<sup>16</sup> When business ventures are risky, and when they have little property to offer as collateral, it is common for businesses to raise capital by offering investors an ownership interest in exchange for their investments. That way, while the risk of loss is greater than in the case of debt, it is balanced by the ability to receive higher returns if the business venture is successful. Friedman and Kuznets's footnote describes "an analogy that at first blush may seem fantastic"—"if individuals sold 'stock' in themselves, i.e., obligated themselves to pay a fixed proportion of future earnings, investors could 'diversify' their holdings and balance capital appreciations against capital losses."<sup>17</sup> In other words, if investors could participate in the upside gain of financially successful students, they could use that money to offset losses caused by financially unsuccessful students, and the result should be a lower cost of capital for the average student.

Friedman was not done with the idea in 1945. He returned to it in 1955, in an article that was influential in Congress's later decision to offer federal guarantees in order to foster a student loan market.<sup>18</sup> This time, Friedman argued more fully that this problem with fixed-rate debt as the sole source of capital for education would not exist if it were possible for investors to take an "equity interest" in the future earnings of a student.<sup>19</sup> So why do students not find such "equity" investors? Friedman concedes that "[t]here seems no legal obstacle to private contracts of this kind, even though they are economically equivalent to the purchase of a share in an individual's earning capacity and thus to partial slavery."<sup>20</sup> But Friedman recognized a host of difficulties with such a contract. Primary among them, according to Friedman, is the fact that they might be hard to enforce, since there is no property to use as collateral and the person subject to the contract may well move around to avoid collection.<sup>21</sup>

But he also commented:

I have never been able to persuade myself that a major role has not also been played by the cumulative effect of such factors as the novelty of the idea, the reluctance to think of investment in human beings as strictly comparable to investment in physical assets, the resultant likelihood of irrational public condemnation

16. See generally Bas Jacobs & Sweder J.G. van Wijnbergen, *Capital-Market Failure, Adverse Selection, and Equity Financing of Higher Education*, 63 FINANZARCHIV 1 (2007); Palacios, *Human Capital Contracts*, *supra* note 5.

17. FRIEDMAN & KUZNETS, *supra* note 14, at 90 n.20.

18. See Milton Friedman, *The Role of Government in Education*, in ECONOMICS AND THE PUBLIC INTEREST 123 (Robert A. Solo ed., 1955). But see J.R. Walsh, *Capital Concept Applied to Man*, 49 Q.J. ECON. 255, 278–84 (1935) (purporting to show that there was no under-investment in "vocational" education in medicine, engineering, academics, or masters degrees, and that law was one area in which it appeared that there was under-investment).

19. Friedman, *supra* note 18, at 137–38.

20. *Id.* at 138.

21. *Id.*

of such contracts . . . and legal and conventional limitation on the kind of investments that may be made by the financial intermediaries that would be best suited to engage in such investments . . . .<sup>22</sup>

In other words, it may be that the impediments to these human capital contracts are not inherent in the market, but are external, caused either by “irrational” conventional attitudes or laws.

Even if the concept of human capital contracts has a long history, actual human capital contracts have only begun to appear in the market recently.<sup>23</sup> But their modest appearance has been accompanied by a significant amount of attention by investors, academics,<sup>24</sup> and (most recently) lawmakers.<sup>25</sup> While observers of the contemporary explosion of

22. *Id.* at 138–39.

23. Companies that have recently begun to offer investments that are arguably human capital contracts include Fantex, Upstart, Lumni, Pave, the recently dissolved My Rich Uncle, 13th Avenue Funding, Base Human Capital, and Cumulus Funding. See *About Lumni*, LUMNI, <http://www.lumni.net/about/> [https://perma.cc/SFZ3-2ZX7] (last visited Feb. 23, 2016); *About Pave*, PAVE, <https://www.pave.com/about> [https://perma.cc/SY3B-7D5D] (last visited Feb. 23, 2016); *Home*, 13TH AVENUE FUNDING, <http://www.13thavenuefunding.org/> [https://perma.cc/KDQ5-BCNB] (last visited Feb. 23, 2016); *How It Works*, BASE HUM. CAP., [http://www.base-hc.com/#option\\_title](http://www.base-hc.com/#option_title) [https://perma.cc/8DCT-KARK] (last visited Feb. 23, 2015); *MyRichUncle*, WIKIPEDIA, <http://en.wikipedia.org/wiki/MyRichUncle> [https://perma.cc/R7XM-5HZ3] (last visited Feb. 23, 2016); *Our Product*, CUMULUS FUNDING, <http://cumulusfunding.com/our-product/> [https://perma.cc/J7EF-KU45] (last visited Feb. 23, 2016); *Overview*, FANTEX, <https://fantex.com/how-it-works> [https://perma.cc/HE2A-BDKG] (last visited Feb. 23, 2016); UPSTART, <https://www.upstart.com/> [https://perma.cc/EK28-826S] (last visited Feb. 23, 2016) (no longer offering human capital contract-like loans).

24. See, e.g., PALACIOS, INVESTING IN HUMAN CAPITAL, *supra* note 12; MIGUEL PALACIOS, TONIO DE SORRENTO & ANDREW P. KELLY, AM. ENTER. INST., INVESTING IN VALUE, SHARING RISK: FINANCING HIGHER EDUCATION THROUGH INCOME SHARE AGREEMENTS (2014) [hereinafter PALACIOS ET AL., INVESTING IN VALUE, SHARING RISK], available at [https://www.aei.org/wp-content/uploads/2014/02/-investing-in-value-sharing-in-risk-financing-higher-education-through-income-share-agreements\\_083548906610.pdf](https://www.aei.org/wp-content/uploads/2014/02/-investing-in-value-sharing-in-risk-financing-higher-education-through-income-share-agreements_083548906610.pdf) [https://perma.cc/QH93-DC6H]; Jacobs & van Wijnbergen, *supra* note 16; Michael C. Macchiarola & Arun Abraham, *Options for Student Borrowers: A Derivatives-Based Proposal to Protect Students and Control Debt-Fueled Inflation in the Higher Education Market*, 20 CORNELL J.L. & PUB. POL'Y 67 (2010); Shu-Yi Oei & Diane Ring, *Human Equity? Regulating the New Income Share Agreements*, 68 VAND. L. REV. 681 (2015) [hereinafter Oei & Ring, *Human Equity?*]; Shu-Yi Oei & Diane M. Ring, *The New “Human Equity” Transactions*, 5 CALIF. L. REV. CIR. 266 (2014) [hereinafter Oei & Ring, *The New “Human Equity” Transactions*]; Palacios, *Human Capital Contracts*, *supra* note 5; Jeff Schwartz, *The Corporatization of Personhood*, 2015 U. ILL. L. REV. 1119; Ritika Kapadia, Note, *A Solution to the Student Loan Crisis: Human Capital Contracts*, 9 BROOK. J. CORP. FIN. & COM. L. 591 (2015); Matthew Soldner, *The Potential Market for Income Share Agreements Among Low-Income Undergraduates*, ISSUE BRIEF (Am. Inst. for Research, Wash., D.C.), Sept. 2015, available at <http://www.air.org/sites/default/files/downloads/report/Income-Share-Agreements-ISAs-Potential-Among-Low-Income-Undergraduates-Sept-2015.pdf> [https://perma.cc/YH78-TYB5].

25. See H.R. 3432, 114th Cong. (1st Sess. 2015); H.R. 4436, 113th Cong. (2d Sess. 2014).

human capital contract-like financial innovation disagree about many things, they all appear to agree that the current legal and regulatory environment creates significant uncertainty and is therefore an impediment to the development of a market for human capital contracts or similar financial products.<sup>26</sup>

Perhaps the most vocal, recent advocate of human capital contracts is Miguel Palacios, a professor of finance at Vanderbilt University's business school and a founder of one of the first human capital contract providers, Lumni.<sup>27</sup> Lumni provides capital upfront in exchange for a percentage of future income for students who show unusual promise. Lumni purports to be currently financing students in the United States, but Lumni started in Chile, where apparently the legal environment is less uncertain, and Palacios has complained that legal uncertainty is a significant barrier to the development of a market for human capital contracts in the United States.<sup>28</sup> Palacios is not alone in believing the time is ripe to develop a market for human capital contracts or other similar financial instruments. Nobel Prize-winning economist Robert Shiller touted what he calls "income-linked loans" in a 2003 book.<sup>29</sup> Recently, members of both houses of Congress have noticed the potential for what they call *income-share agreements*, proposing legislation in both the House and Senate to "provide the legal framework necessary for the growth of innovative private financing options for students to fund postsecondary education . . . ."<sup>30</sup> The premise of the legislation is that various types of income-share agreements are potentially beneficial, but that the current legal environment does not permit them or is uncertain enough to raise their cost unnecessarily. In this Article, we use the term *income-share agreement* to refer to the whole range of financial instruments that resemble human capital contracts, including the IBR Swap.

### B. *The IBR Swap*

This Article presents a relatively simple innovation to the human capital contract, which, to the authors' knowledge, has never been proposed before.<sup>31</sup> We call this innovation an *Income-Based Repayment Swap* (IBR

26. For example, the Upstart blog, in explaining why Upstart discontinued its income-based funding operations, stated, "while many regulatory and policy efforts are underway to facilitate the development of the market, these efforts will likely take many years." Oei & Ring, *The New "Human Equity" Transactions*, *supra* note 24, at 270 (internal quotation marks omitted).

27. *Miguel Palacios*, VAND. U., <http://www2.owen.vanderbilt.edu/miguel.palacios/> [<https://perma.cc/P6YP-3CEL>] (last visited Feb. 23, 2016).

28. *Our Story*, LUMNI, <http://www.lumniusa.net/about/our-story> [<https://perma.cc/98MP-SU9Y>] (last visited Feb. 23, 2016).

29. See ROBERT J. SHILLER, *THE NEW FINANCIAL ORDER: RISK IN THE 21ST CENTURY* 140 (2003).

30. H.R. 4436; H.R. 3432.

31. While no one has proposed a swap structure for human capital contracts, Michael Macchiarola and Arun Abraham proposed a financial instrument that has



Swap). It solves a surprising number of both practical problems and legal uncertainty associated with human capital contracts.

An IBR Swap, as we present it, is a contract between a student in a three-year juris doctor (J.D.) program at some United States law school (the student counterparty) and a fund or financial institution (the institutional counterparty) under which the student pays a percentage of income and the institution covers the costs of the student's law school loans in return. The institution could be any unrelated third-party investor.<sup>32</sup>

The student borrows money to pay for education from the government, just as students do now, taking out the same type of loan as any other student seeking funding for graduate education.<sup>33</sup> Let us imagine that a student borrows \$150,000 to pay for three years of law school. Those loans come with a federally guaranteed fixed interest rate of 6.8% and a repayment schedule of ten years.<sup>34</sup> Repayment is scheduled to begin six months after graduation. The student's monthly loan repayments would be \$1,726. The student takes that \$150,000 and pays it to the school in tuition, just as any other student would.

But simultaneously with taking out loans and paying tuition, the student enters into an IBR Swap agreement with an institutional counterparty. The institutional counterparty agrees to pay the student \$1,726 per month for 120 months (ten years) starting on the same day their student-loan obligations begin. In other words, the institutional counterparty agrees to pay the student the exact amount needed to pay back their loans for exactly the same term as the their loans.

With the institutional counterparty agreeing to pay the student counterparty \$1,726 per month for 120 months, the student agrees to pay the institution 15% of their income for the same 120 months. So, at some

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an "option" feature. See Macchiarola & Abraham, *supra* note 24. Miguel Palacios proposed using an option structure in a slightly different way. See PALACIOS, INVESTING IN HUMAN CAPITAL, *supra* note 12, at 81–101.

32. One possibility, of course, is for the institutional counterparty to be a law school, a fund created by a number of law schools, or some sort of charitable investor. These possibilities introduce a number of unique questions and concerns, however, and so for simplicity's sake, we assume at the outset that the institutional counterparty is a generic institutional investor.

33. Under current law, any student attending an accredited law school in the United States can borrow from the government any amount up to a school's total cost of attendance as unsubsidized graduate loans. See *Subsidized and Unsubsidized Loans*, FED. STUDENT AID, U.S. DEP'T OF EDUC., <https://studentaid.ed.gov/sa/types/loans/subsidized-unsubsidized> [https://perma.cc/NSS2-2WMP] (last visited Feb. 23, 2016).

34. For simplicity's sake, we use the 6.8% rate that has applied to most government direct graduate or professional school student loans for several years, even though under current law the interest rate for new loans is tied to the ten-year Treasury Note. For loans disbursed between July 1, 2014, and June 30, 2015, that rate is 6.21%, and for loans disbursed between July 1, 2015, and the present, the rate is 5.84%. See *id.*; *Interest Rates and Fees*, FED. STUDENT AID, U.S. DEP'T OF EDUC., <https://studentaid.ed.gov/types/loans/interest-rates> [https://perma.cc/73CJ-EAEC] (last visited Feb. 28, 2016).

set day in each month, the institution pays the student \$1,726, and the student pays the institution 15% of the student's income. If the student is making \$120,000 per year (\$10,000 per month), then the student would owe the institution \$1,500 each month. In its basic structure, this is a simple swap transaction.

A swap is a transaction in which the parties, called “counterparties,” exchange cash flows or obligations.<sup>35</sup> A swap is a derivative—an agreement to transfer risk, the value of which is derived from the value of an underlying asset.<sup>36</sup> The underlying asset in derivatives transactions may be any tradable instrument: an interest rate, a commodity, a currency, etc.<sup>37</sup> The parties trade payment obligations (or cash flows) at specified payment dates during the agreed-upon term of the transaction.<sup>38</sup> The payment obligations that the parties exchange are called the “legs” of a swap.<sup>39</sup> Many different kinds of swaps exist in the market.<sup>40</sup> The IBR Swap involves exchanging “fixed” payments—contractual obligations to a lender—for “floating” payments—a contractual obligation to pay a percentage of income.<sup>41</sup>

The payments that swap counterparties exchange are based on a “notional amount”—a stipulated “principal” amount.<sup>42</sup> As the International Swaps and Derivative Association (ISDA) states, “the notional amount[ ] of a derivative contract is a hypothetical underlying quantity upon which

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35. See *Product Descriptions and Frequently Asked Questions*, INT'L SWAPS & DERIVATIVES ASS'N, <http://www.isda.org/educat/faqs.html> [https://perma.cc/4YQL-HPNM] (last visited Feb. 23, 2016) [hereinafter ISDA FAQs]; see also JOHN C. HULL, *OPTIONS, FUTURES, AND OTHER DERIVATIVES* 757 (6th ed. 2006); Saul S. Cohen, *The Challenge of Derivatives*, 63 *FORDHAM L. REV.* 1993, 1997–2000 (1995); *Times Topics: Derivatives*, N.Y. TIMES, <http://topics.nytimes.com/top/reference/timestopics/subjects/d/derivatives/index.html> [https://perma.cc/XDQ4-J59U] (last updated Feb. 11, 2016) (explaining what derivatives are and referring readers to various recent articles about derivatives).

36. See ISDA FAQs, *supra* note 35.

37. *Id.*

38. *Id.*

39. *Id.*

40. For example, there are, among others: currency swaps (in which the parties exchange principle and interest payments in one currency for principle and interest payments in a different currency); commodity swaps (in which parties exchange a fluctuating market price for a fixed price of some commodity over a designated time period); and credit default swaps (in which one party pays a fee to the other party in return for compensation for default, however defined, by some reference entity). See generally *id.*

41. The student-loan leg of the swap is fixed in the sense that it is denominated by contract, not in the sense that the payment amounts necessarily are fixed; they may be fixed or variable depending on whether the student borrows on a fixed or floating rate basis from lenders.

42. In an IBR Swap, the counterparties could stipulate the “notional amount” to reflect the student's full obligation to law school lenders, or this amount also could be some portion of the student's law school loans.

interest rate or other payment obligations are computed.”<sup>43</sup> Furthermore, the reciprocal payments may or may not be netted.<sup>44</sup>

There are several different ways to classify derivatives.<sup>45</sup> Some classify derivatives based on the underlying assets or metrics involved.<sup>46</sup> Others focus on whether a derivative is exchange-traded or over-the-counter (OTC),<sup>47</sup> along with whether it is booked with a clearinghouse or not.<sup>48</sup> The IBR Swap would be an OTC (as opposed to an exchange-traded) swap. Simply put, an OTC derivative is done directly between the counterparties, without involvement of an exchange.<sup>49</sup>

For purposes of understanding the IBR Swap, this Section draws on recent legal scholarship that classifies derivatives according to counterparty motivation.<sup>50</sup> We can classify derivatives among those in which (1) both counterparties are hedging, (2) one counterparty is hedging and the other is speculating, and (3) both counterparties are speculating.<sup>51</sup> The IBR Swap involves a student counterparty that is hedging a preexisting risk, and an institutional counterparty that is speculating on students’ future income, thus it is in the speculator-hedger category.<sup>52</sup> To explain, in some contexts, derivatives serve a hedging purpose: they can offset or hedge against preexisting risks, as does insurance.<sup>53</sup> The ability to acquire insurance can offset loss; hence, buying insurance reduces risk.

