

THE SUPERCHARGED IPO

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INTRODUCTION

Suppose you decide to buy a home, and you make an offer on a property that has just come on the market. In reviewing the details of your proposed contract, the seller observes that you will pay for the property with a home mortgage, which means you may qualify for a home mortgage interest tax deduction.¹ This tax deduction, as both you and the seller understand, is quite valuable—it could literally save you thousands of dollars in taxes over the period in which you make interest payments on your loan.² Recognizing this value, the seller responds to your offer with a counter offer: she adds a provision to the sale contract that requires you to transfer eighty-five percent of your tax savings back to her! Stated differently, if your mortgage interest tax deduction saves you \$1000 in taxes each year, you must transfer \$850 back to the seller in each of the years in which you obtain that tax break. If you accept the deal, you will pay the up-front purchase price in the year of the sale, but you will also pay \$850 every year thereafter while you maintain your mortgage and take advantage of the deduction.

Why would you agree to transfer large amounts of money on an annual basis to the seller in the post-sale period?

This is a question that has long befuddled scholars and commentators who have observed and studied financial contracts that contain “tax receivable agreements” (TRAs), the term of art that experts use to describe contract provisions requiring parties to share tax benefits.³ While the type of agreement just described has not explicitly

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¹ Dean Stansel and Anthony Randazzo, *Unmasking the Mortgage Interest Deduction: Who Benefits and By How Much*, 394 Policy Stud. (July 2011) available at http://reason.org/files/mortgage_interest_deduction.pdf (IRS estimates that 20-25% of tax returns claim a home mortgage interest deduction)

² *Id.* (average annual tax saving from mortgage interest deduction is between \$96 and \$2221).

³ Example.

emerged in the residential housing market,⁴ it is ubiquitous in various other corners of the financial landscape.⁵ Most recently, these agreements have made their way into the stock purchases that take place in the context of initial public offerings (IPOs).⁶ In this setting, the founders of a private company—a company that has amassed tax deductions and credits that can be used to reduce its tax bill well—take the company public and in doing so require the new public entity to share any tax savings obtained in the post-IPO period. Often labeled “supercharged IPOs” in light of the series of payments made to owner-founders over the course of years, these deals were unseen and unheard of prior to 1993. Today, however, they involve the transfer of millions of dollars to owner-founders on an annual basis.

Supercharged IPOs have not entered the market quietly. Some have argued these payments are “a little bit underhanded,”⁷ “unusually one-sided,”⁸ a “true windfall,”⁹ and a “bizarre siphoning off of cash.”¹⁰ At the same time, others argue that financial innovators have devised a useful means to compensate founders for the costs incurred when taking their company public. There is “nothing nefarious about it,”¹¹ notes Robert Willens, a leading finance expert and the one who coined the terms “supercharged IPO,” the agreements are “all disclosed” to the public well before the IPO takes place.¹²

⁴ Tax sharing agreements in the residential housing market do not explicit exist, but most economists believe that the value of the home mortgage interest deduction is implicitly included into the price of the home.

⁵ That tax sharing occurs both implicitly and explicitly is widely understood and extensively studied. See e.g., Dan Dhaliwal, Merle Erickson & Shane Heitzman, *The Effect of Seller Income Taxes on Acquisition Prices: Evidence from Purchases of Taxable and Tax-Exempt Hospitals*, 26 J. AM. TAX. ASSOC. 1-21 (2004); Douglas Shackelford & Terry Shevlin, *Empirical Tax Research in Accounting*, 31 J. ACCT. & ECON. 321-87 (2001); Merle Erickson & Deward Maydew, *Implicit Taxes in High Dividend Yield Stocks*, 73 ACCT. REV. 435-58 (1998); Anne Beatty, *The Cash Flow and Informational Effects of Employee Stock Ownership Plans*, 38 J. FINANCIAL ECON. 211-40 (1994); Douglas Shackelford, *The Market for Tax Benefits: Evidence from Leveraged ESOPS*, 14 J. ACCT. & ECON 117-145 (1991).

⁶ The first supercharged IPO emerged in 1993, and then not again until the 2004. See Amy S. Elliott, *IPO Agreements that Shift the Basis of Step-Up to Sellers Proliferate*, TAX NOTES 334 (July 25, 2011). The 1993 IPO involved Belden, Inc., a division of Cooper Industries, and a subsequent 1994 IPO involved of O’Sullivan Industries—the first two deals to incorporate a tax receivable agreement—a key component of the supercharged IPO.

⁷ Amy S. Elliott, *IPO Agreements that Shift Basis Step-up to Sellers Proliferate*, TAX NOTES, July 25, 2011, at 334 (citing Robert Willens’).

⁸ Reuters, *Blackstone Partners May Avoid Tax on IPO Gains* (July 13 2007) (citing Lee Sheppard) available <http://www.reuters.com/article/2007/07/13/us-blackstone-tax-idUSN1325038320070713>.

⁹ Robert Willens, (“The thing that fuels this is that it is truly a windfall); Amy S. Elliott, *IPO Agreements that Shift Basis Step-up to Sellers Proliferate*, TAX NOTES, July 25, 2011, at 337 (“pure gravy”).

¹⁰ PEU Report, *Carlyle’s “Cash Tax Savings” Won’t Go to Unit Holders* (May 5, 2012) available at <http://peureport.blogspot.com/2012/05/carlyles-cash-tax-savings-wont-go-to.html>.

¹¹ Amy S. Elliott, *IPO Agreements that Shift Basis Step-up to Sellers Proliferate*, TAX NOTES, July 25, 2011, at 339 (citing Robert Willens).

¹² Amy S. Elliott, *IPO Agreements that Shift Basis Step-up to Sellers Proliferate*, TAX NOTES, July 25, 2011, at 339 (citing Robert Willens); see also Debevoise & Plimpton Private Equity Report, *Monetizing the Shield: Tax Receivable Agreements in Private Equity Deals* at 9, Volume 11, no.1 (Fall 2010)

Notwithstanding the vocal disagreement on the deal's rationale and underlying fairness to the parties involved, experts have continually described supercharged IPOs as "masterful,"¹³ works of "artistry,"¹⁴ and "brilliant, just brilliant."¹⁵

Supercharged IPOs have generated substantial notice, debate and controversy, but no commentator has posed the question: why now? After all, owners and founders have taken companies public for at least three hundred years,¹⁶ yet these unusual payout schemes emerged just two decades ago. Moreover, this new-style IPO has spread across industries and geographic areas, a process that raises the question of how and why financial innovations diffuse after the initial idea emerges. Finally, and perhaps most importantly, the supercharged IPO raises the question of who actually benefits: the owner-founders, the investing public, or both? In this study, we seek to find answers to these questions with the help of a large IPO database—the first of its kind—and one that includes both conventional and supercharged deals over the course of the last several decades.¹⁷

(While TRAs have risks and drawbacks, some argue they have a "certain symmetry because existing owners receive tax benefits associated with a tax liability they have borne.")

¹³ Allan Sloan, *GE Perfects the Fine Art of Tax Savings*, The Washington Post (Dec. 13 2005) available at <http://www.washingtonpost.com/wp-dyn/content/article/2005/12/12/AR2005121201510.html>.

¹⁴ *Id.*

¹⁵ *Id.* citing Robert Willens.

¹⁶ West India Trading Company in the year 1650. [Get citation.]

¹⁷ To be sure, quite a few scholars have investigated financial innovation from both a theoretical and qualitative perspective. Many historical and sociological studies, for example, have cataloged significant inventions throughout history, and economists have proffered a variety of theories for why inventions emerge and proliferate. See Darrell Duffie, *Financial Market Innovation and Security Design: An Introduction*, 65 J OF ECON. THEORY 1, 5-7 (1993) (listing economic events and innovations that followed between 1971-86); see, e.g., symposium issue on financial market innovation and security design in 93 J. ECON. THEORY (1993). Few scholars or teams of scholars, however, have attempted to conduct a large-*N* quantitative study on the topic. Mahbrouk Abir and Mamoghli Chokri, *Dynamic Financial Innovation and Performance of Banking Firms: Context of an Emerging Banking Industry*, 51 Int'l Res. J. of Finance and Econ. 17, 18 (2010) ("in spite of extensive descriptive literature on financial innovation, there is a paucity of empirical studies"); Josh Lerner, *The New New Financial Thing: The Origins of Financial Innovations*, 79 J. of Fin. Econ. 223, 224 (2006) (despite the importance of financial innovation, only 39 empirical studies exist on the topic); Jala Akhavein, W. Scott Frame, and Lawrence J. White, *The Diffusion of Financial Innovations: An Examination of the Adoption of Small Business Credit Scoring by Large Banking Organizations*, 78 J. of Bus. 577, 578 (2005) (only seven quantitative studies investigating the process by which innovation diffuses). This gap in the literature is not surprising: it is often difficult to identify the specific time and place of most innovations, and diffusion patterns depend on data that is obscure and frequently unavailable outside private firms. Mahbrouk Abir and Mamoghli Chokri, *Dynamic Financial Innovation and Performance of Banking Firms: Context of an Emerging Banking Industry*, 51 Int'l Res. J. of Finance and Econ. 17, 18 (2010) ("in spite of extensive descriptive literature on financial innovation, there is a paucity of empirical studies"); Josh Lerner, *The New New Financial Thing: The Origins of Financial Innovations*, 79 J. of Fin. Econ. 223, 224 (2006) (despite the importance of financial innovation, only 39 empirical studies exist on the topic); Jala Akhavein, W. Scott Frame, and Lawrence J. White, *The Diffusion of Financial Innovations: An Examination of the Adoption of Small Business Credit Scoring by Large Banking Organizations*, 78 J. of Bus. 577, 578 (2005) (only seven quantitative studies investigating the process by which innovation diffuses). Fortunately, these hurdles do not exist for our study. Federal

Our study begins, in Section IIA, by comparing and contrasting traditional IPOs with the new supercharged version of taking a company public. We note that supercharged IPOs come in many different forms and have gone through a series of highly complex iterations over the course of time, but they all contain one key component: a TRA similar to the one described above awarding owner-founders substantial monies in the post-IPO period. After describing supercharged IPOs as an important financial innovation, Section IIB then outlines the means by which companies disclose the details of the payout schemes to their investors, and highlights the various risks that each party undertakes by entering a TRA.

In Section III, we turn to the theoretical literature to understand how and why financial innovations, such as the supercharged IPOs, enter the market. We focus first on the drivers of the financial innovation and observe that the incentive to generate new strategies is often not a discoverer's passion and zeal, but mundane factors associated with risk aversion, information asymmetry, transaction costs, and legal and regulatory regimes.¹⁸ We then explore the underlying theories for how and why innovation diffuses across markets and industries and find that the process is often explained by factors such as elite financial intermediaries, professional networks, firm culture, and media coverage. Sections IIIA and B present a series of interconnected and competing theories for the rise and the spread of the supercharged IPO. Accordingly, throughout Section III, we present hypotheses that grow out of our theoretical discussion, thereby framing our empirical expectations.