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43. ISDA FAQs, *supra* note 35. In a swap, the counterparties do not exchange the notional amount. *See id.*; Timothy E. Lynch, *Derivatives: A Twenty-first Century Understanding*, 43 LOY. U. CHI. L.J. 1, 5 n.12 (2011) [hereinafter Lynch, *Derivatives*].

44. As ISDA explains: “Payment netting reduces payments due on the same date and in the same currency to a single net payment. Payment netting is essentially identical to the legal concept of *set-off*.” ISDA FAQs, *supra* note 35.

45. *See generally* Lynch, *Derivatives*, *supra* note 43; Timothy E. Lynch, *Gambling by Another Name: The Challenge of Purely Speculative Derivatives*, 17 STAN. J.L. BUS. & FIN. 67 (2011) [hereinafter Lynch, *Gambling*]; Jeffrey Manns, *Insuring Against a Derivative Disaster: The Case for Decentralized Risk Management*, 98 IOWA L. REV. 1575 (2013).

46. *See* Lynch, *Derivatives*, *supra* note 43, at 34–38.

47. *See* Lynch, *Gambling*, *supra* note 45, at 75–76.

48. *Id.*

49. *See* I PHILIP MCBRIDE JOHNSON & THOMAS LEE HAZEN, DERIVATIVES REGULATION 74–75 (I PHILIP MCBRIDE, THOMAS LEE HAZEN & CARY C. BOSHAMER, COMMODITIES REGULATION (3d ed. 1998), successor ed. 2004); *see also* ISDA FAQs, *supra* note 35. Note that some OTC derivatives are booked with a clearinghouse. *Id.* An IBR Swap would not be subject to regulatory clearinghouse requirements. *See infra* notes 126–31 and accompanying text.

50. *See* Lynch, *Gambling*, *supra* note 45; Lynn A. Stout, *Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives*, 48 DUKE L.J. 701 (1999) [hereinafter Stout, *Why the Law Hates Speculators*].

51. *See* Lynch, *Gambling*, *supra* note 45, at 71.

52. The possibility that a student would not have incurred risk but for the existence of an IBR Swap program does not affect this designation. *See id.* at 79–82.

53. *See id.* at 71, 75–82; *see also* I JOHNSON & HAZEN, *supra* note 49, at 28–29; M. Todd Henderson, *Credit Derivatives Are Not “Insurance”*, 16 CONN. INS. L.J. 1, 1–5 (2009); Manns, *supra* note 45.

In other contexts, derivatives serve a speculative purpose: they can create payment obligations based on the parties' (contrasting) predictions of future events, which creates risk that did not previously exist.<sup>54</sup>

The literature further divides derivatives that fall into the speculator-hedger category in which the speculator assumes risk for a premium—the insurance model<sup>55</sup>—and those in which speculators expect to leverage superior information or predictive capacity—the information arbitrage model.<sup>56</sup> IBR Swaps could follow either an insurance model or an infor-

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54. Commentators often describe derivatives as bets, in a literal sense. They are agreements under which one party will pay the other, depending on whether certain events occur. Lynn A. Stout, *Derivatives and the Legal Origins of the 2008 Credit Crisis*, 1 HARV. BUS. L. REV. 1, 6 (2011) [hereinafter Stout, *Derivatives*] (stating that “[t]he value of a derivative agreement is ‘derived’ from the performance of the underlying financial phenomenon, just as the value of a betting ticket at the racetrack is ‘derived’ from the performance of a horse in a race”). Betting can serve very different purposes in different market contexts. Regulatory and market challenges surrounding derivatives concern the fact that speculative betting can reduce welfare by exposing market actors to new risks without a compensating increase in returns. *See id.* at 8; Lynch, *Gambling*, *supra* note 45, at 93–94. Bets that are hedging, or serve an insurance function, in contrast, involve transfer of risk for a premium. “In the parlance of economic theory,” Stout explains, “speculative derivatives trading is a form of *rent-seeking*—trying to acquire wealth not by creating it, but by taking existing wealth from someone else.” Stout, *Derivatives*, *supra*, at 9. However, many defend speculative derivatives on grounds that they provide other benefits such as greater liquidity and price discovery. *See Lynch, Gambling*, *supra* note 45, at 74.

55. Under an insurance model, counterparties agree to swap payments based on a formula that slightly favors the risk purchaser—paying, in essence, a premium for transferring the risk. In the case of a derivative that follows the insurance model, the terms of the derivative will favor, to some degree, the speculating counterparty. Such speculators earn profits in aggregate, over time, by entering many contracts and then allowing the favorable terms, combined with probabilities and events over time, to yield a return. *See Lynch, Gambling*, *supra* note 45, at 80–82. The speculating counterparty does not receive a “price” embedded in the contract, like an insurance premium, necessarily. Rather, the counterparties may calculate the amounts of payments to be swapped, or other terms of the swap, using formulas designed to slightly favor the speculating counterparty. *See id.* at 79 n.49.

56. Under an information arbitrage model, risk purchasers invest in generating better information than their counterparties have. In the case of a speculator-hedger derivative that follows the information arbitrage model, the speculating party may not assume risk for a “price.” Rather, this counterparty may be privy to superior information about the direction or future value of the underlying asset or may have better tools or predictive skills. This kind of speculator counterparty will enter into a derivative contract with market (not favorable) terms and then wait for its predictive skills and informational advantages to produce a return. *See id.* at 79–81. This counterparty may invest in research and collect and analyze data in a way that the hedger does not. The hedger counterparty gets to mitigate risk at current market rates. The speculator counterparty gets to leverage the value of its information and analysis vis-à-vis a certain type of underlying asset with the numerous hedgers seeking to transfer risk. *Id.* Derivatives in which a speculating counterparty follows the information arbitrage model can contribute to price discovery, helping the market to determine accurate market prices for the underlying asset.

mation arbitrage model. Either way, students benefit from the fact that the institutional counterparty is able to assume risk and diversify its exposure to student-counterparty earning trajectories.

The pricing of an IBR Swap turns on a prediction of the student's future earnings over the term of the swap. A swap priced to "break even" would be one in which the predicted average earnings of the student produce payments to the swap counterparty that exactly match the payments that the swap counterparty agrees to make to the student. So, for example, if the institutional counterparty has agreed to make monthly payments of \$1,726 to the student for ten years (exactly the amount needed to service a loan for \$150,000 at 6.8% interest), then the parties would break even if the swap was "priced" at 15% and the student earned \$138,080 per year on average over the ten-year term of the swap. In that scenario, the student would pay on average \$1,726 per month to the institutional counterparty and the institutional counterparty would pay the student the same \$1,726 per month.

But, of course, parties presumably would not price a swap at a perfect "breakeven price." First of all, in an IBR Swap, the two counterparties—the student counterparty and the institutional counterparty—assume credit risk associated with the willingness and ability of the other counterparty to perform. The student counterparty assumes the risk that the institutional counterparty could default on the student's obligations to lenders. The institutional counterparty assumes risk that the student counterparty could default on making the income-based payments. If either party defaults, the result is that the student is liable for any payments owed on outstanding student loans. This credit risk would have to be incorporated into the price of the swap. In addition, institutional counterparties would presumably want to be compensated for their costs of capital; their payments are likely to be bigger than the student's corresponding payment in the beginning of the swap's term. In addition, institutional counterparties will want to price in some profit for themselves.

If the student counterparty earns more than expected, there is an incentive for the student to default on their payment obligations, but the IBR Swap would be designed to prevent student default in this circumstance, giving institutional counterparties all the tools that lenders have to ensure compliance.<sup>57</sup> Conversely, if the student counterparty earns a relatively low income, the IBR Swap has a negative value for the institutional counterparty and a positive value for the student counterparty. IBR Swaps may require regulation—such as capital adequacy requirements and pen-

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57. Cf. Patricia Brown, *Tax Consequences of Interest Rate Swaps: Characterization by Function, Not Prejudice*, 6 BERKELEY J. INT'L L. 122, 131 (1988) (citing U.C.C. § 2-718(1) (1978)).

alties for breach—to prevent institutional counterparties from defaulting on swaps that have a negative value to them.<sup>58</sup>

### III. BENEFITS OF THE IBR SWAP

The current interest in income-share agreements accompanies widespread anxiety about the rising costs of higher education and the recognition that traditional student loans are significantly burdening students.<sup>59</sup> In the law school context, where students can borrow the total cost of attendance at their institutions, which may be as high as \$230,000 for three years of attendance,<sup>60</sup> the situation for graduates is even more pronounced than in other areas.<sup>61</sup> Supporters of income-share agreements argue that market-based financial innovations, like human capital contracts, offer several benefits over traditional debt.

These same benefits apply equally to IBR Swaps. But there are additional benefits that are unique to IBR Swaps. This Section first discusses benefits that IBR Swaps share with human capital contracts and other similar instruments. It includes both benefits over traditional debt and potential benefits over the current governmental income-based repayment programs. It then explains those benefits that arise from unique attributes of the IBR Swap.

#### A. *Benefits Shared with Other Income-Share Agreements*

##### 1. *Alignment of Costs with Benefits*

The primary benefit of IBR Swaps and other income-share agreements is that they do a better job than debt of aligning the costs of an

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58. In addition, contractual terms or regulation may be necessary in IBR Swaps to reduce moral hazard, as they are in some other derivatives contexts. See Lynch, *Gambling*, *supra* note 45, at 107; Frank Partnoy & David A. Skeel, Jr., *The Promise and Perils of Credit Derivatives*, 75 U. CIN. L. REV. 1019, 1034–36 (2007).

59. See Palacios, *Human Capital Contracts*, *supra* note 5, at 2.

60. See, e.g., DELISLE & HOLT, ZERO MARGINAL COST, *supra* note 2, at 3 (“[G]raduate students have been able to use the program to finance the entire cost of their educations . . . without limit since 2006.” (citing Deficit Reduction Act of 2005, Pub. L. No. 109-171, 20 U.S.C. § 8005 (2006))).

61. Some commentators have focused on the law school context because the volume of student debt is so large there, and the earnings of law school graduates are so uneven. See, e.g., JASON DELISLE & ALEX HOLT, NEW AM. FOUND., SAFETY NET OR WINDFALL?: EXAMINING CHANGES TO INCOME-BASED REPAYMENT FOR FEDERAL STUDENT LOANS 10 (2012) [hereinafter DELISLE & HOLT, SAFETY NET OR WINDFALL?], available at [https://static.newamerica.org/attachments/2332-safety-net-or-windfall/NAF\\_Income\\_Based\\_Repayment.18c8a688f03c4c628b6063755ff5dbaa.pdf](https://static.newamerica.org/attachments/2332-safety-net-or-windfall/NAF_Income_Based_Repayment.18c8a688f03c4c628b6063755ff5dbaa.pdf) [https://perma.cc/44HG-WXKX]; BRIAN Z. TAMANAHA, FAILING LAW SCHOOLS, at x (2012) [hereinafter TAMANAHA, FAILING LAW SCHOOLS]; Macchiarola & Abraham, *supra* note 24, at 77–79; Brian Z. Tamanaha, *The Problems with Income Based Repayment, and the Charge of Elitism: Responses to Schrag and Chambliss* (Wash. U. St. Louis Sch. of Law Research Paper Series, Paper No. 13-06-01, 2013) [hereinafter Tamanaha, *The Problems with Income Based Repayment*].

education to the financial benefit to the student.<sup>62</sup> A debt arrangement defines the cost to students before they know how much money they will earn post-graduation. If a student loan program is going to break even, the interest rate must be high enough for regular borrowers to subsidize those borrowers who default because they do not earn enough to service their loans. Thus, all students who earn enough to avoid default must subsidize those students who earn too little and default. But the large majority of students who earn enough to avoid default pay the same amount, no matter how much they earn. For low earners who nonetheless earn enough to avoid default, the rate can be a very high percentage of their income.

The IBR Swap solves the problem of variable earnings by retrospectively tailoring the cost of education, so to speak, based on the amount the graduate actually earns. Instead of having a single rate that everybody pays, the rate of repayment is adjusted based on the student's individual ability to pay after the fact. This tailoring of the repayment rate to post-graduation income means that graduates who earn above the mean income subsidize students who earn below the mean. Thus, the cost for the median earner goes down, since above average returns can be captured from high earners, unlike in a traditional debt arrangement in which every non-defaulting borrower pays the same (relatively high) rate.

This decrease in cost for median earners could be substantial, depending on the default rate in the traditional loan program. But for non-defaulting *low* earners, the decrease in cost is even more substantial. Thus, the primary benefit of income-share agreements is that they dramatically decrease the cost of education for graduates who end up not earning high incomes. If it is true that there is some inherent uncertainty about which students will be high earners and which will be low earners, this reduction in the downside risk of low earning is a huge benefit. It enables students to decrease the downside financial risk that their educations will not result in earnings high enough to justify the cost.<sup>63</sup>

In the law school context, the variation of earnings is extreme.<sup>64</sup> Currently, this problem of extreme variation in earnings among graduates is

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62. SHILLER, *supra* note 29, at 139.

63. If there is no real uncertainty from the student's perspective, and the student's actions largely determine earnings (through effort, for example), then the benefits of insuring against downside risk are dramatically reduced. In this case, so-called moral hazard could reduce the value of the IBR Swap's structure. See *infra* notes 143–45 and accompanying text.

64. According to the National Association of Law Schools (NALP), the distribution of starting salaries of law school graduates is bimodal, with one peak (representing about 16% of students) making approximately \$160,000 and a second peak (representing about 51% of students) making between \$40,000 and \$65,000. See *Class of 2013 Bimodal Salary Curve*, NALP (July 2013), [http://www.nalp.org/class\\_of\\_2013\\_bimodal\\_salary\\_curve](http://www.nalp.org/class_of_2013_bimodal_salary_curve) [<https://perma.cc/6AXE-MR7J>]. This data excludes graduates working part-time and graduates who are not employed. Michael Simkovic and Frank McIntyre survey available data on *lifetime* earnings by law school graduates, which shows a similar wide disparity in earnings. See Michael

at least partially addressed by an expansion of income-based repayment programs by the Obama Administration.<sup>65</sup> But these programs, which are designed to enable those borrowers who have the most debt and the lowest income to avoid default, do not do as good a job aligning the costs of education with the financial benefits derived from it as an IBR Swap.

A governmental income-based repayment option prevents very low-income students from defaulting, but it does not reduce the cost for median students. It also does nothing for students who only borrow part of the costs of their education, because they do not have enough debt to trigger the entrance requirements for the program.<sup>66</sup> An IBR Swap, on the other hand, adjusts the amount repaid for one's education dollar for dollar based on the ex post financial value of that education, as reflected in one's overall income. Thus, an IBR Swap performs a more precise matching of ability-to-pay with financial benefit than government income-based repayment and loan forgiveness programs.

Some proponents of income-share agreements support them because they believe that income-share agreements have the potential to decrease the government's involvement in higher education finance.<sup>67</sup> These commentators believe that existing government programs, especially governmental IBR expanded by the Obama Administration, commit taxpayer funds in ways that can have perverse effects on costs and can potentially subsidize students whose families could afford to pay without assistance.<sup>68</sup> Because IBR Swaps and other income-share agreements subsidize the risk of low earning graduates with earnings from high-earning graduates, the need for taxpayers to subsidize low-earning graduates is potentially diminished.<sup>69</sup> And because income-share agreements permit low-earning students to pay less, the need for government-subsidized insurance against

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Simkovic & Frank McIntyre, *The Economic Value of a Law Degree*, 43 J. LEGAL STUD. 249, 254 (2014). For example, the United States Bureau of Labor Statistics has data for all lawyers, which shows that in 2012, the 75th percentile compensation was about \$160,000 (at all levels) and that the 25th percentile was about \$70,000. See *Occupational Employment Statistics: Lawyers*, U.S. DEP'T OF LABOR (May 2012), <http://data.bls.gov/cgi-bin/print.pl/oes/2012/may/oes231011.htm> [<https://perma.cc/B9EB-EFY6>] (last modified Mar. 29, 2013).

65. See, e.g., Carey, *supra* note 4.

66. This feature of the government's IBR programs creates strong incentives for students to over-borrow. It could be corrected in the government program by tailoring the eligibility requirements for the income-based repayment programs to the amount borrowed. See, e.g., DELISLE & HOLT, ZERO MARGINAL COST, *supra* note 2, at 21–23.

67. See, e.g., Palacios, *Human Capital Contracts*, *supra* note 5, at 3.

68. See, e.g., DELISLE & HOLT, SAFETY NET OR WINDFALL?, *supra* note 61, at 10; DELISLE & HOLT, ZERO MARGINAL COST, *supra* note 2, at 21.