Section IV presents the empirical component of our study. Section IVA outlines our data collection process and explains our statistical models. Section IVB presents our findings vis-à-vis the rise and proliferation of the supercharged IPO. We find the initial motivation for pursuing this new deal structure relates to legitimate business planning and macroeconomic factors. More specifically, our data indicate that supercharged IPOs are highly correlated with the parties' desire to take advantage of tax arbitrage opportunities, and not a devious plan by owner-founders to profit from naïve investors as many critics have argued. Our results also suggest, contrary to the existing literature, that while innovation in the IPO context is an on-going process, it tends to spike when the economy performs poorly. With respect to the process of the use and diffusion of new ideas in the financial sector, we find that the earliest innovators are firms widely viewed to be aggressive and flexible, such as those organized in tax havens. Over time, however, the diffusion process is best explained by two factors: elite lawyers and professional networks—especially those located in the New York City region. Owner-founders, who take their company public, tend to supercharge their deal when they hire elite New York City lawyers.

securities laws require public companies to disclose details of the post-IPO payouts, and for this reason we are able to track both the emergence and the diffusion of the supercharged IPO.

¹⁸ MYRON S. SCHOLES ET AL., *TAXES & BUSINESS STRATEGY* (4th ed. 2008); David M Schizer, *Frictions as a Constraint on Tax Planning*, 101 COLUM. L. REV. 1312 (2001).; EVERETT M. ROGERS, *DIFFUSION OF INNOVATIONS* (1995) (establishing framework to describe how innovations spread).

Finally in Section V, we note that our findings have important implications for IPO planners and strategizers, legal reformers, and the existing theoretical literature on financial innovation generally. Our qualitative analyses indicate that supercharged IPOs enable *both* founders and investors to save substantial amounts of money in taxes, and this finding suggests that all the parties should seek the assistance of elite New York lawyers if they want to gain access to these savings. The tax avoidance opportunities inherent to the supercharged IPO, however, raise the normative question of whether these innovative deals undercut the nation's social and economic welfare due to the massive revenue losses they generate. Legal reformers have proposed legislation to eliminate their tax benefits, but our analyses indicate the reforms are so massively under-inclusive that they will not address the perceived problem and may ultimately operate in way that punishes public investors but not the owner-founders for seeking to share tax benefits. Finally, our study advances the existing literature on financial innovation. The literature is largely theoretical and often presents a series of competing explanations for any given innovation that emerges on the market. Our approach builds on this scholarship and demonstrates how scholars can use empirical data to test the competing theories and shows that it is possible to extricate the value of each theory for explaining financial innovation.

II. INITIAL PUBLIC OFFERINGS

Initial public offerings (IPOs) are transactions whereby privately held companies register and sell stock to the public for the first time. A successful IPO infuses the company with substantial cash, thereby making it possible to expand and diversify the business, increase research and development, retire debt obligations, and so forth.¹⁹ IPOs also provide liquidity and exit options for the founders, investors, and employees who own shares in the company. Indeed, for many insiders, the true benefit of going public is the monetization of the pre-IPO owners' interest in the company; founders often realize a sizable return by selling shares directly to the public, or by selling shares in a secondary offering a few months after the IPO.²⁰ At the same time, founders usually do not sell all of their shares: many seek to (and do) retain control over their company after it has gone public.²¹

A. The Traditional IPO

To understand the supercharged IPO as an important financial innovation, it is useful first to consider traditional IPOs. To begin, assume that Founders Co., a privately

¹⁹ Companies that go public file a prospectus that includes a description of the business along with the growth plans. *See, e.g.*, Fortress Investment Group LLC, Form S-1 (Feb. 2, 2007). For a useful review of the IPO process, *see* PATRICK J. SCHULTHEIS, ET AL., *THE INITIAL PUBLIC OFFERING: A GUIDEBOOK FOR EXECUTIVES AND BOARDS OF DIRECTORS* 1-12 (2004); CARL W. SCHNEIDER, JOSEPH M. MANKO, ROBERT S. KANT, *GOING PUBLIC: PRACTICE, PROCEDURE AND CONSEQUENCES* 1-5 (2002).

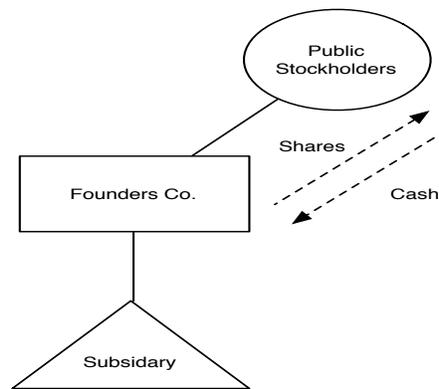
²⁰ Andrew W. Needham, *Private Equity Funds*, 735 *TAX MGMT. PORTFOLIO* 2d A-90 (2010).

²¹ *Id.*

held corporation, operates its business through a subsidiary. Assume also that this subsidiary holds several assets, including goodwill, a valuable item associated with its corporate identity, customer relationships, and so forth.²² Many corporate assets give rise to amortization and depreciation tax deductions, thereby enabling the company to recover its costs and save substantial monies in taxes over the course of years. Goodwill, however, is subject to a unique rule: if the asset is *self-generated* it cannot be amortized, but if it is *purchased*—the tax laws allow the purchaser to amortize the cost of the asset over a fifteen-year period.²³ As we will see, acquired goodwill—along with the tax benefits this asset provides—is a key factor underlying many of the recent supercharged IPOs.

If Founders Co. chooses to go public in a traditional IPO, it will sell newly issued shares of stock to the public for cash as depicted in figure 1, a structure that reflects a simplified version of the IPO. The public offering infuses Founders Co. with substantial monies based on its underlying value (reflected by the company assets, including goodwill), but from a tax perspective it is a non-event—none of the parties will pay any tax on the deal.²⁴

Figure 1: The traditional IPO



Note: Founders Co. sells stock to the public and obtains substantial cash, but the transaction does not generate any tax consequences for any of the parties.

The traditional IPO generates substantial cash for the owner-founders and avoids tax costs, but many commentators nonetheless view the transaction as inefficient and

²² Congress defines goodwill as “the value of a trade or business that is attributable to the expectancy of continued customer patronage, whether due to the name of a trade or business, the reputation of a trade or business, or any other factor.” Treas. Reg. § 1.197-2(b)(1). In accounting, the term is “The acknowledgement in the balance sheet that the whole is greater than the sum of its part.” See Note, *Treatment of Goodwill by the Seller Under I.R.C. Section 197*, 43 KAN. L. REV. 903, 903 (1995).

²³ I.R.C. § 197.

²⁴ See I.R.C. § 1032(a) (“No gain or loss shall be recognized to a corporation on the receipt of money or other property in exchange for stock (including treasury stock) of such corporation.”).

wasteful for at least two reasons. First, the deal could have been structured to accomplish the parties' goals while reducing taxes. Second, experts believe that public investors routinely undervalue IPO stock (and thus underpay for the stock) given the tendency to disregard the "tax assets"²⁵ that reside inside the company. We explain the concept of tax assets immediately below, but for now we note that an alternative deal structure is available to address the drawbacks of the traditional IPO. With the help of a tax receivable agreement (TRA) executed at the time the company goes public, the parties can capture the value lost by the overpayment of taxes and/or the undervalued stock price. This feature of the alternative deal structure—the tax receivable agreement—has led commentators to label it a "supercharged IPO."²⁶

B. The Supercharged IPO

A supercharged IPO differs from a traditional IPO because it always involves so-called tax assets, along with a TRA. Tax assets are simply the tax deductions, credits, and exemptions that generate tax savings for the company. For example, if a company purchased goodwill for \$15 million and ratably amortized that asset over fifteen years on its tax return, it would take a deduction of \$1 million a year. At a 35 percent tax rate, this deduction would save the company a total of \$5,250,000 in taxes over fifteen years. Because the ability to reduce the corporate tax burden is so valuable to a corporation's bottom line, tax assets are routinely listed on a company's balance sheet for purposes of highlighting hidden but very profitable company assets. This information, in turn, can and does play a role in the valuation process when companies go public in an IPO: as the value of tax assets increase, so does a company's market value. Moreover, the more tax assets that exist, the more likely the parties are to supercharge the IPO with a TRA.

Since 1993, when the first supercharged IPO appeared, several different formulations of the deal have emerged. Each new generation has built on the basics of the earliest deals, and for this reason we limit our discussion to the first two waves of the innovation to illustrate the key features. As we note below, experts justify each of these deal structures with a range of different underlying rationales ranging from completely legitimate to pure thievery on the part of the founders.

1. *The First Wave*

One of the most widely discussed supercharged IPO deal structures involves the both the transfer of pre-existing tax assets and the creation of new tax assets. To accomplish this, the parties participate in a deal far more complex than that depicted in figure 1. First, Founders Co. transfers its subsidiary to a newly created corporation, Public Co., in exchange for Public Co.'s stock. Founders Co. then agrees to sell a large percentage of this newly acquired Public Co. stock to a third party (the investing

²⁵ A tax asset is an accounting concept that refers to an item that reduces the amount of a future tax burden.

²⁶ See Robert Willens, *General Electric "Supercharges" the Genworth Financial IPO*, Tax Notes 661 (Aug. 9, 2004) [hereinafter, *Supercharged IPOs*].

public).²⁷ This arrangement, an alternative to that presented in figure 1, has the advantage of not only transferring Founders Co.'s pre-existing tax assets to Public Co.—but also generating new tax assets. It is easy to understand the role of pre-existing tax assets in the deal: these assets are listed on the company's balance sheet and, like all the other company assets, they are transferred to Public Co., thereby enabling Public Co. to use them to reduce taxes down the road.

But how are new tax assets *created* in the deal? The new tax assets emerge because the parties will elect to treat the transfer, for tax purposes, as a sale of assets by Founders Co. to an outside third party.²⁸ Recall from above, that if a company buys goodwill, that company will be able to amortize its cost—amortization deductions that were denied to the owner-founders who generated the goodwill as discussed above.²⁹ Public Co.'s new tax assets (the amortization deductions) are far from inconsequential: the new company stands to save millions of dollars *each* year well into the future. Indeed, financial experts estimate that these newly created tax assets operate to reduce company taxes to such a great level that investors save roughly 20 to 25 percent of the purchase price paid for the stock shares through decreased corporate tax bills in the future. Put differently, the supercharged IPO enables investors to pay just 75 to 80 percent of the “headline” price for their shares due to the new tax assets that are created—assets that will substantially reduce corporate tax costs and thus keep the company's value high.

Public Co. and its investors reap valuable benefits but there is a major drawback to the deal: it is likely to generate substantial taxes, both at the subsidiary level and on the owner-founders.³⁰ This double tax is associated with the fact that the parties elected to treat the deal as a sale of stock and not a mere transfer of assets, a distinction with

²⁷ Actually, Founders Co. sells the shares to the investment bank, which then sells to the public. This arrangement causes the transaction to fail the section 351 “control” test and the related party rule in section 338(h)(3)(A)(iii). The deal, in short, is a “busted 351 transaction” and as such qualifies as a *stock sale*, leaving Public Co. with a carryover basis in the underlying assets and the public investors with its stock. The parties, however, do not want the carry-over basis so they will make a section 338(h) election and treat the transaction as a hypothetical *asset sale*. This treatment, in turn, enables Public Co. to obtain a stepped-up basis in the underlying assets reflecting their current fair market value. See Rev. Rul. 79-70, 1979-1 C.B. 144; see also Rev. Rul. 79-194, 1979-1 C.B. 145; TAM 9747001 (July 1, 1997); PLR 9541039 (July 20, 1995), as modified by PLR 9549036 (Sept. 12, 1995); PLR 9142013 (July 17, 1991).