69. The government subsidies are currently almost exclusively to be found in the government's IBR programs, since the current system of federal student loan financing (excluding the loan forgiveness programs) currently operates at a profit for the government.



low earnings in the form of income-based repayment or loan forgiveness is dramatically reduced.<sup>70</sup>

But even for those who believe that higher education *should* be subsidized by taxpayers, IBR Swaps and other income-share agreements offer an opportunity to clarify the discourse around governmental support for education and redirect resources where they will do the most good.<sup>71</sup> If the existence of a market for IBR Swaps would diminish the problem of low-earning graduates being unable to pay for their higher education, then that would enable the government to focus its resources on providing educational opportunities to those who need them the most. For example, the government could redirect its efforts and funds to provide grants for students without means, or to fund state educational institutions or other programs that are targeted to increase access to higher education for those students who have barriers to access. In the law school context, a market for IBR Swaps would enable the government to withdraw from its current loan forgiveness programs (at least for future students) and refocus its resources on making legal education better, cheaper, and more accessible to low-income and minority students—if those are the policy objectives the government chooses to pursue. Alternatively, the government could focus its resources on making higher education, and even law school, cheaper and more accessible for all students.

## 2. *Information for Students*

The second most often touted potential benefit of income-share agreements is their ability to communicate information to students seeking an education.<sup>72</sup> Advocates for human capital contracts emphasize in-

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70. Some argue that the current governmental IBR represents a significant subsidy in the law school context. *See, e.g.,* DELISLE & HOLT, SAFETY NET OR WIND-FALL?, *supra* note 61, at 1; Tamanaha, *The Problems with Income Based Repayment*, *supra* note 61. For example, a law student who borrows \$125,000 will qualify for the government's income-based repayment and loan forgiveness programs even if the student earns up to \$172,620 per year. (The math here is slightly simplified—\$125,000 at 6.8% for ten years is \$17,262 per month; a student qualifies for PAYE if payments under the standard ten-year payment option exceed 10% of annual income.) However, qualifying for income-based repayment does not necessarily represent a subsidy from the federal government, since loan forgiveness comes after ten years only for students who work for that whole period in public interest jobs. For all others, loan forgiveness only comes after twenty years, after which time many students will have paid back the full amount of their loans.

71. *See, e.g.,* LAUREN ASHER, DIANE CHENG & JESSICA THOMPSON, INST. FOR COLL. ACCESS & SUCCESS, SHOULD ALL STUDENT LOAN PAYMENTS BE INCOME-DRIVEN?: TRADE-OFFS AND CHALLENGES 10–18 (2014), *available at* [http://ticas.org/sites/default/files/pub\\_files/TICAS\\_IDR\\_White\\_Paper.pdf](http://ticas.org/sites/default/files/pub_files/TICAS_IDR_White_Paper.pdf) [<https://perma.cc/J9S8-24AT>]; Stephen Crawford & Robert G. Sheets, *Managing Risk, Reaping Reward: The Case for a Comprehensive Income-Based Loan System*, in REINVENTING FINANCIAL AID: CHARTING A NEW COURSE TO COLLEGE AFFORDABILITY 171, 171–90 (Andrew P. Kelly & Sara Goldrick-Rab eds., 2014).

72. *See* SHILLER, *supra* note 29, at 133; *see also* Palacios, *Human Capital Contracts*, *supra* note 5, at 1, 5–6.

formation-generating benefits of income-share financing, as the pricing of individual income-share agreements would communicate information to students about the institutional counterparty's assessment of a student's potential and of the value of the programs or careers the student is pursuing.<sup>73</sup>

However, the extent to which this "differential pricing" of income-share agreements can generate useful information for students may be far less than advocates indicate. In order to generate information about the value of a given program, vis-à-vis another program, pricing would have to control for other attributes of the student, concentrating differentials on program differences. Current models for income-share agreements do not do this. In addition, as discussed below, while many describe this differential pricing as a "feature" of income-share agreements, it is also a significant "bug."<sup>74</sup> In any event, to the extent that human capital contracts produce useful information, the IBR Swap would do so as well.

Palacios describes information benefits of human capital contracts this way:

The pricing of human capital contracts will be based on the investor's expectations of a student's future income during the repayment period. Those expectations will depend on the school that the student is attending, the student's field of study, and other factors considered relevant to the student's future earnings. Thus, by observing the price of these contracts, comparisons of earnings expectations will be possible in an easy, straightforward manner.<sup>75</sup>

There is significant outcry that such information is not currently available to students, especially law students, and that much of the information provided is skewed or even fraudulent.<sup>76</sup> Thus, a law-school financing mechanism that could incentivize investors to spend the time and money to collect the highest quality information available to predict probable earnings of students graduating from specific schools, or based on other characteristics, would be welcome by many.

IBR Swaps, in theory, would incentivize investment in information gathering.<sup>77</sup> The nature of that information, however, and its usefulness

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73. See, e.g., Crawford & Sheets, *supra* note 71.

74. See *infra* Part IV(A).

75. Palacios, *Human Capital Contracts*, *supra* note 5, at 5.

76. TAMANAH, *FAILING LAW SCHOOLS*, *supra* note 61, at 143.

77. *Price discovery* is the impounding of new information into asset prices, through trading. In theory, the concept of price discovery can refer broadly to the capture and aggregation of market wisdom about future events. See DON M. CHANCE & ROBERT BROOKS, *AN INTRODUCTION TO DERIVATIVES AND RISK MANAGEMENT* 11–12 (7th ed. 2007); S.L. GUPTA, *FINANCIAL DERIVATIVES (THEORY, CONCEPTS AND PROBLEMS)* 16–17, 35, 90 (2006); Joel Hasbrouck, *One Security, Many Markets: Determining the Contributions to Price Discovery*, 50 J. FIN. 1175, 1175–77 (1995); Lynch, *Gambling*, *supra* note 45, at 108–18. Some contend that derivatives are use-

to students would remain to be seen. To understand how the “price” of an IBR Swap or other income-share agreement could communicate information to a student, it is first necessary to understand what “price” means in this context. Palacios explains it this way: “Let’s define the price of a human capital contract as the percentage of income that a student agrees to pay back to the investor *per* dollar provided.”<sup>78</sup> As was discussed above, a “breakeven price” could be identified for each student based on the amount the counterparty will be obligated to pay each month,<sup>79</sup> the term of the IBR Swap, and the projected earnings of the student over the term of the IBR Swap. In the example described above, the counterparty paid the student \$1,726 per month (\$20,712 per year), the term was ten years, and the projected average annual earnings of the student over those ten years was \$138,080, resulting in a “price” of 15%.<sup>80</sup>

However, that 15% “price” is derived from the other variables and is therefore not fixed. If differential pricing were permitted, then institutional counterparties might offer IBR Swaps (or other income-share agreements) to different students at different prices. For example, while one student (Ben) might be expected to earn on average \$138,080 per year, justifying a 15% price for receiving \$150,000 upfront, another student (Heather) might be expected to earn more. If Heather was expected to earn \$207,129, for example, she may be offered a contract with a price of 10% of her income over the same period in exchange for the same

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ful to predict information, such as creditworthiness. See Mark J. Flannery, Joel F. Houston & Frank Partnoy, *Credit Default Swap Spreads as Viable Substitutes for Credit Ratings*, 158 U. PA. L. REV. 2085 (2010). In the literature on derivatives, scholars debate whether a robust futures market can provide beneficial “price discovery,” focusing on the relationship between futures or options prices and spot prices in exchange-based markets. Some contend that the price discovery benefits of speculative derivatives justify their risks (or offset the net reduction in welfare associated with rent-seeking). See Kenneth D. Garbade & William L. Silber, *Price Movements and Price Discovery in Futures and Cash Markets*, 65 REV. ECON. & STAT. 289 (1983); Robert W. Kolb, James V. Jordan & Gerald D. Gay, *Futures Prices and Expected Future Spot Prices*, 2 REV. RES. FUTURES MARKETS 110 (1983). Others contend that the information that derivatives markets yield outpace spot prices by such short intervals that the benefits do not offset speculative derivatives’ costs. See Lynch, *Gambling*, *supra* note 45, at 116–18; Lynn A. Stout, *Betting the Bank: How Derivatives Trading Under Conditions of Uncertainty Can Increase Risks and Erode Returns in Financial Markets*, 21 J. CORP. L. 53, 55–59 (1995); Lynn A. Stout, *Regulate OTC Derivatives by Deregulating Them*, REG., Fall 2009, at 30, 31–33 [hereinafter Stout, *Regulate OTC Derivatives*]. This literature may be only marginally relevant to the IBR Swap, the “price discovery” functions of which may be quite limited.

78. See Palacios, *Human Capital Contracts*, *supra* note 5, at 5.

79. See *id.*

80. The price of 15% is based on the fact that the student received \$150,000 up front. However, the price should actually be expressed as a function of how much was received. So, for example 15% for \$150,000 is really 1% for each \$10,000 received. Therefore, if the student has some savings and so chooses only to obtain \$100,000 through a human capital contract, they will only have to pay back 10% of their income over twenty years.

\$150,000.<sup>81</sup> Even though they both pay for their entire education with a human capital contract, and even though their educations cost the same amount, Ben will have to pay back one and one-half as much *as a percentage of his future income* as Heather. The difference in price reflects the fact that the investor predicted that Heather's future income over the relevant period is likely to be higher than Ben's future income. They will pay the same amount as each other if they earn the amount predicted, which, if the price is the "breakeven price," will be the same amount that either would pay under a traditional loan.<sup>82</sup> If either one earns more or less than predicted, they will pay the commensurate amount more or less according to the "price" of their contract.

Palacios and others assume that investors would take into account (1) school, (2) field of study, and (3) other factors when setting an appropriate price for a human capital contract.<sup>83</sup> In the law school context, investors might charge more—as a percentage of income—to a student attending a low-ranked law school than a student attending a highly-ranked law school, based on projected income. If they were permitted, investors might charge students who attended the same school less or more depending on their Law School Admission Test (LSAT) scores or undergraduate GPAs, if they determined that these factors were predictive of earnings.<sup>84</sup> Finally, if it was legal to do so, investors might charge a student more if that student was a woman than if that student was a man, again based on projected income, since women (including female lawyers) earn less on average than men.<sup>85</sup> Some may find this differential pricing deeply disturbing, and we discuss tradeoffs in regulating differential pricing below in Part V. But it is important to recognize that there is no production of information to students without some kind of differential pricing.

Currently, law schools are required by the American Bar Association (ABA) to survey their students to determine how many of them are employed nine months after graduation and what type of employment they

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81. For Ben, the calculation is as follows:  $20,712 \div 138,080 = .15$ ; for Heather, it is as follows:  $20,712 \div 207,129 = .10$ .

82. Just to be clear, the cost of financing a law school education is likely to be about the same under fixed debt and an income-share agreement if the student earns the amount that they are predicted to earn. If the student earns less than predicted, then their cost will be higher under debt financing than under an income-share agreement. If they earn more than predicted, their cost will be higher under an income-share agreement than under debt financing.

83. See Palacios, *Human Capital Contracts*, *supra* note 5, at 5.

84. It appears that the few companies currently purporting to offer human capital contracts are making individualized pricing decisions based on a variety of potentially intangible factors, given that they appear to be choosing a very few, very promising students to receive the first contracts. They are, in effect, "cherry picking" students. The authors know of no study that supports an inference that law school graduates with higher LSAT scores or undergraduate GPAs make more money than their peers, once other factors are controlled.

85. See *infra* Part V(A).

have. Some commentators have criticized this employment information as untrustworthy, misleading, insufficient, or even fraudulent.<sup>86</sup> An investor in IBR Swaps would need to have much more robust information about the earnings of those students in which they invested. In order to “price” the contract adequately, an investor would have to assess the long-term earnings prospects of each participant.<sup>87</sup> In theory, as a market for IBR Swaps developed, investors would compete to develop the most predictive models of future earnings, providing students with a range of opinions about their future earning capacity.

Some believe that the information-providing benefit of differentially priced IBR Swaps may introduce pressure on what is perceived as excessive costs of education, especially law school education. The extent to which higher education costs are in fact excessive (rather than simply high), their relationship to inflation, the rates at which they rise, and their capacity to respond to downward pressure, are subjects of a rich literature.<sup>88</sup> Though assessing cost is complex, an income-based financing program like the IBR Swap might create some downward pressure if it provided information to students about the relationship between cost and future earnings that make the cost seem unjustified.<sup>89</sup>

Because the current education-financing system provides financing on the same terms no matter what a student studies and where, and because students have such thin or misleading information about earnings projections for graduates of various schools, commentators believe that tuition costs are relatively insensitive to price pressures.<sup>90</sup> In other words, because students are unable to evaluate how much different types of educations are worth, from a financial point of view, they are prevented from making good choices about where to go and what to study.<sup>91</sup> In the law school context, some commentators believe that law schools with low-earn-

86. See, e.g., TAMANAHA, *FAILING LAW SCHOOLS*, *supra* note 61, at 143.

87. If an investor was more interested in communicating rosy information about employment prospects of law school graduates than in making money or breaking even, that investor could “distort” the signal provided by predictive data. That might be a reason to favor independent investors as an institution providing a human capital contract or IBR Swap over a law school.

88. See generally ROBERT B. ARCHIBALD & DAVID H. FELDMAN, *WHY DOES COLLEGE COST SO MUCH?* (2010); WILLIAM J. BAUMOL, *THE COST DISEASE: WHY COMPUTERS GET CHEAPER AND HEALTH CARE DOESN'T* (2012); WILLIAM ZUMETA ET AL., *FINANCING AMERICAN HIGHER EDUCATION IN THE ERA OF GLOBALIZATION* (2012); W.J. Baumol & W.G. Bowen, *On the Performing Arts: The Anatomy of Their Economic Problems*, 55 AM. ECON. REV. 495 (1965); Brooks, *supra* note 2, at 11–15.

89. Of course, if the effect instead shows the opposite, then the price pressure could be upwards.

90. See, e.g., Michael Simkovic, *Risk-Based Student Loans*, 70 WASH. & LEE L. REV. 527, 557 (2013) (discussing students' lack of information in college context).

91. See, e.g., *id.* at 567 (“[S]kewed incentives and information asymmetries have increasingly shifted educational resources away from human capital investment and toward present consumption.”).

ing graduates are unsustainably expensive.<sup>92</sup> Students are willing to pay the high cost of education at least partially because the structure of the current educational financing system makes it easy to overburden oneself with debt in programs that are unlikely to provide employment opportunities commensurate with their price.

Governmental IBR currently exacerbates this problem. Governmental IBR is structured as a ceiling on loan repayments for students who participate. But this ceiling is the same no matter how much a student borrows. So, a student who borrows \$30,000 for college will be able to take advantage of governmental IBR only if their income is less than \$55,215.<sup>93</sup> A student who borrows \$125,000 for law school, in addition to the \$30,000 they borrowed for college, will be able to take advantage of governmental IBR until their income exceeds \$210,240.<sup>94</sup> If they expect their income to be below that amount, they can, in effect, continue to borrow without their cost going up at all. No matter how much the student borrows, they pay a flat 10% of their income in repayment obligations. Some commentators think this situation creates bad incentives for students, because they have an incentive to continue attending school beyond when it is useful to them and also to borrow as much as permitted to fund their educations.<sup>95</sup> It also creates bad incentives for schools, which can increase tuition without any additional cost to students who are already borrowing so much that they are virtually guaranteed to be covered by governmental IBR.<sup>96</sup>

Because the percentage a graduate owes under an IBR Swap depends on how much they borrow, the perverse incentives of governmental IBR go away. In other words, rather than owing a flat 10% ceiling no matter how much a student borrows, under an IBR Swap (or other income-share

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92. See, e.g., Gregory Crespi, *Will the Income-Based Repayment Program Enable Law Schools to Continue to Provide "Harvard-Style" Legal Education?*, 67 SMU L. REV. 51, 60 (2014); see also TAMANAHA, *FAILING LAW SCHOOLS*, *supra* note 61, at 122–25.

93. This calculation is for the PAYE program, under which a student may limit their monthly payments to 10% of "discretionary income," which is defined as 150% of the DHHS Poverty Guideline for the year. In 2014, the 150% of the Poverty Guideline for a single person living in the continental United States was \$17,655. Assuming that the student had total eligible debt of \$30,000 at 4.66% interest rate (Stafford rates for 2014), they would owe \$313 per month (or \$3,756 per year) under the standard (ten-year) repayment plan. Therefore, once the student's income exceeded \$55,215, their payments under the PAYE program would be less than their payments under the standard program, and they would be eligible to participate in PAYE.