²⁸ Tax explanation.

²⁹ See notes [–] and accompanying test.

³⁰ Founders Co. will suffer a taxable gain at the subsidiary level, depending on a number of factors such as the amount of unrealized gain and the availability of net operating losses. Moreover, to the extent that Founders Co. has appreciated in value, the original owner-founders will still have to pay a second level of tax when they sell or liquidate Founders Co. *Supercharged IPOs*, *supra* note 26; MARTIN D. GINSBURG AND JACK S. LEVIN, MERGERS, ACQUISITIONS, AND BUYOUTS ¶ 405 (2011). The basis step up occurs when Founders Co. contributes stock, assets or subsidiary interests to Public Co. in a “busted” 351 transaction—a strategy that the buyers almost always prefer and gives the sellers' some initial hesitation. See *Supercharged IPOs*, *supra* note 26; GINSBURG & LEVIN, MERGERS, ACQUISITIONS, AND BUYOUTS, *supra*.

important consequences under the tax laws.³¹ The important take-away for purposes of this article is the fact that the double tax did not exist in the structure presented in figure 1—indeed the traditional IPO generates *no* tax consequences.

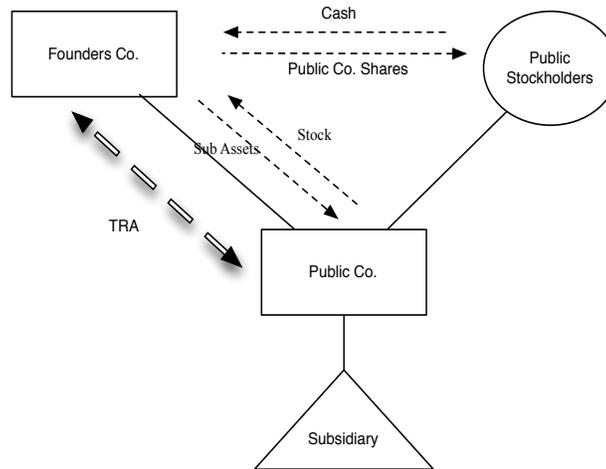
We now understand that the supercharged IPO generates valuable tax assets for Public Co. but also a tax burden on the original owner-founders. Why would Founders Co. agree to pay tax on the sale of stock simply to provide Public Co. (and its new outside investors) with tax savings down the road? The answer is simple: Public Co. will compensate Founders Co. for incurring this tax cost. One possible, and very simple, compensatory plan would involve charging the new shareholder-investors a higher price per share at the time of the IPO—this would reimburse Founders Co. for its tax costs and still enable investors to enjoy the benefits of the newly-created tax assets. Alternatively, Public Co. could agree to make a single lump sum payment to Founders Co. as compensation for the cost it incurs in transferring the assets to Public Co. and its investors. The parties, however, eschewed these and other simple options and adopted a far more complicated plan. Founders Co. and Public Co. supercharge the deal by entering a TRA, requiring Public Co. to transfer a portion of its tax savings back to Founders Co. in the post-IPO period.

The typical TRA requires Public Co. to pay Founders Co. 85 percent of the tax benefits realized as a result of the tax savings that would have been *unavailable* in the traditional IPO. The timing of the payments corresponds to the deductions as they are used to reduce the corporate tax burden. Public Co., in other words, makes the TRA payments to the founders as it realizes the tax savings and not before this time.³² Figure 2 is a simplified depiction of an early-supercharged IPO where Founders Co. exacted payments from Public Co. through a TRA in return for allowing Public Co. to benefit from the tax assets that were transferred and created in the multi-step transaction.

³¹ Explain.

³² The amounts transferred under the TRA are determined on an annual basis comparing Public Co.'s actual tax liability to its notional tax liability as if such deductions were unavailable and did not exist. In short, the value of the tax benefit is measured on a “with and without” basis: Public Co. measures what its taxable income would be with and without the amortization deductions, and makes a payment equal to eighty-five percent of that difference per the parties' TRA. Although some agreements indicate that the pre-IPO investors can accelerate the payments. *See, e.g.*, [cite] An interesting feature of the TRA payments is linked to the effects of the obligation going forward. Because each TRA payment is viewed as part of the purchase price of the stock or partnership interest by Public Co., every payment causes the basis in the underlying assets to increase, which in turn leads to additional TRA payments to the pre-IPO owners.

Figure 2: The Supercharged IPO: seller extracts more cash with a TRA



Note: As described in the text, Founders Co. first transfers its subsidiary to Public Co. in exchange for stock; then Founders Co. sells the stock to the public and at the same time executes a tax receivable agreement with Public Co. Ultimately, Public Co. will make payments to Founders Co. in the post-IPO period per the terms of the tax receivable agreement.

The early-supercharged IPOs emerged because Founders Co. sold its subsidiary to Public Co., enabled Public Co. to gain access to valuable tax assets, and incurred a tax on the deal.³³ A second generation of supercharged IPOs, however, soon followed with a deal structure similar to that depicted in figure 2 but with two notable differences—Public Co. does *not* receive new tax assets and Founders Co. does *not* suffer a double tax. Yet, the parties nevertheless execute a TRA requiring post-IPO payouts to Founders Co.

2. *The Second Wave*

In the second wave of supercharged IPOs, Founders Co. transfers pre-existing tax assets residing inside the company but does not create new tax assets in the process. This form of the deal involves similar steps described above, beginning with Founders Co.'s transfer of its subsidiary to Public Co. in exchange for Public Co.'s stock. Founders Co. then sells a large percentage of this stock to the investing public. The parties, however, do not elect to treat the transaction as a sale, but as a mere transfer of assets. This means that the deal will not generate new tax assets; Public Co. will simply inherit Founders Co.'s basis in the assets obtained, typically leading to much lower amortization and depreciation tax deductions down the road.³⁴ Pre-existing tax assets residing inside the

³³ Many experts, however, believe that the total benefits will not exceed the total costs, making the deal interesting but not rational. We discuss the costs and benefits of the first wave of supercharged IPOs *infra* notes and accompanying text.

³⁴ Explain.

company may include items such as deductible net operating losses, tax credits and so forth. Because Public Co. essentially steps into the shoes of Founders Co., the former will not be viewed as the purchaser of goodwill and will not be permitted to amortize this valuable asset as Public Co. could do in the first wave of the supercharged IPOs. Finally, this deal structure does not generate a tax on Founders Co. or any other party. In short, this deal looks much like the traditional IPO—in the sense that it does not create new tax assets or generate a tax burden—and yet the parties chose a very complex deal structure as depicted in figure 2 and executed a TRA that enables the owner-founders to share in the value of the tax assets transferred.

Why the parties would pursue this strategy is related to investors' perceived failure to understand or value them. While tax assets are simply the estimated tax savings associated with deductions and credits and they listed on company balance, many believe that public investors simply do not account for these types of assets when purchasing stock. The lack of knowledge may be due to the assets' esoteric nature, or perhaps to investment banks' choice to disregard these assets when valuing a company for purposes of an IPO.³⁵ Whatever the reason, if investors refuse to pay for the assets that reside inside the company at the time of a stock purchase, then it is rational and fair for Founders Co. to retain this value with the help of a TRA.

To understand the justification for the second wave of supercharged IPOs more fully, suppose Founders Co. owns exactly one asset: an oyster with a valuable pearl that cannot be harvested for three years. Also imagine that Founders Co. would like to sell the entire asset but the investors value only the shell and not the pearl (either because the purchaser does not understand the nature of the hidden gem or because it simply desires to own the shell itself and nothing else). Founders Co. has several options: 1) refuse to sell, 2) sell but demand an up-front price that reflects the value of the hidden pearl, or 3) sell the shell and retain the rights to the pearl when it becomes available three years hence. If Founders Co. selects the third option, the parties will execute a supplemental contract provision that supercharges the deal with a "pearl receivable agreement."

Recall that experts believe tax assets provide investors with as much as a 20-25 percent hidden reduction in the headline price of shares. Investors recover this value when the company pays a reduced tax bill down the road with the help of tax credits, net operating loss deductions, depreciation and amortization deductions, and so forth. The key question that many ask, with respect to this second wave of supercharged IPOs is this: does the purchase price reflect the true value of the company—along with its tax assets—at the time of the IPO or are investors refusing to pay for these assets? Finding the answer to this question is important because it will settle a debate among scholars and commentators with respect to the underlying motivation of the second generation of supercharged IPOs. Many commentators, on the one hand, have argued that investors refuse to pay for tax assets and thus Founders Co. justly demands post-IPO payouts in the form of a TRA as compensation for the transfer of the assets. On the other hand, many others argue that a supercharged IPO is merely a means by which founders-owners take

³⁵ Explain.

advantage of unsuspecting investors who pay the full and fair price for all the company's assets irrespective of their form, and who do not realize the complex TRA language has been slipped into the IPO documents.

C. Company Disclosures and Risk Projections

While supercharged IPOs are controversial and subject to widespread debate, a company that goes public must disclose the details of the TRA in the prospectus and attach a copy of the TRA to its SEC filings.³⁶ To give just one example, Evercore Partners (the owner-founders of the firm) filed documents with the SEC containing language describing the terms of their TRA along with the relevant tax code provisions and the advantages to Evercore, Inc. (Public Co. in our discussion above) associated with the structure of the deal and, by implication, its shareholders in the following language.

The exchanges may result in increases in the tax basis of the tangible and intangible assets of Evercore LP [the owner-founders] that otherwise would not have been available. These increases in tax basis would increase (for tax purposes) amortization and, therefore, reduce the amount of tax that we would otherwise be required to pay in the future.

We [i.e. Public Co.] have entered into a tax receivable agreement . . . that provides for the payment by us to an exchanging Evercore partner [i.e. an owner-founder] of 85 percent of the amount of cash savings, if any, in U.S. federal, state and local income tax that we actually realize as a result of these increases in tax basis. We expect to benefit from the remaining 15 percent of cash savings, if any, in income tax that we realize.³⁷

Not only are the terms of the TRA and the cash payments disclosed to investors at the time of the IPO, the potential risks of entering into this type of agreement are also outlined. Payments under the TRA are contingent on Public Co.'s income; that is to say, absent taxable income the amortization deductions are literally worthless to Public Co. so the new company *must* operate at a profit to gain the advantage identified in the TRA. This reality poses a risk that the owner-founders will not actually receive the payments. Moreover, the IRS could scrutinize the tax components of the supercharged IPO, jeopardizing the value of the tax assets and the TRA to both Public Co. and the owner-founders. These risks, and others, were identified by Fortress Investment Group at the time of their supercharged IPO, and outlined in the SEC filings:

³⁶ Can we find a cite for this?