94. The slightly simplified math is as follows: under the standard plan, \$3,756 for the undergraduate loan, plus \$17,268 (\$125,000 at 6.8%, see *supra* note 34, under the standard ten-year payment plan) equals \$21,024. Therefore, when the student's income reached \$227,895, the amount of discretionary income would be \$210,240 (227,895 minus 17,655), their annual payment under PAYE would be \$21,024, and so they would at that point be eligible for PAYE.

95. See DELISLE & HOLT, *ZERO MARGINAL COST*, *supra* note 2, at 10 (describing what Delisle and Holt call "zero marginal cost threshold").

96. See *id.*

agreement), the student would owe a percentage tied to the amount they borrowed. In that case, the cost of further borrowing always increases the future cost of repayment, removing the perverse incentives in the current government programs.<sup>97</sup>

### B. *Benefits Unique to IBR Swaps*

While income-share agreements have a number of benefits, Milton Friedman had already identified problems with them over fifty years ago. There are two problems with human capital contracts that are *not* solved by IBR Swaps: adverse selection<sup>98</sup> and moral hazard.<sup>99</sup> IBR Swaps, however, do largely solve the three other biggest problems associated with human capital contracts. First, because the institutional counterparty provides no money up front to the student, the costs of collection and risk of default should dramatically decrease as compared to human capital contracts. Second, IBR Swaps integrate with existing government programs to help students finance their educations, while human capital contracts compete with such programs. Finally, IBR Swaps are less risky for institutional counterparties than human capital contracts, because there is no need for the institutional counterparty to put significant amounts of capital at risk. These benefits make it possible for a widespread market in income-share agreements to become a reality for students.

#### 1. *IBR Swaps Reduce Default Risk and Collection Costs*

There is an inherent collection problem in all student loans, since such loans are unsecured. Students do not generally have property to serve as collateral for their loans, and therefore one of the primary mechanisms for reducing risk of non-payment in large lending markets is absent in the student loan context. This was one of the factors that induced the federal government to enter the student loan business in the first place.

Risk of non-payment exists in the human capital contract market as well as in the student loan market. Under any type of income-share agreement, the investor shares some of the student's risk of under-earning and is compensated for this risk-sharing by distributing the risk of low earning broadly among a pool of students. But in addition to the risk of under-earning by students, there is a risk that a student who has received an upfront payment from an investor and used it for their education would then refuse to repay the investor, even if they are able. This risk exists every time one person provides something of value upfront in exchange for another promising something of value in the future.<sup>100</sup> An investor

97. The government could also remove these perverse incentives by tying the percentage owed under their IBR programs to the amount borrowed.

98. *See infra* Part IV(B).

99. For a variety of reasons we think moral hazard is not a significant problem in the IBR Swap context. *See infra* notes 143–45.

100. *See, e.g.,* Arthur Allen Leff, *Injury, Ignorance and Spite—The Dynamics of Coercive Collection*, 80 YALE L.J. 1, 1 (1970) (“Whenever one person does something

incurs costs when students do not pay what they owe, both because some amount will never be collected and because monitoring the student's earnings and enforcing their obligation to pay has costs.

On one hand, human capital contracts may have a lower cost of collection than traditional debt. Because low-earners pay very little under the terms of the contract, income-share agreements shift the focus of collection for non-payment from low-earning graduates (the perennial collection problem for traditional student loans) to high-earning graduates. Low-earning graduates owe less, so they are more able to make their required payments. High-earners, as their income goes up, have more incentive to try to avoid repayment. If it is true that it is harder to collect money from someone who has very little, focusing collection on high earners may decrease at least some collection costs.

On the other hand, costs of collection may be high for human capital contracts, since default becomes more attractive as a student's post-graduate income rises. As a high earner's income grows, they may compare the amount they owe under a human capital contract to the amount they would have paid under a traditional debt instrument. As this difference grows, the high earner might feel justified renegeing on their agreement, even if they would not have felt justified in the case of a traditional loan. And the fact that the student is a high earner means that they may have access to the means, like legal counsel, to press a claim to avoid repayment.

Whether high-earning or low-earning, collection-evaders are actually more expensive to pursue is an empirical question beyond the scope of this Article. It is difficult to add up these disparate and speculative costs of collection, but they are likely substantial. Some believe that factors like these were instrumental in the demise of Yale's so-called "Tuition Postponement Option," a voluntary income-based tuition program that was available for students at Yale College from 1971 to 1978.<sup>101</sup>

The primary practical benefit of an IBR Swap over a human capital contract is that the IBR Swap should have significantly lower costs of collection across the board. This decrease in costs of collection comes from the fact that the institutional counterparty provides no money up front to the student. Rather, the student gets all the money they need for their education from a lender, who is likely the federal government. Therefore, the student's payment obligation is split between the lender and the inves-

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in the expectation that another will then do something else, there arises, given the nature of people and time, a potential problem: the other person might not.").

101. Robert Shiller has an informative description of the program, in which he concluded that it "was a wonderful idea, but it . . . [among other things] affronted then-current individual impressions of fairness." SHILLER, *supra* note 29, at 143.



tor. This bifurcation of payment obligation reduces the cost of collection for the investor.<sup>102</sup>

As discussed above, the student has an obligation to pay a fixed amount to the lender no matter how much they earn. They and the institutional counterparty then make reciprocal payments that are either exactly equal, result in a net positive for the student, or result in a net positive for the institutional counterparty. Remember, the amount of income the student earns at which the reciprocal payments are exactly equal is called the *break-even point*.

If the student earns less than the break-even point, then they are receiving more from the institutional counterparty than they are paying it. In that situation, obviously, the student has a strong incentive to perform. Every time the reciprocal payments do not occur, they lose money. So, if the reciprocal payments only occur when the student both reports information to the institutional counterparty and makes the appropriate payment to the institutional counterparty, then the institutional counterparty's costs of collection should be quite low. The counterparty presumably never needs to chase down low-earning students or expend significant sums to monitor them. It does have to make sure it has a system in place to keep track of which students have made payments to it, so it does not make payments to students who have not made their appropriate reciprocal payments. It also needs some system to ensure that students are not providing false or fraudulent information about their income, since a student's reported income determines the amount of money the student pays the institutional counterparty.<sup>103</sup> But the counterparty has a pretty big stick that it can swing: each month it pays the student more than the student pays it.

This situation is dramatically different from a human capital contract, in which the investor provides a bulk payment up front. Once the student receives the upfront capital and spends it on tuition, the entire obligation flows the other way, from student to investor. Therefore, it is in the student's interest to avoid payment or even disappear if possible, even if their income is below what would be the break-even amount in an IBR Swap. The only "sticks" the institutional investor wields are the enforcement provisions that lenders use to enforce unsecured debts.<sup>104</sup> Since in the case of an IBR Swap the institutional counterparty has provided nothing up

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102. Note that the total cost of collection shared between the investor and the lender may be the same or even greater than the cost of collection associated with a human capital contract. We focus on the cost of collection for the investor alone, who is able to "piggy back" on the collection efforts of the lender and thereby save money.

103. There is a wide range of contractual options available to enforce payment and income-monitoring, including required submission of student's federal income tax forms and required information sharing from student loan lenders.

104. In this context, legal uncertainty about whether human capital contracts constitute debt or are dischargeable in bankruptcy becomes important. *See infra* Part IV(C) & (D).

front, the student depends on it to make ongoing monthly payments. It is in the student's interest to maintain the relationship and provide what is needed to receive those ongoing reciprocal payments.

When students earn more than the break-even amount, the situation is reversed, and it is in the student's interest to avoid payment. But, as compared to a human capital contract, an institutional counterparty providing an IBR Swap is in much better shape. That is because the amount owed to the IBR Swap institutional counterparty is a fraction of the amount that would be owed to a human capital contract investor, as the student's total payment obligation is split between the student's lender and the swap counterparty.

Take as an example the student described above who earns \$160,000. The student owes \$1,726 per month on law school loans. The student also has a reciprocal obligation under which they pay the institutional counterparty \$2,000, and it pays them \$1,726, which represents a net payment from the student to the institutional counterparty of \$274. If the student stops paying the IBR Swap institutional counterparty the \$2,000 they owe, the institutional counterparty will stop paying the student the \$1,726 it owes them.<sup>105</sup> This default results in a monthly benefit to the student of only \$274, while their monthly benefit would be the full \$2,000 if they defaulted on a human capital contract with the same terms.

If the student wants to avoid payment altogether, they have to default not only on their payments under the IBR Swap, but also to their lender. Obviously, if the benefit of defaulting on the student's obligation to the institutional counterparty alone is only \$274 instead of \$2,000 per month, their incentive to default is lower. If they choose to default on their entire obligation—\$274 to the institutional counterparty and \$1,726 to the lender—then they will have *both* the lender *and* the institutional counterparty seeking to enforce the obligation. In that case, presumably, there would be at least some collection synergies that would reduce the cost of collection for the institutional counterparty. And if they both fail, the institutional counterparty will only lose \$274 per month. The lender takes the bigger loss from the default.

In addition, the fact that a student's income is likely to go up over the course of their post-graduate career means that they are likely to have

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105. Reciprocal payments could be reduced to a single net payment. Under this system, the payment obligation of the student counterparty would be netted against the payment obligation of the institutional counterparty; one counterparty would make a net payment. If the institutional counterparty owed the student \$1,726, and the student owed the institutional counterparty \$2,000, there would be a single payment of \$274 from the student to the institutional counterparty. In another alternative, the institutional counterparty could make its full payment directly to the student's lender and collect the full amount the student owes directly. Under this scenario, the institutional counterparty would ensure that the student was not defaulting on its loan and keeping the institutional counterparty's payments, but the institutional counterparty would be required to collect the whole amount from the student.

started their career receiving a net benefit from the institutional counterparty. In that case, they may have developed a personal “culture of compliance,” in which they have gotten into the habit of making their payments to the institutional counterparty, and this culture of compliance may raise the personal, psychic costs of defaulting for the student. In any case, while collection costs do not disappear in an IBR Swap, limiting collection problems to high-earning students, and even decreasing them substantially, should dramatically decrease collection costs.

But more importantly, the fact that IBR Swaps coordinate with governmental loan programs means that the government is still collecting a significant portion of the student’s repayment obligation. The government can use collection mechanisms that are superior to those available to ordinary lenders or human capital contract providers. It currently administers \$1 trillion of student loans,<sup>106</sup> and thus economies of scale drive down costs of collection. In addition, once a student has defaulted, the government has the ability to withhold tax refunds, garnish paychecks, and take a portion of social security benefits—all without a court order.<sup>107</sup> It also has made student loans non-dischargeable in bankruptcy.<sup>108</sup> If human capital contracts were entered into with private investors, none of the collection benefits of governmental student loans would apply. The private parties would be left to their own devices to enforce collection, and these costs could represent a significant cost per agreement, driving up the price. In the case of an IBR Swap, however, because the payment obligation is split between the government lender and the IBR provider, the collection methods available to the government are not lost, but can be used to collect a portion of the student’s repayment obligation.

## 2. *IBR Swaps Coordinate with Government Student-Loan Programs*

Unlike human capital contracts, the IBR Swap complements, rather than competes with, existing governmental student loan programs. The benefit of this coordination is apparent in reducing collection costs, but it also has additional benefits. Under current law, the federal government provides loans to students for attending law school at a fixed rate. There is some controversy currently about whether the rate is too high, but it is inarguably lower than could be obtained from private lenders. Because the federal government still provides the upfront capital (in the form of a student loan) for a student’s education when the student enters an IBR Swap, the student can benefit from this favorable interest rate.

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106. See Rohit Chopra, *Student Debt Swells, Federal Loans Now Top a Trillion*, CONSUMER FIN. PROTECTION BUREAU (July 17, 2013), <http://www.consumerfinance.gov/newsroom/student-debt-swells-federal-loans-now-top-a-trillion/> [https://perma.cc/manage/create/].

107. See *Federal Loans*, STUDENT LOAN BORROWER ASSISTANCE, <http://www.studentloanborrowerassistance.org/collections/federal-loans/> [https://perma.cc/TPA5-HDQW] (last visited Feb. 27, 2016).

108. See 11 U.S.C. § 523(a)(8) (2012).

Human capital contracts, on the other hand, compete with federal student loans. A student who wishes to enter into a human capital contract must forego student loans in favor of the contract.<sup>109</sup> Therefore, any subsidies that are provided by the federal government to the student loan industry by guaranteeing or directly offering student loans cannot be used by students who obtain their financing through human capital contracts. In addition, any loan-forgiveness programs offered or subsidized by the government will not be available to human capital contract holders. In this way, human capital contracts must not only provide terms that are more attractive than those offered by traditional lenders, they must offer terms that are more attractive than those offered by the government.

IBR Swaps are designed specifically to be used in conjunction with federal student loan programs, and so any subsidy available through the federal student loan system is also available to students with IBR Swaps. If the government should ever increase the subsidies provided through the student loan system, this would negatively impact a market for human capital contracts. IBR Swaps, on the other hand, act in the opposite way. They complement governmental loan programs and automatically integrate any benefits provided by government loans into themselves. The price of an IBR Swap is directly tied to the amount a student needs to pay back their loans, and it therefore automatically incorporates any subsidies or benefits provided by the government into the Swap. If the government loan rate goes down, then the amount of reciprocal payments a student needs to cover their loan payments goes down, and the price of an IBR Swap would also go down.<sup>110</sup>

This Article does not assess how the IBR Swap would or should interact with government income-based repayment programs. That question is a complex one, and the objective here is to present the basic IBR Swap concept. For example, understanding how an IBR Swap program would interface with a government income-based repayment program would require discussion of which counterparty should capture benefits of the government subsidy. Also, the mechanics of how the Swap would interact

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109. Students are presumably not required to completely forego student loans, but each dollar they acquire under a human capital contract is a dollar they do not acquire through a student loan.

110. If the government changes the repayment rate on loans that have already been disbursed, the IBR “price” has already been fixed, and so the student’s obligation to the institutional counterparty would presumably not change. But in this case, the student still automatically receives the benefit of a reduced student-loan repayment obligation, because the reciprocal payment from the institutional counterparty to the student would be more than the student needs to repay their loans. Absent any contractual provision to the contrary, they could keep the difference, or it would be incorporated into the calculation of the single net payment made from the student to the institutional counterparty or from the institutional counterparty to the student.

with a student election of government-sponsored, income-based payments would require explication.<sup>111</sup>

### 3. *IBR Swaps Do Not Put Capital at Risk*

Finally, IBR Swap institutional counterparties avoid a part of the costs associated with providing upfront capital to invest in a student's education. Under an IBR Swap, the student borrows the upfront capital from a lender, and accordingly the IBR Swap institutional counterparty does not have to take on the cost of such capital. Of course, the capital still has a cost, which is the interest rate the student owes the lender, and the IBR Swap must be priced to compensate the student for the cost of capital the student obtained through a traditional loan. But the institutional counterparty does not have to take on much additional debt of its own.<sup>112</sup>

Again, a human capital contract does not have this feature. A provider of human capital contracts has to invest significant capital up-front on the promise of repayment in future years. Because providers of human capital contracts must provide capital upfront to students, because they won't receive it back for many years, and because they are likely to receive less of it back in the early stages of the contract, providers of human capital contracts have the costs associated with acquiring the capital to provide to students.

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111. One possibility would be for the institutional counterparty's obligations to be unaffected by a student's participation in a governmental IBR program and all the benefit to be received by the student. So, if a student had an IBR Swap under which the student paid the institutional counterparty 10% of their income in exchange for the counterparty's payment of \$1,726 per month, both parties payments would remain the same whether the student made use of a governmental IBR program or not. If the student's income was \$50,000, they would pay the institutional counterparty \$417 per month (10% of their income), and the institutional counterparty would pay the student \$1,726 per month—enough to make the payments on their student loan. But the student would also qualify to make payments on their loan of \$417 per month (slightly simplified math) under a governmental IBR program, and if the student chose to take advantage of it, they could use the \$1,726 they received from the institutional counterparty to pay the government \$417, and still have \$1,309 in their pocket. Of course, the other possibility would be for the institutional counterparty to receive the benefit of the government IBR program. In either case, the chance of the benefit would be incorporated into the "price" of the IBR Swap, decreasing the overall price the student pays if the benefit were to be captured by the institutional counterparty. Of course, whichever party was contractually permitted to capture the benefit of government IBR would, in effect, be bearing the risk that the government will discontinue or change its IBR programs.

112. The institutional counterparty will probably have to take on some debt, since it is predictable that students' earnings will be lower in the earlier part of their careers than the latter parts, and therefore the IBR Swap institutional counterparty will have to borrow money to pay out more than it is receiving in the first several years.

## IV. CURRENT LEGAL REGIME

The practical benefits unique to IBR Swaps discussed above are not the only benefits that make the IBR Swap superior to other income-share arrangements. IBR Swaps, because they are a recognizable financial instrument, do not face as much legal uncertainty as human capital contracts face under current law.