³⁷ The Evercore deal involved a complicated transaction and the exchange referred to in the quoted language were subsequent to the IPO. Specifically the documents indicated that "Partnership units held by our Senior Managing Directors in Evercore LP may be exchanged in the future for shares of our Class A common stock . . . Evercore LP intends to make an election under Section 754 of the Internal Revenue Code (the "Code") effective for each taxable year in which an exchange of partnership units for shares occurs, which may result in an adjustment to the tax basis of the assets owned by Evercore LP at the time of an exchange of partnership units." We discuss the Evercore deal and similar deals in more detail in the appendix.

Although we [i.e. Public Co.] are not aware of any issue that would cause the IRS to challenge a tax basis increase, our principals [i.e. the owner-founders] will not reimburse the corporate taxpayers for any payments that have been previously made under the tax receivable agreement. . . . The corporate taxpayers' ability to achieve benefits from any tax basis increase, and the payments to be made under this agreement, will depend upon a number of factors, including the timing and amount of our [i.e. Public Co.'s] future income.³⁸

Because of the amount of money at stake along with the negative view that many experts and commentators have of TRAs as “underhanded,” and “one-sided,”³⁹ Public Co.'s obligation could also, theoretically, be challenged down the road by angry shareholders who feel cheated.⁴⁰ This could result in a scenario whereby the company retains the tax asset, and at the same time eliminates the payment obligation to the owner-founders under the TRA.

In the next section, we explore competing explanations for why the parties would agree to a supercharged IPO, notwithstanding the deals' complexity, bad optics, and risks. As our discussion will illustrate, some of the explanations suggest that supercharged IPOs are a very good way for the parties to reduce tax costs, while others suggest opportunism on the part of the owner-founders.

III. COMPETING THEORIES OF FINANCIAL INNOVATION: DISCOVERY AND DIFFUSION

Innovation in the financial context is not new; historians have documented creative solutions to financial problems for centuries.⁴¹ For the most part, scholars and

³⁸ Fortress Investment Group LLC, Form S-1 (Feb. 2, 2007).

³⁹ See, Amy S. Eliot, TAX NOTES 334 (July 25, 2011); others.

⁴⁰ We have not identified any litigation involving a supercharged IPO. In other contexts, however, TRAs have been the subject of litigation. See, e.g., *Third National Bank in Nashville v. Wedge Group Incorporated*, 882 F.2d 1087 (1989) (defendant denies liability under the TRA).

⁴¹ Political and religious organizations, for example, have long barred or extensively limited bankers' ability to charge interest, but these restrictions have never eliminated the active market for credit. Instead, lenders have found novel ways to obtain interest payments, sometimes at usury rates, with the help of third parties, unusual contracts, and a variety of other means. See, Michael Knoll, *The Ancient Roots of Modern Financial Innovation: The Early History of Regulatory Arbitrage*, 87 OR. L. REV. 93 (2008); see also Jonathon Barron Baskin, *The Development of Corporate Financial Markets In Britain and the United States, 1600–1914: Overcoming Asymmetric Information*, 62 BUS. HIST. REV. 199 (1988); Larry Neal, *Trust Companies and Financial Innovation, 1897–1914*, 45 BUS. HIST. REV. 35 (1971). KRISTEN STILT, ISLAMIC LAW IN ACTION AUTHORITY, DISCRETION, AND EVERYDAY EXPERIENCES IN MAMLUK EGYPT (2011), Knoll, at 101–13; [more cites]. Indeed as Professor Kristen Stilt, Michael Knoll and many others have noted, financiers continue to innovate in order to facilitate their lending practices and to avoid violating contemporary laws and norms against paying or charging interest. The Islamic prohibition against paying interest has made it difficult for many Muslims in the United States to buy a home with the help of a mortgage. To avoid violating religious tenets, bankers

policymakers have applauded these efforts as important means for making markets complete and efficient. When it comes to policymaking choices, Ben Bernanke noted in 2007, “we should always keep in view the enormous economic benefits that flow from a healthy and innovative financial sector; the increasing sophistication and depth of financial markets promote economic growth by allocating capital where it can be most productive.”⁴² Two years after making this statement, and in the wake of the 2008 financial collapse, Bernanke acknowledged that financial innovation also had its drawbacks. “Indeed innovation once held up as the solution is now more often than not perceived as the problem . . . we have seen only too clearly during the past two years, innovation that is inappropriately implemented can be positively harmful.”⁴³

Good and bad, financial innovators are part of the economic landscape and for this reason it is useful to understand the environment that fosters creative financing, the factors that enable its diffusion, and the chosen allocation of costs and benefits between the parties.⁴⁴ Scholars have set forth a range of theories that address these issues and the goal in this section is to provide a brief outline of the extant literature as it applies to supercharged IPOs and, more specifically, to TRAs. We then offer hypotheses with respect to why TRAs emerged and why they spread across geographic zones and industries.

A. Innovation and Discovery: Five Competing Models

In a perfectly efficient world, free of taxes, regulations, information asymmetries, transaction costs, and so forth, financial innovation would provide little or no benefit and would likely play an insignificant role in the economy.⁴⁵ Markets, however, are notoriously incomplete and inefficient and, as we know, financial innovation is pervasive. The extant theoretical literature has converged on a range of factors, often believed to

have devised methods . . . Also, see *Bollinger* (bankers avoid state usury laws by setting up a conduit corporation).

⁴² Chairman Ben S. Bernanke, *To the Federal Reserve of Atlanta's 2007 Financial Markets Conference, Sea Island, Georgia* (May 15, 2007), available at <http://www.federalreserve.gov/newsevents/speech/bernanke20070515a.htm>. See also, M. Watson, D. Mathieson, R. Kincaid, E. Katler, *International Capital Markets: Developments and Prospects* at 15 International Monetary Fund, Paper No. 43, Feb. 1986 (on balance the innovations have been almost certainly beneficial for the system as a whole).