Proponents of human capital contracts have argued that legal uncertainty is a significant impediment to the development of a market for human capital contracts.<sup>113</sup> That uncertainty arises primarily from the fact that a human capital contract is not a preexisting (and therefore recognizable) category of financial instrument. Is it an “equity investment in human beings,” as Milton Friedman suggested over half a decade ago?<sup>114</sup> Is it a form of debt? Is it a kind of insurance? Is it a partnership or joint venture between the student and the contract provider?<sup>115</sup> In order to know what law would apply to a human capital contract, one needs an answer to these questions. To remove some of this uncertainty, Senator Marco Rubio and Representative Tom Petri introduced legislation to clarify the legal treatment of income-share agreements in 2014, and in 2015, Representatives Todd Young and Jared Polis introduced similar legislation.<sup>116</sup>

For IBR Swaps, the legal and regulatory landscape is quite different from that of other income-share agreements like human capital contracts. The design of IBR Swaps makes the question of how they would be regulated under existing law much easier to answer. Because they are a preexisting category of financial instruments—a derivative—there is no question about whether they are an “equity investment in a human being.” They are not. Just like other swap transactions, the agreement is legally

113. See, e.g., PALACIOS ET AL., INVESTING IN VALUE, SHARING RISK, *supra* note 24, at 12 (“Significant legal uncertainty exists regarding the treatment of [human capital contracts]. . . . this legal uncertainty has made it very difficult for any kind of market to develop on a larger scale. . . . A major impediment to the growth of [a human capital contract] industry is regulatory uncertainty: not only are some of the rules uncertain, but even the *source* of any future rules is also uncertain . . . . [I]s [a human capital contract] more like a loan, an investment contract, or a hedging instrument?”); see also Jacobs & van Wijnbergen, *supra* note 16, at 5 (noting “legal problems prevent the execution of both equity and insurance contracts by the private sector in the case of education financing,” then listing as causes “contract enforceability,” illegality of “slavery and indentured labor,” which makes it illegal “to sell claims on future incomes,” and “bankruptcy laws” not covering equity-like financing); *id.* (“These legal limitations effectively preclude financial contracts that are contingent upon the returns of human-capital investment.”); *id.* at 6 (“[G]iven the legal limitations, private contracts are currently prohibitively costly to execute. Attempting to eliminate legal limitations to facilitate trade in equity-type contracts requires far-reaching changes in the legal system that are also very costly.”).

114. See Friedman, *supra* note 18, at 140.

115. See Oei & Ring, *Human Equity?*, *supra* note 24, at 723–25.

116. See H.R. 3432, 114th Cong. (1st Sess. 2015); H.R. 4436, 113th Cong. (2d Sess. 2014).

enforceable.<sup>117</sup> Because nothing of value is provided upfront to the student in exchange for a future promise of repayment, they are not debt, and are therefore not subject to fair lending laws or laws that apply specifically to student loans.<sup>118</sup> For the same reason, they are not “securities” subject to securities regulation; the investor makes no disbursement in exchange for a speculative return.<sup>119</sup> As discussed below, they are not insurance under current law. Even their treatment in bankruptcy<sup>120</sup> and how they would be taxed<sup>121</sup> is more certain than human capital contracts.

But the fact that regulatory treatment of IBR Swaps is relatively certain under existing law does not mean that such treatment is right, from a normative perspective. Recently, scholars have begun to examine what

117. Jacobs & van Wijnbergen, *supra* note 16, at 5 (“[I]n general, contract enforceability of private equity contracts is problematic because legal frameworks are not yet adapted to protecting the rights of investors who provide the funds for the investment.”).

118. *Id.* at 12; *see also* PALACIOS ET AL., INVESTING IN VALUE, SHARING RISK, *supra* note 24, at 12 (“[P]olicymakers should make clear that the total cost of [a human capital contract] should not be used retrospectively to impute an interest rate for usury purposes . . .”).

119. The income-share obligation of the student counterparty is not a security, nor is the IBR Swap transaction itself. Legal scholars have analyzed whether human capital contracts are securities for regulatory purposes, focusing on the possibility that investing in a person, taking an “equity” interest in future earnings, could fall within the catchall category of “investment contract” for SEC purposes. *See* 15 U.S.C. § 77b(a)(1) (2012); *id.* § 78c(a)(1). In order to be an investment contract, a transaction must involve (1) investment of money, (2) in a common enterprise, (3) to earn a profit, (4) solely from the effort of others. *See* Schwartz, *supra* note 24, at 1156–63. In an IBR Swap, the institutional counterparty does not make an investment of money in the student. The IBR Swap involves a contractual commitment to pay a loan obligation in exchange for payment of a share of income. There is not an investment or disbursement on which the institution seeks a return. If the student fails to remit income, the institution ceases to make loan payments. The payments are simultaneous. The IBR Swap itself is also not a security. *See* Securities Act of 1933 § 2A, 15 U.S.C. § 77b(a)(1) (providing definition of security does not include non-security-based swap agreement as defined in section 206C of Gramm-Leach-Bliley Act). The IBR Swap would not be a securities-based swap. *See Final Rules and Interpretations i) Further Defining “Swap,” “Security-Based Swap,” and “Security-Based Swap Agreement”; ii) Regarding “Mixed Swaps”; and iii) Governing Books and Records for “Security-Based Swap Agreements*, U.S. COMMODITIES & FUTURES TRADING COMM’N, available at [http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/fd\\_factsheet\\_final.pdf](http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/fd_factsheet_final.pdf) [perma.cc/NAW7-J24C] (last visited Feb. 27, 2016); *see also* Jacobs & van Wijnbergen, *supra* note 16, at 5 (“Since human-capital contracts are not legally acknowledged as securities, trade in claims on human capital is legally obstructed.”).

120. PALACIOS ET AL., INVESTING IN VALUE, SHARING RISK, *supra* note 24, at 13; *see also* Jacobs & van Wijnbergen, *supra* note 16, at 5 (“[B]ankruptcy laws do not generally feature provisions for graduates who declare themselves bankrupt to avoid dividend payments to financiers, whereas bankruptcy laws do cover provisions for debt contracts.” (citation omitted) (citing Palacios, *Human Capital Contracts*, *supra* note 5)).

121. PALACIOS ET AL., INVESTING IN VALUE, SHARING RISK, *supra* note 24, at 14 (“[P]articipants face some uncertainty regarding tax treatment of payments [under a human capital contract] . . .”).

rules *should* apply to income-share agreements like human capital contracts.<sup>122</sup> Since IBR Swaps are different from other human capital contracts in critical ways, we address regulatory questions and opportunities raised by IBR Swaps.

#### A. *Swaps: Federal Derivatives Regulation and State Insurance Laws*

Two different regulatory regimes may pertain to a contract involving transfer of loan default risk in exchange for a speculative return: derivatives regulation and insurance regulation.<sup>123</sup> Subsection 1 below explains that an IBR Swap would not be subject to federal regulations pertaining to over-the-counter (OTC) derivatives.<sup>124</sup> The IBR Swap, though, serves an “insurance” or hedging function for the student counterparty.<sup>125</sup> Subsection 2 discusses the extent to which IBR Swaps could, in theory, fall within the ambit of state insurance regulation. It considers the purpose and design of insurance regulation, the identities of IBR Swap counterparties, and the fitness of state insurance regulators (as opposed to other intermediaries), for addressing regulatory concerns that the IBR Swap could raise. This Subsection argues that the IBR Swap should not be subject to state insurance regulation. However, it identifies the possibility that a regulator could claim that an IBR Swap program falls within its jurisdiction.

##### 1. *Federal Derivatives Regulation*

Simply put, the IBR Swap as presented above would be exempt from federal regulations pertaining to OTC derivatives.<sup>126</sup> Derivatives regulation centers on clearinghouse requirements—rules requiring that certain swaps are confined to a derivatives clearing organization registered with

122. See Oei & Ring, *Human Equity?*, *supra* note 24, at 729–36; Schwartz, *supra* note 24, at 1165–74.

123. As mentioned above, the IBR Swap would not be a security. See *supra* note 119 and accompanying text.

124. See *infra* notes 126–31 and accompanying text.

125. There are insurance policies designed to cover risk of inability to meet loan obligations. These kinds of policies, however, tend to have a maximum coverage of twenty-four months and are designed to cover loan payments upon occurrence of some event, such as unemployment, that temporarily affects the insured’s ability to pay. In addition to policies especially for payment protection, other insurance policies and workplace benefit plans can cover temporary inability to pay loans, such as disability or unemployment benefits. See Ana Gonzalez Ribeiro, *Is Loan Protection Insurance Right for You?*, INVESTOPEDIA, <http://www.investopedia.com/articles/pf/08/loan-protection-insurance.asp> [https://perma.cc/5B64-ESQL] (last visited Feb. 27, 2016). The IBR Swap offers a very different kind of hedging arrangement, obviously, than insurance policies that protect borrowers for a limited time if they cannot pay.

126. Title VII of the Dodd-Frank Act amends the Commodities Exchange Act (CEA) to require that OTC derivatives trade through clearinghouses, but provides exceptions. See Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) § 723, 7 U.S.C. § 2 (2012); Commodities and Exchange Act, 7 U.S.C. §§ 2(h)1, 2(h)7.



the Commodity Futures Trading Commission (CFTC).<sup>127</sup> However, OTC derivatives in which one counterparty is not a financial entity—like the IBR Swap—are exempt from clearinghouse requirements.<sup>128</sup> Derivatives in which one counterparty is hedging or mitigating commercial risks are also exempt.<sup>129</sup> Because student counterparties would meet the end-user exception for non-financial entities, we need not assess whether student counterparties to IBR Swaps would be mitigating “commercial risks” as defined by the CFTC.

Clearinghouses serve enforcement functions that mitigate risks and market effects of counterparty defaults.<sup>130</sup> Though IBR Swaps would not be regulated derivatives, it may be interesting to consider whether IBR Swap programs might want to use a private clearinghouse system.<sup>131</sup>

## 2. State Insurance Laws

Insurance regulation is a state enterprise that primarily addresses consumer protection concerns.<sup>132</sup> However, Dodd-Frank does create federal regulatory oversight for “systemically important” insurers, which addresses the systemic risk associated with failure of the largest insurers, such as AIG.<sup>133</sup> Whether an IBR Swap program would fall within the ambit of insurance regulation depends upon factors such as the nature of the institutional counterparty and the existence of intermediaries (such as schools or a private clearinghouse) that can protect the interests of student counterparties.<sup>134</sup> Robust discussion has surrounded the question of

127. *Id.* §§ 2(h)(1), 2(h)(7).

128. Dodd-Frank Act § 723; *see also* CFTC *End-User Exception to the Clearing Requirement for Swaps Rule*, 17 C.F.R. § 39.1 (2016).

129. 17 C.F.R. § 39.6(a)(i).

130. *See* Stout, *Derivatives*, *supra* note 54, at 34–35.

131. *See generally* Mark J. Roe, *Clearinghouse Overconfidence*, 101 CALIF. L. REV. 1641 (2013) (describing clearinghouse system and questioning its efficacy in financial regulation).

132. *See* McCarran-Ferguson Act of 1945, 15 U.S.C. §§ 1011–1015 (2012) (stating that regulation of insurance by states is in public interest and that no federal law of general applicability shall preempt state laws regulating business of insurance); Daniel Schwarcz & Steven L. Schwarcz, *Regulating Systemic Risk in Insurance*, 81 U. CHI. L. REV. 1569, 1579–84 (2014). *See generally* KENNETH S. ABRAHAM & DANIEL SCHWARCZ, *INSURANCE LAW AND REGULATION* 2–5 (6th ed. 2015); THE FUTURE OF INSURANCE REGULATION IN THE UNITED STATES (Martin F. Grace & Robert W. Klein eds., 2009); John Patrick Hunt, *Rating Dependent Regulation of Insurance*, 17 CONN. INS. L.J. 101 (2010); Jonathan R. Macey & Geoffrey P. Miller, *The McCarran-Ferguson Act of 1945: Reconciling the Federal Role in Insurance Regulation*, 68 N.Y.U. L. REV. 13 (1993); Susan Randall, *Insurance Regulation in the United States: Regulatory Federalism and the National Association of Insurance Commissioners*, 26 FLA. ST. U. L. REV. 625 (1999).

133. *See* Schwarcz & Schwarcz, *supra* note 132, at 1589–93; Daniel Schwarcz, *Regulating Insurance Sales or Selling Insurance Regulation?: Against Regulatory Competition in Insurance*, 94 MINN. L. REV. 1707, 1770–71 (2010); *see also* Hunt, *supra* note 132; Manns, *supra* note 45.

134. Substantively, insurance laws establish (1) licensing requirements for insurers, (2) fiduciary duties to policy holders, (3) capital reserves, (4) disclosure of

whether derivatives should be regulated as insurance.<sup>135</sup> In order for a contract to be “insurance,” the protection buyer must have an insurable interest—a property interest or other risk of real loss that the contract covers.<sup>136</sup>

An IBR Swap would fall within the class of derivatives in which a hedging counterparty has an insurable interest. The student counterparty is in privity of contract with law school lenders and, by entering into the Swap, is hedging risk of default on those loans. Because of this, state regulators could claim that IBR Swaps are subject to insurance laws. Despite this possibility, however, IBR Swaps do not necessarily raise the concerns that insurance regulation is designed to address. This Subsection now presents these concerns, discussing the extent to which IBR Swaps implicate them.

While the major, overarching concern of insurance law is consumer protection, the need for consumer protection stems from two different sources. The first is lack of sophistication among consumers and consumers’ general vulnerability in procuring essential insurance products. The second is solvency risk due to the nature of insurance firms, namely, the facts that (1) they have an inverted production cycle that detaches contracting and pricing from customers’ receipt of the product<sup>137</sup> (payment on claims which may happen years later or never) and (2) they have diffuse creditors, or policyholders, that do not assert control to discourage excessively risky decision-making when firms encounter distress.<sup>138</sup>

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insurers’ financial data to regulators, (5) approval of form contracts, and (6) restrictions on prices that insurers can charge consumers. Henderson, *supra* note 53, at 42–48.

135. See, e.g., Thomas Lee Hazen, *Disparate Regulatory Schemes for Parallel Activities: Securities Regulation, Derivatives Regulation, Gambling, and Insurance*, 24 ANN. REV. BANKING & FIN. L. 375 (2005); Thomas Lee Hazen, *Filling a Regulatory Gap: It is Time to Regulate Over-the-Counter Derivatives*, 13 N.C. BANKING INST. 123 (2009) [hereinafter Hazen, *Filling a Regulatory Gap*]; Henderson, *supra* note 53; Stout, *Regulate OTC Derivatives*, *supra* note 77; see also *Hearing to Review the Role of Credit Derivatives in the U.S. Economy: Hearing Before the H. Comm. on Agric. Comm.*, 110th Cong. (2008) (statement of Eric Dinallo, Superintendent, Ins. Dep’t, N.Y.), available at <http://agriculture.house.gov/testimony/110/h91120/Dinallo.pdf> [<https://perma.cc/6MFD-N3S5>].

136. The insurable interest doctrine can be complex; scholars and policy-makers debate what constitutes an insurable interest for purposes of insurance laws’ jurisdiction. See Hazen, *Filling a Regulatory Gap*, *supra* note 135, at 420–26; Michael J. Henke, *Corporate-Owned Life Insurance Meets the Texas Insurable Interest Requirement: A Train Wreck in Progress*, 55 BAYLOR L. REV. 51, 53–54 (2003) (discussing Texas’s “insurable interest” doctrine); Hunt, *supra* note 133; Roy Kreitner, *Speculations of Contract, or How Contract Law Stopped Worrying and Learned to Love Risk*, 100 COLUM. L. REV. 1096, 1099–1100 (2000); see also GRAYDON S. STARING, LAW OF REINSURANCE § 6:1 (1993) (“In limited space we can talk around insurable interest but never talk it through. A standard text confesses that ‘[i]t is very difficult to give any definition of an insurable interest,’ and then discusses it for about 70 pages” (alteration in original) (quoting I M. MUSTILL & J. GILMAN, ARNOULD ON THE LAW OF MARINE INSURANCE AND AVERAGE §§ 331–410 (16th ed. 1981))).

137. See Henderson, *supra* note 53; Hunt, *supra* note 132.

138. *Id.*

With respect to consumer vulnerability, an IBR Swap program would not necessarily raise the same concerns as insurance products. Law students are a specific class of consumer, and participation in the program would not be mandatory. This is *not* to say that student counterparties need no protection, are sophisticated, or enjoy even bargaining positions with institutional counterparties. It is only to say that regulation of such interactions in the IBR Swap context may raise issues different from those that arise in various insurance markets and so-tailored regulation may be appropriate. For example, intermediaries such as school advisors and financial aid office professionals may be in a better position to protect students' interests than state insurance regulators. Protection of the "protection buyer"—the student counterparty to an IBR Swap—involves both explanation of the programs' terms and conditions and also protection from unfair pricing. Private intermediaries familiar with legal education, law school graduates' career trajectories, and federal lending programs would likely be better suited than state officials to advise protection buyers in the IBR Swap context.

Regulatory concerns that stem from dangerous incentives of an inverted production cycle would most likely not arise in an IBR Swap program. Unlike other businesses, insurance firms contract with customers who pay in the form of premiums in advance of product delivery—payment on claims which may happen years later or not at all. Because of this, insurance firms lack the discipline that comes with having to spend revenues on market products and services deliverable contemporaneously with customer contracts.<sup>139</sup> Insurance firms can fall into a model that is not unlike a Ponzi scheme, where they solicit investment from new customers, using that revenue to pay claims to prior customers because they lost revenues from prior customers on risky investments.<sup>140</sup> Insurance regulation imposes capital requirements and financial disclosure requirements on insurance firms to avoid this result.<sup>141</sup>

An IBR Swap program would not have the inverted production cycle associated with insurance firms. The institutional counterparty begins paying on the student counterparty's obligations to law school lenders as soon as they become due. The institutional counterparty's performance obligation is certain in amount and contemporaneous with the student counterparty's payments. Furthermore, incomes generally rise over time, both because of the effects of inflation on wages and because more experienced lawyers tend to earn more than less experienced ones. Because of the likelihood that early earnings would be lower than later earnings, the institutional counterparty is likely to owe more than it collects in the early years of each contract and overall. Thus, it will need some source of capital at the outset, but its need to accumulate capital is the inverse of the

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139. See Henderson, *supra* note 53.

140. *Id.*

141. *Id.*

production cycle that is dominant in the insurance industry, in which the insurer collects money over time and is required to pay out later because of an insured event.

With respect to concerns arising from the capital and governance structure of insurance firms, the extent to which an IBR Swap program would raise these concerns depends upon the identity of the institutional counterparty. In other kinds of firms, capitalization often comes from a large number of diffuse shareholders, along with a small group of creditors, banks, or other lenders, with monitoring capacity. When the firm faces distress, creditors often can exercise monitoring and control functions through loan covenants, other contractual obligations, and collateral obligations, preventing excessively risky behavior.<sup>142</sup> An insurance firm, however, has a diffuse group of creditors—policyholders—who are not in a position to monitor and exert control like institutional creditors do. This leaves insurance firms more prone than other businesses to excessive risk-taking in hard times. Again, capital adequacy, disclosures, and other risk protections imposed by insurance laws address this risk.

Counterparties to derivatives are often financial institutions that do not share the same governance and capital structure as insurance firms. If the institutional counterparty to an IBR Swap were such a financial institution, then the state insurance law requirements designed to address these concerns would not be necessary. Many swap counterparties are also not exclusively in the business of entering into one kind of swap. They are firms with multiple kinds of investments, speculative, and hedging positions across product types and even industries. It is possible that the institutional counterparty to an IBR Swap could be an entity dedicated to entering into these swaps with a pool of student counterparties and a capital structure analogous to that of an insurance firm. If this were the case, then some regulatory requirements to control excessive risk-taking in the event that the pool of swaps leans towards negative value would be desirable.

It is not clear, though, that state insurance regulation would be the best mechanism to protect student counterparties in this situation. Often, clearinghouse requirements address counterparty risk and capital adequacy concerns in the derivatives context. A private clearinghouse for IBR Swaps could be a better solution to counterparty risk for students than subjecting the IBR Swap program to state insurance regulation. However, clearinghouse requirements could raise the transaction costs of IBR Swaps, making the Swaps less advantageous for students. Given this con-

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142. There is ample literature on the efficacy of creditors' monitoring functions. See, e.g., Robert E. Scott, *A Relational Theory of Secured Financing*, 86 COLUM. L. REV. 901 (1986); Joanna M. Shepherd, Frederick Tung & Albert H. Yoon, *What Else Matters for Corporate Governance?: The Case of Bank Monitoring*, 88 B.U. L. REV. 991 (2008); Frederick Tung, *Leverage in the Boardroom: The Unsung Influence of Private Lenders in Corporate Governance*, 57 UCLA L. REV. 115 (2009). This simple explanation is just to compare typical insurers to possible IBR Swap counterparties.

cern, regulators might require institutional counterparties to have diversified portfolios, and perhaps subject them to other capital adequacy requirements as regulated banking institutions.

In conclusion, the IBR Swap should not be subject to state insurance regulation. IBR Swaps do not raise the same concerns for protection sellers and buyers that insurance policies and firms do. Additionally, to the extent that IBR Swaps do warrant protection for student counterparties or attention to the nature of institutional counterparties, private intermediaries would be better suited to address concerns than state insurance regulators would be. That said, the IBR Swap does involve hedging of risk by a student-counterparty with an insurable interest. As such, a state insurance regulator could potentially claim that IBR Swaps fall within insurance regulators' jurisdiction.

To the extent that the IBR Swap serves an insurance function for the student counterparty, some may wonder if moral hazard among student counterparties could undermine the efficacy of an IBR Swap program. Moral hazard is often identified as a central problem with insurance products.<sup>143</sup> Moral hazard "is a form of ex post opportunism" that arises in insurance markets when the existence of insurance reduces the insured's incentives to avoid the insured loss.<sup>144</sup> In the case of human capital contracts, some commentators fear that owing a percentage of one's income to investors might decrease a person's incentives to earn income. The existence of moral hazard in this context is an empirical question, and available evidence suggests that we should not be overly concerned about it.<sup>145</sup>

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143. See, e.g., SHILLER, *supra* note 29, at 113. For livelihood insurance, Shiller proposes that individual livelihood insurance only cover 50% of the decline in income "since the person is only reimbursed for half of his or her own income drop, he or she still has an incentive to work hard, reducing, if not eliminating, the moral hazard problem." *Id.* If the insurance only covers 15% of a student's income, the moral hazard problem is presumably even less.

144. FRANCESCO PARISI, *THE LANGUAGE OF LAW AND ECONOMICS: A DICTIONARY* 187, 188 (2013); see also ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 50-52 (3d ed. 2000) (stating that moral hazard arises when behavior of insuree changes after purchase of insurance so that probability of loss or size of loss increases).

145. Scholars have been interested in the question of how paying a percentage of one's income affects labor participation for decades. That is because the income tax functions just like a human capital contract in that each dollar a taxpayer earns is reduced by a percentage that is paid to a third party. It is axiomatic that the disincentives for labor participation that an income tax produces are a significant potential flaw in any income tax regime. However, the empirical evidence suggests that relatively low income tax rates have modest effects on labor participation. See, e.g., Robert McClelland & Shannon Mok, *A Review of Recent Research on Labor Supply Elasticities* (Cong. Budget Office, Working Paper No. 2012-12, 2012), available at [http://www.cbo.gov/sites/default/files/cbofiles/attachments/10-25-2012-Recent\\_Research\\_on\\_Labor\\_Supply\\_Elasticities.pdf](http://www.cbo.gov/sites/default/files/cbofiles/attachments/10-25-2012-Recent_Research_on_Labor_Supply_Elasticities.pdf) [https://perma.cc/AA6L-WZ3U].

Also, a market for human capital contracts or IBR Swaps might reduce a variety of moral hazard problems that exist in the current student debt regime. For example, some commentators have decried the moral hazard that arises when law

B. *Enforceability of the Contract*

Commentators have expressed concern that a human capital contract might not be enforceable.<sup>146</sup> If human capital contracts are unenforceable, then a student would be permitted under the law to walk away from these agreements without sanction. The drafters of the proposed legislation regarding income-share agreements thought enforceability was enough of an issue that they included a section that stated: “Any income share agreement that complies with the requirements of [this law] shall be a valid, binding, and enforceable contract notwithstanding any State law limiting or otherwise regulating assignments of future wages or other income.”<sup>147</sup> The history of wage assignments and legal restrictions on them is long, and while no one has made a strong case that human capital contracts would be unenforceable under current law in any state, some legal uncertainty presumably remains.

But whatever uncertainty surrounds the enforceability of human capital contracts; it does not affect IBR Swaps.<sup>148</sup> An IBR Swap does not involve any sort of assignment of wages; it is simply a derivative that uses future earnings to measure the payment obligation of one of the counterparties. The institutional counterparty has no claim directly against the student’s employer. There is no wage garnishment.<sup>149</sup> The institutional counterparty cannot demand specific performance. The Swap is not an unenforceable wager<sup>150</sup> because, as discussed above, the

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schools can charge unsustainably high tuition and the students can avoid paying back their loans by making use of current federal income-based repayment and loan forgiveness programs. See, e.g., Steven J. Harper, *Bankruptcy and Bad Behavior the Real Moral Hazard: Law Schools Exploiting Market Dysfunction*, 23 AM. BANKR. INST. L. REV. 347 (2015).

146. The most extreme claim is that human capital contracts may be illegal or unconstitutional as a form of slavery, indentured servitude, or peonage. Jeff Schwartz, for example, argues that an exchange of money for future income is “equity in a person” and therefore a form of “ownership in people,” and so, it could be argued that “they should be outlawed on constitutional or policy grounds.” See Schwartz, *supra* note 24, at 1121. He ultimately concludes, however, “human-equity investing passes [constitutional] muster.” See *id.* at 1122, 1135–38; see also Jacobs & van Wijnbergen, *supra* note 16, at 5. Some commentators make vague statements about the enforceability of human capital contracts if students choose to breach. See, e.g., Jacobs & van Wijnbergen, *supra* note 16, at 5 (“It is not generally possible to sell claims on future incomes. For example, some states in the U.S. do not allow this.” (citation omitted) (citing Palacios, *Human Capital Contracts*, *supra* note 5)); see also *supra* note 117.

147. H.R. 4436, 113th Cong. § 101(b) (2d Sess. 2014).

148. For discussion of enforceability of a “settlement amount” in case of breach, see *supra* note 58.

149. Although, if there was, some states would require the term to be shorter than the likely term of an IBR Swap. See U.S. DEP’T OF LABOR, WAGE & HOUR DIV., FACT SHEET #30: THE FEDERAL WAGE GARNISHMENT LAW, CONSUMER CREDIT PROTECTION ACT’S TITLE 3 (CCPA) (rev. July 2009), available at <http://www.dol.gov/whd/regs/compliance/whdfs30.pdf> [https://perma.cc/GR4H-6YFR].

150. At common law, wagering agreements were unenforceable. See Stout, *Derivatives*, *supra* note 54, at 1. However, a derivative like a swap agreement is not

student counterparty is hedging risk pertaining to an insurable interest.<sup>151</sup> In short, an IBR Swap is a fully enforceable contract under current law.

### C. Debt Treatment

Proponents of human capital contracts also worry that such agreements could be classified as “debt,” which would make compliance with a variety of laws difficult at best. For example, if human capital contracts constituted debt or a “private education loan” they might be regulated under the Truth in Lending Act of 1968.<sup>152</sup> These federal laws require lenders to clearly disclose interest charges as an annual rate. But for a human capital contract, calculating such a rate is impossible because the amount the “borrower” is obligated to repay to the “lender” varies depending on the income of the borrower.

Furthermore, if human capital contracts are loans, they might be subject not only to the disclosure requirements, but also to limits on the maximum amount that could be charged.<sup>153</sup> Many states have limits on the total amount of interest that can be charged to a borrower, and these limits, if applicable, would mandate relatively low ceilings on the maximum amount a high earner could pay under a human capital contract. If these limits were interpreted to apply to human capital contracts, they would remove most of the benefit of such structures, since they would prevent

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an unenforceable wagering agreement because the student counterparty is hedging risk. See *supra* notes 52–54 and accompanying text.

151. See *supra* notes 50–53 and accompanying text.

152. “Private education loans” are subject to numerous reporting requirements under Section 128(e) of the Truth in Lending Act. See 15 U.S.C. § 1638(e)(1) (2012). These disclosures fit poorly with (or they are impossible to comply with) human capital contracts. For example, the lender must report “(A) the potential range of rates of interest applicable to the private education loan; . . . [and] (C) limitations on interest rate adjustments, both in terms of frequency and amount, or the lack thereof, if applicable.” *Id.*

153. The extent to which characterizing human capital contracts as loans would limit their pricing—and the limits that would apply—depends on a variety of factors surrounding usury laws. State usury laws restrict the amount of interest that lenders can charge on consumer loans. Though these laws can appear to impose straightforward rate limits, this is often not the case. For example, in some cases usury limits are preempted by federal law (such as home equity loans). Federal law also permits federally insured financial institutions to charge the highest interest rate limits permitted among the various states in which they are located, undermining the implementation of state usury laws with lower limits. In addition, (1) state usury laws contain numerous exceptions, such as for retail installment loans and loans issued by certain types of institutions (e.g., credit unions); (2) interest rate ceilings may be higher than they appear due to special rules for compounding fees, calculating balances and rates; (3) remedies for usury law violation may be narrow; and (4) contracting parties may avoid usury limits by drafting price terms in a way that obscures disbursement versus interest components of the transaction. See generally Richard M. Hynes & Eric A. Posner, *The Law and Economics of Consumer Finance* (U. Chi. Law & Econ., Olin Working Paper No. 117, 2001), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=261109](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=261109) [perma.cc/YGC3-JE29].

the contract from capturing much, if any, upside gain from high-earning graduates.

There is no statutory definition of debt in either the Truth in Lending Act or the Higher Education Act (HEA), but an essential characteristic of debt is that it involves a transfer of funds from one party, the lender, to another party, the borrower, in exchange for a promise of future repayment, usually with interest.<sup>154</sup> In the case of the IBR Swap, there is no initial transfer of funds from the institutional counterparty to student, and so the relationship cannot be characterized as debt.<sup>155</sup> Thus, the IBR Swap removes ambiguity about whether lending disclosure regimes, rate ceilings, or usury laws apply.

#### D. *Bankruptcy*

Several commentators have mentioned that uncertainty about how human capital contracts would be treated in bankruptcy creates regulatory uncertainty.<sup>156</sup> For example, if a human capital contract constitutes a “qualified education loan,” then it is not typically dischargeable in bankruptcy unless the student can show “undue financial hardship,” which is generally difficult to show.<sup>157</sup> Even ignoring issues specific to student loans, some argue that it would be difficult to figure out how to treat a human capital contract in bankruptcy. In a bankruptcy proceeding, the obligations of the bankrupt party are prioritized, with low priority obligations being subject to discharge. There is some fear that a bankruptcy court would extinguish future obligations under a human capital contract unless it was classified as a private student loan under the HEA. Since a human capital contract represents a long-term obligation, and the risk of under-earning likely is highest early in the term of the agreement, extinguishing the obligation in bankruptcy early in the term of the agreement would be problematic. That uncertainty poses some risk to the investor<sup>158</sup> and may serve to increase the cost of the human capital contract.

Unlike a human capital contract, an IBR Swap is not a liability for a low-earning student, but an *asset*. Remember, a student who earns less than the “break-even” income receives a net benefit from the institutional counterparty. The amount that the institutional counterparty pays to the student is *more* than the student pays to the institutional counterparty, and

154. See, e.g., Brown, *supra* note 57, at 144 (“If a swap is a debt instrument, it must have been issued either for money . . . or for property . . .”).

155. See, e.g., *id.* at 156 (stating that payments made under interest rate swaps are not interest because there is no underlying debt (citing H.R. Rep. No. 3838, 99th Cong., 1st Sess. 457 (1985))).

156. See, e.g., PALACIOS ET AL., *INVESTING IN VALUE*, *supra* note 24, at 13; Jacobs & van Wijnbergen, *supra* note 16, at 5.

157. See 11 U.S.C. 523(a)(8) (2012).

158. Since a human capital contract adjusts by its terms to the investee’s ability to pay, it is not as substantial a burden on a low-earning student, and thus the need to discharge it in bankruptcy is dramatically diminished. But, presumably, there is still some possible risk.



so every month the IBR Swap makes the student richer than they would be without the IBR Swap. Thus, a student whose income is so low as to result in bankruptcy would not want to have their IBR Swap discharged. Far from it, the IBR Swap is the one thing that is enabling the student to make their presumably non-dischargeable student loan debt payments possible. Thus, the IBR Swap may avoid the possibility of discharging the student's obligation because of bankruptcy.

Literature on treatment of derivatives in bankruptcy generally concerns Chapter 11 re-organization and the status of derivatives with two institutional counterparties.<sup>159</sup> In the IBR Swap context, the effect of student counterparty bankruptcy may be significantly different from that of institutional counterparty bankruptcy. In the event a student counterparty enters bankruptcy, the fact that an IBR Swap is an asset rather than a liability makes its treatment different from human capital contracts, but that does not dispose of all questions surrounding bankruptcy treatment. Because the IBR Swap represents a novel transaction, such a question would require jurisdiction-specific analysis by attorneys preparing documentation and counseling prospective institutional counterparties.

The possibility that an institutional counterparty could be undercapitalized and default or even seek bankruptcy protection to avoid payments to student counterparties also warrants careful consideration. Regulation to assure capital adequacy or otherwise protect students against institutional counterparty credit risk would need to accompany any implementation of an IBR Swap market.<sup>160</sup>

#### E. Tax

While bankruptcy occurs only in extreme cases, every investor and student-party to an income-share agreement has to decide how to treat the investment for tax purposes. Some commentators identify tax uncertainty as an important impediment to human capital contracts,<sup>161</sup> and the authors of H.R. 4436 consider it significant enough to propose definitive tax treatment.<sup>162</sup> The tax treatment of the IBR Swap is more certain than that of a human capital contract. That said, it is probably not especially favorable treatment.

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159. See, e.g., Douglas G. Baird & Robert K. Rasmussen, *Antibankruptcy*, 119 YALE L.J. 648 (2010); Mark J. Roe, *The Derivatives Market's Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539 (2011).

160. See *infra* notes 180–83 and accompanying text.

161. See, e.g., Oei & Ring, *Human Equity?*, *supra* note 24, at 744–46.

162. See H.R. 4436, 113th Cong. § 201 (2d Sess. 2014) (providing that payments made from investor to student are not includible in student's income, and payment of future income to investor constitute tax-free recovery of capital for investor until full amount of investment is recovered, after which time they are taxable income).

There are many possible options for how to treat a human capital contract for tax purposes. If it is debt, then the receipt of the initial payment from the investor to the student is not a taxable event for either party—the student does not treat it as income, and the investor cannot deduct the payment from its income for tax purposes. When the student makes percentage-of-income payments back to the investor, those payments are partially a tax-free “return of capital” and partially “interest.” Return of capital has no tax implications, but interest is income to the investor, and, importantly, it is income at the “ordinary” rather than at the lower “capital gains” rate.<sup>163</sup> But if a human capital contract is debt for tax purposes, a method must be employed for separating the return of capital from the interest. Just as was the case when we discussed lending law, the structure of a human capital contract makes it impossible to calculate a “rate,” and so there is no easy way to distinguish “interest” from “return of capital.”<sup>164</sup>

If the human capital contract is not treated as debt, it could be treated in a number of other ways, each of which provides a different solution to the problem of how to distinguish the tax-free return of capital from taxable income. At least one commentator has raised the possibility that the best way to view at least some human capital contracts is as a partnership or joint venture, in which case the student’s income would be allocated between the student and the investor for tax purposes, with one (but not both) paying tax on all of it.<sup>165</sup> This treatment would be extremely complicated, although it might be favorable to the parties collectively.<sup>166</sup>

More likely, a human capital contract would be taxed like some similar investment vehicle. For example, if it was considered more “insurance-like,” it might be taxed as an “annuity.”<sup>167</sup> It could also be taxed pursuant to the “open transaction” doctrine, in which the first money received by the investor from the student is all return of capital, and only after all is

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163. For the student, the interest may be deductible under certain circumstances. For example, if the human capital contract were incurred in the course of the student’s existing trade or business, then the interest would be deductible. However, if it were incurred for education, even professional education, it would likely not be deductible, unless it was deductible as student loan interest, which is subject to numerous limitations and exemptions.

164. In addition to being uncertain, this treatment would probably not be preferred by taxpayers, because there is no opportunity to defer the taxation of income and interest is taxed at the full ordinary income rate.

165. See Oei & Ring, *Human Equity?*, *supra* note 24, at 723–25.

166. The student’s earnings would somehow be treated as partnership income subject to allocation between the parties pursuant to Subchapter K of the Internal Revenue Code. Payments from the student to the investor would be distributions, as would payments from the “partnership” into the student’s own personal bank account.

167. 26 U.S.C. § 72 (2012). Under annuity treatment, capital is allocated pro rata over the years of the term of the annuity, and so each year an equal amount would be tax-free return of capital. Any amount exceeding this amount would be income to the investor.

received is the rest taxed as income.<sup>168</sup> This uncertainty creates tax problems, though it also creates tax opportunities, since some of the potential treatments of the transaction would be favorable from a tax perspective for the investors at least.<sup>169</sup>

In the case of an IBR Swap, the tax treatment is more certain (even if not particularly favorable). That is because in an IBR Swap, there is no upfront payment from one party to the other. Instead, each party agrees to make reciprocal payments to each other. The proposed methods of taxing payments made under a human capital contract discussed above—debt/interest treatment, annuity treatment, open transaction doctrine, among others—are all methods of distinguishing tax-free return of principal from taxable income. But when there is no up-front investment in the transaction, none of these methods apply. Furthermore, when there is an upfront investment in a financial product, there is a question of whether the gains that accrue to that product are ordinary income or capital gains. When there is no upfront investment, ordinary-income treatment makes the most sense.

The tax treatment of an IBR Swap, however, is still subject to some uncertainty. Congress has expressly provided for the tax treatment of most swap transactions. Section 446 of the Internal Revenue Code governs the taxation of so-called notional principal contracts. While the definition of a “notional principal contract” at first blush would appear to include an IBR Swap, in fact, the IBR Swap is probably not a notional principal contract under the Code.<sup>170</sup> To qualify as such, each “leg” of the

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168. See *Burnet v. Logan*, 283 U.S. 404, 413–14 (1931).

169. Unsurprisingly, H.R. 4436 seeks to clarify the tax treatment of qualifying income-share agreements. Under H.R. 4436, the treatment is essentially the same as it would be under the open transaction doctrine, which is the most favorable treatment for the investor. The initial payment from the investor to the student is excluded from income of the investee, just as it would be if it was debt, and the return payments are tax-free return of capital until the whole invested amount is paid back. After that, payments are income to the investor. H.R. 4436, 113th Cong. § 201(a) (2d. Sess. 2014).

170. See 26 C.F.R. § 1.446-3(c)(1)(i) (2016) (“A notional principal contract is a financial instrument that provides for the payment of amounts by one party to another at specified intervals calculated by reference to a specified index upon a notional principal amount in exchange for specified consideration or a promise to pay similar amounts.”). The IBR Swap is a financial instrument in which one party (the institutional investor) agrees to pay amounts at specified intervals (probably monthly) to another party (the student) by reference to a specified index (probably a fixed percentage) upon a notional amount (the amount the student borrowed in student loans) in exchange for a promise to pay. The question is whether the promise is to a pay a “similar amount.” And while the payments from the student to the institutional investor are paid at specified intervals, they are not calculated by reference to a specified index, because the regulations state explicitly that “a specified index” is “an index that is based on objective financial information . . . .” *Id.* § 1.446-3(c)(2)(iii). And “objective financial information” cannot be “within the control of any of the parties to the contract.” *Id.* § 1.446-3(c)(4)(ii). Because the student’s income is (more or less) within the student’s control, an index based on that information cannot be a “specified index” under the regula-

swap has to be calculated based on a measurement that is not “within the control of any of the parties to the contract.”<sup>171</sup> Because the student’s income is (more or less) within the student’s control, the IBR Swap would not likely qualify as a notional principal contract.

When a contract to exchange reciprocal payments fails to qualify as a notional principal contract, it is presumably taxed according to general principles of tax law. The most likely treatment would be that the reciprocal payments over the course of the tax year would be “netted” so that one party has an aggregate annual payment that is positive, and the other party has an exactly corresponding negative annual aggregate.<sup>172</sup> The party with the positive annual payments would pay tax on that positive amount as “ordinary income.” The party whose payments were negative would presumably have an “ordinary loss.”

#### V. CONSIDERING REGULATORY ISSUES

The unique structure of the IBR Swap reduces the regulatory uncertainty that undermines human capital contracts and other income-share agreements under current law. However, the fact that the legal treatment of IBR Swaps under current law is more certain than that of human capital contracts does not exempt IBR Swaps from implicating regulatory and ethical issues. On the contrary, IBR Swaps raise a host of problematic issues that deserve careful consideration. No study to date has systematically examined the regulatory tradeoffs inherent in designing a system of higher education financing that includes various types of income-share agreements.<sup>173</sup> Nor do we attempt such a systematic study here. Instead, in this Section we identify three obvious regulatory concerns: the issue of disclosure requirements to protect student counterparties, the issue of institutional counterparty solvency or credit risk, and the issue of differential pricing and adverse selection.

As discussed above, those who are in favor of human capital contracts should also be in favor of IBR Swaps. But if you are alarmed (or even horrified) by the possibility of a world in which human capital contracts are the primary mode for financing higher education, then you probably oppose IBR Swaps. Thus far, this Article has discussed how IBR Swaps are like human capital contracts, but “better” in the sense that they are more efficient and do not suffer from the same regulatory impediments. We have thus far deferred a discussion about potential drawbacks of income-share agreements that warrant regulation. The Rubio–Petri Legislation clears some of the legal hurdles that impede the development of a market

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tions, and the instrument that is based on it (the IBR Swap) is not a notional principal contract for tax purposes.

171. *Id.*

172. See generally Brown, *supra* note 57, at 162–65.

173. Although several scholars have made good starts. See, e.g., Oei & Ring, *Human Equity?*, *supra* note 24; Schwartz, *supra* note 24.

for income-share agreements, but it does little to regulate the market it purports to create.<sup>174</sup> Drawbacks to a market for income-share agreements potentially include risk that income-share agreements could exacerbate income and other forms of inequality, diminish access to education for some qualified students, raise the cost of education for some students, accelerate the withdrawal of public support for education,<sup>175</sup> and generally lead to a society that is less egalitarian, less educated, and all around worse. It is possible, though, that well-constructed regulations can manage each potential drawback such that the benefits of an IBR Swap program outweigh the detriments.

Law students entering IBR Swaps are consumer counterparties transacting with more sophisticated institutional actors. Unless a public or private governing body standardizes contract forms or specifies disclosure requirements for IBR Swap transactions, student counterparties could be at risk of committing to contract terms that they have not contemplated and do not like. Disclosure requirements are common regulatory tools in a variety of market contexts where consumer protection is a concern.<sup>176</sup> Along with disclosure, standardization of contract terms is also a common regulatory strategy to reduce information costs. If an IBR Swap market arose, law schools, consumer advocates, and institutional counterparties would want to determine the best regulatory body to develop disclosure rules. In some markets, federal bureaus regulate disclosure,<sup>177</sup> in others state or local laws do so,<sup>178</sup> and in still others this responsibility is met by private industry-specific organizations.<sup>179</sup>

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174. Note that the current version of the Bill (1) prevents investors from controlling investees' actions, (2) requires that income below \$18,000 does not trigger repayment, (3) provides a ceiling on the percentage of income that can be charged, (4) provides an aggregate limit on the percentage of income any one student can commit, (5) provides a sliding limit on how long a repayment period can be required, and (6) requires that ISAs include a series of disclosures. *See* Investing in Student Success Act of 2015, H.R. 3432, 114th Cong. §§ 103(a)(1), (3)–(5), 103(b), 103(c) (1st sess. 2015).

175. *See, e.g.*, ASHER ET AL., *supra* note 71 (arguing that income-driven repayment programs may take pressure off governments or institutions to make education more affordable).

176. For example, as discussed *supra* note 152, student loans are subject to disclosure requirements under the Truth in Lending Act.

177. For example, the Consumer Financial Protection Bureau implements numerous disclosure requirements pertaining to home mortgages and student loans, pursuant to Title XIV of Dodd-Frank. *See* Dodd-Frank Act, 15 U.S.C. § 5511 (2012); Truth in Lending Act, 15 U.S.C. § 1638; *Regulatory Implementation*, CONSUMER FIN. PROTECTION BUREAU, <http://www.consumerfinance.gov/regulatory-implementation> [<https://perma.cc/9X7Q-XY2Y>] (last visited Feb. 28, 2016).

178. For example, the market for rental housing is frequently regulated by local authorities that require disclosure of terms and tenants' rights. *See, e.g.*, D.C. *Municipal Regulations and D.C. Register*, SECRETARY D.C., OFF. DOCUMENTS & ADMIN. ISSUANCES, *available at* <http://www.dcregs.dc.gov/Gateway/ChapterHome.aspx?ChapterNumber=14-3> [<https://perma.cc/Q2CT-SFS5>] (last visited Feb. 28, 2016).

179. Real estate brokers' associations are one example of this. *See, e.g.*, Greater Boston Real Estate Bd., Standard Form Purchase & Sale Agreement (Form

A second obvious concern that regulation should address is the risk to student counterparties of institutional counterparty default. Student counterparties may make career decisions by relying on an IBR Swap transaction. If an institutional counterparty becomes insolvent or otherwise defaults, a student counterparty could be left without capacity to meet student loan obligations. Regulations designed to protect certain types of parties to particular transactions from counterparty default risk are common. In derivatives markets generally, regulations requiring that transactions take place on an exchange or through a clearinghouse address counterparty credit risk concerns.<sup>180</sup> The exchange or clearinghouse meets swap obligations, absorbing risk of counterparty default. In insurance markets, capital adequacy requirements protect policyholders from underwriter insolvency.<sup>181</sup> In many markets, assignments of collateral secure counterparty performance, enhancing credit.<sup>182</sup> In the IBR Swap context, again, interested parties and policy-makers would need to determine the appropriate regulatory body and the nature of credit enhancement requirements. IBR Swaps could be traded on a private clearinghouse established by an association of law schools and institutional counterparties.<sup>183</sup> Or, state or federal regulators could impose capital adequacy requirements on institutional counterparties. Formulating and enforcing regulations to protect students from institutional counterparty credit risk, like disclosure requirements, questions of political will. The requirements themselves are not exceedingly difficult to design or enforce.

The remainder of this Section discusses in greater detail the issue of “differential” or “discriminatory” pricing, one of the aspects of income-share agreements that is both a feature and a bug. While regulating to protect student counterparties from obtuse or disadvantageous terms and from institutional counterparty credit risk is fairly straightforward (and faces hurdles primarily of political will), differential pricing and adverse selection present more complex regulatory challenges. Here, we briefly examine the regulatory tradeoffs surrounding differential pricing that could constrain potential harms of IBR Swaps.

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ID: RA700) (Mar. 2006), *available at* <http://thehomebuyingmentors.org/files/2015/01/GREB-Standard-PS-Agreement.pdf> [<https://perma.cc/CS9S-8CAK>].

180. *See* Dodd-Frank Act § 723; CEA, 7 U.S.C. §§ 2(h)1, 2(h)7 (2012).

181. *See* Henderson, *supra* note 53; Hunt, *supra* note 132.

182. *See generally Collateral*, INT’L SWAPS & DERIVATIVES ASS’N, <http://www2.isda.org/functional-areas/infrastructure-management/collateral> [<https://perma.cc/2WMC-NNV2>] (last visited Feb. 10, 2016) (“contain[ing] [c]ollateral information and certain informational documents for the Standard Credit Support Annex (SCSA®), which seeks to standardize market practice regarding embedded optionality in current CSAs . . . and align the mechanics and economics of collateralization between the bilateral and cleared OTC derivative markets”).

183. This option may not be feasible; for example, a clearinghouse structure may involve margin requirements that would be unworkable for student counterparties. *See supra* note 131 and accompanying text.

A. *Differential or Discriminatory Pricing*

The primary variable in imagining a market for income-share agreements is the range of factors involved in pricing the agreements. The student-loan market is divided into two submarkets that operate very differently with respect to differential pricing. The bulk of loans for higher education are government loans, and these loans have interest rates fixed by statute that are the same for all qualified borrowers. But there is also a significant market for private loans for higher education, and these loans carry rates that are priced differently depending on a variety of factors, including the creditworthiness of the borrower or guarantor, the loan default rate of the school the borrower is attending, and other factors. In the private student loan context, students are protected against discrimination on the basis of race and other factors by the Equal Credit Opportunity Act (ECOA).<sup>184</sup> But, as discussed above, unless the law is changed, IBR Swaps would not be considered student loans and so would not be subject to ECOA. Furthermore, because IBR Swaps could be used in conjunction with government loans, a vibrant IBR Swap market could introduce differential pricing into the existing market for government loans as well as avoid the regulation of discriminatory lending that currently applies to the private student loan market.

There is nothing inherent in IBR Swaps that requires them to be differentially priced. A governmentally controlled IBR Swap program could offer some of the benefits of ISAs without any differential pricing. But all commentators assume that private income-share agreements would not be available to all students on the same terms the way the government's income-based payment plans are.<sup>185</sup> Rather, a market would develop in which income-share agreements are differentially priced based on some criteria that investors believe predict high-earning graduates. As discussed above, most of the commentators thus far have assumed that income-share agreements for undergraduate education would be differentially priced based on undergraduate major, with "high earning" majors like engineering commanding lower priced income-share agreements, while "low earning" majors like English would have to pay higher prices for their income-share agreement. In other words, an English major may be able to borrow \$10,000 in exchange for 2% of their income, while a petroleum engineering major may be able to borrow the same \$10,000 in exchange for only 1% of their income. It is beyond the scope of this Article to discuss the

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184. 15 U.S.C. § 1691(a) (2012) ("It shall be unlawful for any creditor to discriminate against any applicant, with respect to any aspect of a credit transaction—(1) on the basis of race, color, religion, national origin, sex or marital status, or age (provided the applicant has the capacity to contract); (2) because all or part of the applicant's income derives from any public assistance program . . . ."). ECOA is implemented by Regulation B (12 C.F.R. pt. 202) and enforced by the Consumer Financial Protection Bureau, which also has the authority to promulgate implementing regulations for it. *See id.* § 1691b.

185. *See supra* note 24.

merits of this particular assumption, but we are both skeptical of the evidence that supports it and unenthusiastic about the effects a market would have if college major was the primary driver of differential pricing.<sup>186</sup>

But there is no reason that course of study would necessarily be the dominant factor that would determine the price of an income-share agreement. Choice of school could be a significant factor in differential pricing, especially in the law school context.<sup>187</sup> If investors determined that graduates of highly-ranked law schools on average made more money than graduates of low-ranked law schools, then they could charge more to students of low-ranked law schools for their income-share agreements.<sup>188</sup> If they estimated that Ben, a student of a low-ranked law school was likely to earn half as much as Heather, a student of a high-ranked law school, they might charge Ben 2% of his future income for every \$10,000 borrowed, while they charge Heather only 1% for the same \$10,000. Remember, that does not mean that Ben will pay more than Heather for his education. If the investors are predicting correctly, and if Ben and Heather earn the average amount for their schools, they will each pay the same amount for their education. It will just be a higher percentage of income for Ben than for Heather.<sup>189</sup> The same is true of debt—if they earn the average amount for their schools, then Ben pays a higher percentage of his income than Heather, even though they pay the same amount of money. But, obviously, the investors might not predict accurately or Heather and Ben might not be average. If Ben is above average *for his school* then he will pay more for his education than someone who is average *for their school*. If he is below average *for his school* then he will pay less. If Ben and Heather earn the same amount as each other, then Ben, who is dramatically outperforming the other students from his school, will pay much more than Heather, who is earning the average for her school. That may seem unfair. It may even contribute to social inequality, since students from low-income backgrounds may be more likely to attend lower ranked schools.

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186. Avoiding a robust discussion of exactly this issue was one of the reasons we chose to focus on law school financing in this Article. For a critique of differential pricing in the undergraduate context, see Jonathan D. Glater, *The Unsupportable Cost of Variable Pricing of Student Loans*, 70 WASH. & LEE L. REV. 2137 (2013).

187. In the private student loan market, a version of this school-based differential pricing operates to raise the price of loans for students attending certain schools that have high aggregate default rates on student loans.

188. The rankings mentioned in this hypothetical are the graduate school rankings published annually by the U.S. News and World Report. It is widely believed that graduates of higher ranked law schools earn more on average than graduates of lower ranked law schools.

189. Remember, that is how it currently works with fixed-rate debt. If Ben earns half Heather's salary, he pays twice as much for his education as she does, *as a percentage of his income*. See *supra* note 82. Of course, Ben and Heather are paying the same amount in absolute terms if they both borrow the same amount of fixed-rate debt, unless one or the other defaults or takes advantage of a governmental repayment program.



But the possibilities of differential pricing do not end there. It is likely that school will not be the only meaningful pricing factor for an investor in income-share agreements. Absent any rule or law to the contrary, an investor could use more personal factors, such as undergraduate GPA or an LSAT score. These “scores-based” factors would have a very different impact than schools-based factors. Even worse than scores-based differential pricing is differential pricing based on other personal factors. For example, we know that women on average earn less than men, and so, absent any law preventing it, one could imagine a world in which Heather and Ben have identical LSATs and GPAs and go to the same school, but Heather’s income-share agreement costs more than Ben’s just because she is a woman.<sup>190</sup> Similarly, we know that children of high-earning parents are more likely to be high-earners themselves than children of low-earning parents, even when other factors are controlled. One could imagine a world in which income-share agreements are priced largely based on the earnings history of the student’s parents. One could imagine a world in which race is a factor.<sup>191</sup> Again, these pricing strategies would mean that students who ended up earning the same amount would pay different amounts based on sex or parental income or race. And the difference

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190. As discussed above, *supra* note 184, ECOA prevents discrimination on the basis of sex in the private student loan context, but without legislative or regulatory change, ECOA would not apply to income-share agreements. It would be relatively easy to prevent discrimination on the basis of sex or race just by including income-share agreements in the definition of student loans for the purposes of ECOA. While there is room for debate on this subject, the Rubio–Petri Legislation arguably accomplishes this by providing that an income-share agreement that meets the requirements of the bill is defined as “qualified education loan” under Section 221(d) of the Internal Revenue Code. *See* H.R. 3432, 114th Cong. § 301(a) (1st sess. 2015). Once the instrument is described as a “qualified education loan, it is presumably “credit” which is subject to ECOA. *See* 15 U.S.C. § 1691a(d) (2012) (“The term ‘credit’ means the right granted by a creditor to a debtor . . . to incur debts and defer its payment . . . .”); 12 C.F.R. § 202.2(j) (2016) (“Credit means the right granted by a creditor to an applicant to . . . incur debt and defer its payment . . . .”). With respect to the IBR Swap, which does not constitute debt absent some law or regulation to the contrary, the Rubio–Petri Bill could change the debt analysis for any IBR Swap that qualified as an ISA under the Bill.

191. Race, like sex, is covered under ECOA. *See* 15 U.S.C. § 169a(d). It is worth mentioning in this context, that discrimination can be found under ECOA under either a theory of disparate treatment or disparate impact. *See* CONSUMER FIN. PROT. BUREAU, CONSUMER LAWS AND REGULATIONS: EQUAL CREDIT OPPORTUNITY ACT 1 (2013), *available at* [http://files.consumerfinance.gov/f/201306\\_cfpb\\_laws-and-regulations\\_ecoa-combined-june-2013.pdf](http://files.consumerfinance.gov/f/201306_cfpb_laws-and-regulations_ecoa-combined-june-2013.pdf) [<https://perma.cc/J54E-NDNH>] (“Disparate impact occurs when a creditor employs facially neutral policies or practices that have an adverse effect or impact on a member of a protected class unless it meets a legitimate business need that cannot reasonably be achieved by means that are less disparate in their impact.”); *see also* *Rodriguez v. SLM Corp.*, No. 07cv1866 (WVE), 2009 WL 598252, at \*3 (D. Conn. Mar. 6, 2009) (“In light of the early stage of this action and the recent decisions that [*Smith v. City of Jackson*, 544 U.S. 228 (2005)] does not preclude ECOA disparate impact claims as recognized in pre-*Smith* precedent, the Court will deny the motion to dismiss on this ground.”).

would undermine egalitarianism in access to education: the children of high earners would pay *less* than the children of low earners.<sup>192</sup>

### B. *Regulating Differential Pricing*

Congress could create a regulatory regime that would control which factors could be used in pricing income-share agreements. Lawmakers could mandate that the price of an income-share agreement not vary based on sex or race or parental income.<sup>193</sup> They could mandate that the price be based solely on school attended or even course of study, with students of all law schools paying the same amount.

The problem with such regulation is that it represents a tradeoff in two ways. First, the information-gathering potential of income-share agreements depends on differential pricing. When the investors set a different price for students with different factors, it communicates to the student the market's estimation of the relative importance of those factors to the students' future earnings. If the government prevents differential pricing based on LSAT or undergraduate GPA, for example, it prevents students from learning anything about their own earning potential based on their LSATs or undergraduate GPAs. After all, either thing may be irrelevant or highly relevant. The dream of many income-share agreement supporters is that permitting people to make money from accurately predicting students' earnings would fuel investment into exactly these questions, and the price would communicate the findings.

The second tradeoff in regulating differential pricing is so-called regulatory adverse selection. *Adverse selection* is the term used to describe a central problem in insurance markets. Traditional adverse selection arises when insurers and insureds have "asymmetric information" about the risks posed to the insured. For example, an insurer providing life insurance may know that the overall probability of a forty-six-year-old man dying in the next year is 2%. If the only information he had about the insured was his age and sex, then he would price the one year of life insurance based on that 2% chance of the insured dying in the coming year. But the chance of a forty-six-year-old man who is diagnosed with advanced lung cancer dying in the next year may be as high as 50%. If the insured knows that he has cancer, but the insurer does not, then there is an informational asymmetry. If the insurer prices the insurance based on its knowledge of the general population of forty-six-year-old men, then the insurance will be a bargain for the man with cancer.

Assuming that the insurer cannot discover which people are diagnosed with cancer, it will have to price its insurance slightly higher than it

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192. Remember, privileged students would pay less *as a percentage of their income*, but they would pay the same amount if both parties earned the amount they were projected to earn.

193. The easiest way to protect against discrimination in ISA pricing would be to include ISAs in the instruments covered by ECOA. *See supra* note 190.

otherwise would, because it knows that people with cancer are more likely to purchase it than people without cancer. As the insurer increases the price of the insurance to take into account those people who know they have cancer, the insurance becomes less attractive to people who do not have cancer, and they purchase less, driving the price even higher. That tendency for asymmetric information to encourage high-risk individuals to acquire more insurance, and thereby drive low-risk individuals out of the market, is called “adverse selection.” In extreme cases, adverse selection can cause a “death spiral” as low-risk insureds opt out of the market, driving up the price, thereby causing more low-risk insureds to exit the market.

In education financing, adverse selection potentially exists whether financing is provided in the form of debt or an income-share agreement. In the case of income-share agreements, any information that accurately predicts earnings—and that is known to students but not investors—is relevant to the adverse selection issue. For example, if a student knows that they want to work in public interest law and that salaries are very low there, then they present a greater-than-normal risk of low earnings. Similarly, if a student has a personal contact at a high-paying law firm, they potentially present a greater-than-normal chance of high earnings. If the low-earning student opts in to the human capital contract market, and the high-earning student opts out, the adverse selection problem may be acute. That is because personal commitments and personal contacts are private information held by the student and not available to the investors.

But adverse selection problems arise not only through asymmetric information, but also when both parties have access to information. However, the insurer is prohibited by law to take that information into account in setting rates. This kind of adverse selection is sometimes called *regulatory adverse selection* to emphasize the fact that it arises out of the legal regime, rather than out of asymmetrical information.<sup>194</sup> So, for example, the fact that federal law prohibits insurers from considering preexisting conditions when providing or pricing health insurance creates the potential for regulatory adverse selection.<sup>195</sup> In the case of income-share agreements, any regulatory regime that limits the factors that investors can consider in pricing the contracts could create or exacerbate the adverse selection problem. Even banning only the most disturbing forms of price discrimination could potentially cause regulatory adverse selection. For example, if the government banned sex discrimination in pricing income-share agreements, women (who are at greater risk of low earnings) might opt in to the program, while men (who have a greater likelihood of high earnings) opt out. In this scenario, the average price would go up.

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194. Ronen Avraham, Kyle D. Logue & Daniel Schwarcz, *Understanding Insurance Antidiscrimination Laws*, 87 S. CAL. L. REV. 195, 204 (2014).

195. The so-called individual mandate, which requires almost all persons to purchase health insurance, is an attempt to overcome at least some of the potential adverse selection caused by the prohibition.

In the income-share agreement market, regulatory adverse selection could also occur if investors were constrained from taking into account any other individual factor, like family wealth, grades, LSAT scores, or anything else. It is conceivable that adverse selection could be prevalent enough in a market for human capital contracts to cause a “death spiral.” In that case, no market could develop for income-share agreements, and it would be necessary for the government to intervene, either with some sort of “individual mandate” or by subsidizing income-share agreements enough to counter the costs of adverse selection.

Ultimately, the question of whether asymmetrical information or regulatory adverse selection would destroy a voluntary market for income-share agreements is an empirical one. There are some reasons to believe that the adverse selection problem may not be as bad as one might fear, at least if students are required to make their choice about whether to participate before they start their law school career. As for information asymmetries, the consensus appears to be that at the point students enter school, they have very little reliable information about their future earning capabilities at graduation, at least in the law school context. Remember, for adverse selection to be a concern, students would have to know more about their individual earning potential than the investors.<sup>196</sup> Most evidence suggests that at least prospective law students have very little private information about themselves that would enable them to make better predictions about their earning potential than investors.<sup>197</sup> Even the classic example of the student who plans to go into a low-earning field like public interest appears to be largely a myth. Most students do a bad job at the outset of law school predicting what kind of law they will practice, and so-called public interest careers are not the main cause of low earning among law school graduates.

Regulatory adverse selection may also pose less of a problem than one might assume if individual characteristics are not very predictive of future earnings. Transaction costs already limit the individual factors that insurers use to price insurance, and only those whose predictive ability justifies the price of collecting the information are likely to be used. It may well be that the factors that are prohibited—even if they include scores or parental income—are just not significant enough to cause a death spiral in the market. After all, we had a robust health insurance market prior to the Affordable Care Act with a significant number of antidiscrimination provi-

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196. See Macchiarola & Abraham, *supra* note 24, at 110–13.

197. See PALACIOS ET AL., INVESTING IN VALUE, SHARING RISK, *supra* note 24, at 11 (giving good general introduction to adverse selection problem faced by human capital contracts).

Given that students are often not very accurate in projecting their future income and typically have low levels of knowledge about the labor market, however, investors will most likely have better information than students about their future economic prospects in particular courses of study at particular institutions.

*Id.*

sions. It presumably was the ban on pricing based on preexisting conditions that legislators thought would be the straw that broke the camel's back to necessitate the individual mandate.

In regulating income-share agreements, legislators would have to make a similar judgment about which pricing factors could be prohibited without destroying the market and which would be too much. If skepticism about the predictive power of various characteristics is warranted, then regulatory arbitrage may not be such a significant problem. On the other hand, if no factor does a good job of predicting earnings, then the "information-gathering" power of income-share agreements will probably be less powerful than some commentators hope. These two issues—regulatory adverse selection and differential pricing—are inherently connected.

In summary, the point here is that the creation of a market for income-share agreements might necessitate new regulation, and this new regulation would implicate a series of policy trade-offs. We leave a systematic examination of these policy tradeoffs to another day.

## VI. CONCLUSION

This Article has introduced a novel financial instrument that has both strengths and weaknesses. One of the benefits of a financial innovation like the IBR Swap is how flexible it is to adapt to a variety of circumstances. One example should illustrate how thinking about the IBR Swap may help policy-makers to see higher education finance in new ways, making creative policy reform possible.

In July 2013, the Oregon legislature approved a pilot program under which students can attend state universities for free in exchange for a promise to pay a percentage of their future income.<sup>198</sup> The program, called "Pay It Forward," has been stalled for over two years largely because legislators are unsure of how to fund it. Because Oregon state schools would have to forego tuition revenue for any student participating in the program, the cost would have to be made up elsewhere. Legislators have proposed issuing bonds, directing revenue from the state's lottery, and other sources of revenue to fund the program. Pay It Forward is in essence a human capital contract between the state of Oregon and some of the students at its state schools.

If it wanted to, Oregon could solve its revenue problem by structuring the Pay It Forward program as a series of IBR Swaps. Instead of attending Oregon state schools for free, students would borrow from the federal government the cost of tuition and pay that tuition to the school they attend. Then, Oregon could agree that it would pay the students' loan payments on their behalf, so long as the students pay Oregon a percentage of their future incomes. Oregon has estimated that four years of public college

198. See H.B. 3472, 77th Leg. Assemb. Reg. Sess. (Or. 2013), available at <http://gov.oregonlive.com/bill/2013/HB3472/> [<https://perma.cc/7Q5Y-2DR5>].

would cost 3–5% of a student's income for twenty years. Therefore, if students borrowed enough to pay for four years, Oregon would enter into IBR Swaps with them in which it paid off their student loans, and they paid Oregon 3–5% of their incomes for twenty years. From the student's perspective, a Pay It Forward program structured around an IBR Swap is almost identical to the currently proposed Pay It Forward program. From Oregon's perspective, the primary benefit of an IBR Swap model is that it does not need to come up with upfront capital to fund its Pay It Forward Program.

The ways that the IBR Swap opens possibilities for Oregon and others is just the beginning of the conversation, however. It is crucial that we bring both creativity and detailed attention to the possibilities that income-based education finance presents. The IBR Swap combines structural and financial advantages of derivatives with the appeal of income-based approaches to paying for law school. But the benefits of the IBR Swap from a financial engineering perspective only make starker the potential social problems that could arise from an unregulated market for income-share agreements. The IBR Swap concept should inspire reexamination of the best role for government in higher education finance and the importance of channeling public funds to their best uses. Now is the time to explore innovations like the IBR Swap, as legal education strives to better match costs and capital to educate the next generation of lawyers.