⁴³ Chairman Ben S. Bernanke, *Financial Innovation and Consumer Protection, Speech Given at the Federal Reserve System's Sixth Biennial Community Affairs Research Conference, Washington, D. C., April 17, 2009*, available at <http://www.federalreserve.gov/newsevents/speech/bernanke20090417a.htm>

⁴⁴ See e.g., Peter Tufano, *Financial Innovation* in THE HANDBOOK OF ECONOMICS OF FINANCE, GEORGE CONSTANTINIDES, MILT HARRIS AND RENE STULZ, EDS.; W. Scott Frame and Lawrence J. White, *Financial Studies of Financial Innovation: Lots of Talk, Little Action*, 42 J. ECON. LIT. 116 (2004); see also, Robert C. Merton and Zvi Bodt, *The Design of Financial Systems: Towards a Synthesis of Functions and Structure*, NBER Working Paper 10620 (discussing financial innovation, neo-classical finance, frictions, and behavioral economics).

⁴⁵ Peter Tufano, *Financial Innovation* in GEORGE CONSTANTINIDES, MILT HARRIS, AND RENE STULZ, EDS, THE HANDBOOK OF THE ECONOMICS OF FINANCE (2003) (financial innovation in a world free of “imperfections” would benefit no one).

operate simultaneously, that motivate financial experts to innovate.⁴⁶ While the mainstream account often assumes that financial innovation is driven primarily by investor demand,⁴⁷ we will see that questionable and self-serving motives can also inspire financial engineers to the detriment of shareholders and investors.

1. *Taxes, regulations, and accounting standards*

Taxes, regulations, and formal industry standards are widely viewed as an impediment to market activities, but they also operate as a major incentive to innovation.⁴⁸ Milton Merton, along with many other scholars in a wide range of fields, have discussed and debated financial creativity,⁴⁹ but all agree that financial engineers spend significant time and energy avoiding taxes,⁵⁰ maneuvering around regulations,⁵¹ and devising creative accounting and reporting strategies.⁵² As long as policymakers

⁴⁶ Bruno Rossignoli and Francesca Arnaboldi, *Financial Innovation: Theoretical Issues and Empirical Evidence in Italy*, 56 J. INT. REV. ECON 275, 280–81 (2009) (various drivers of innovation exist and they tend to work simultaneously); Peter Tufano, *Financial Innovation* in GEORGE CONSTANTINIDES, MILT HARRIS, AND RENE STULZ, EDS, *THE HANDBOOK OF THE ECONOMICS OF FINANCE* (2003) (all the stimuli operate together to promote innovation).

⁴⁷ Josh Lerner and Peter Tufano, *The Consequences of Financial Innovation: A Counterfactual Research Agenda*, NBER Working Paper 16780 at 10; Ross (1976); Allen and Gale (1994).

⁴⁸ Darrell Duffie and Rohit Rahi, *Financial Market Innovation and Security Design: An Introduction*, 65 J. ECON. THEORY 1, 2 (1995) (“new securities are often designed in response to accounting standards, regulations and tax codes”).

⁴⁹ Merton Miller, *Financial Innovation: The Law Twenty Years and the Next*, 21 J. OF FIN. & QUANT. ANAL. 459 (1986) (“the major impulses to successful financial innovation over the last twenty years have come . . . from regulations and taxes”); Michael Carter, *Financial Innovation and Financial Fragility*, 23 J. ECON. ISSUES 779, 783 (1989).

⁵⁰ Charles Pouncy, *Contemporary Financial Innovation: Orthodoxy and Alternative*, 15 SMU LAW REV 505 (2009); Edward Kleinbard, *Equity Derivative Products: Financial Innovation's Newest Challenge to the Tax System*, 69 TEX. LAW. REV 1319 (1990); Alvin C. Warren, *Financial Contract Innovation and Income Tax Policy*, 107 HARV. L. REV. 460 (1993);

⁵¹ Scholars have noted that innovators often create means to avoid regulation by designing investment opportunities in unregulated or minimally regulated industries. Banking policy, for example, long limited banks' ability to pay interest on savings accounts and this led non-bank intermediaries who operated outside the jurisdiction of the banking regulators to devise money market and mutual fund accounts that mimicked the attributes of savings deposits but could pay interest. Charles Pouncy, *Contemporary Financial Innovation: Orthodoxy and Alternative*, 15 SMU LAW REV 505, 546–48 (2009); Joseph C. Shenker and Anthony J. Colletta, *Asset Securitization: Evolution, Current Issues and New Frontiers*, 69 TEX. L. REV 1369 (1990); Henry T.C. Hu, *Swaps, The Modern Process of Financial Innovation and the Vulnerability of a Regulatory Paradigm*, 138 U. PENN. L. REV. 333 (1989); Carter, at 782–84; James Tobin, *Financial Innovation and Deregulation in Perspective*, 3 MONETARY AND ECON. STUD. 19 (1985).

⁵² Many have argued that accounting firms are uniquely positioned to engage in financial innovation given the background expertise in accounting, taxation, and regulations and numerous firms now market themselves as experts not only in accounting services but in the design of “structured investment vehicles” that enable firms to creatively avoid the limits of accounting standards and tax rules. Patricia Arnold, *Global Financial Crisis: The Challenge to Accounting Research*, 34 ACCOUNTING, ORG. & SOC'Y 803 (2009); Norio Sawaabe, *Co-Evolution of Accounting Rules and Creative Accounting Instruments—The Case of a Rules-Based Approach to Accounting Standard Setting*, 1 EVOL. INST. ECON. REV. 177 (2005); Eric R. Hake, *Financial Illusion: Accounting for Profits*

generate differential tax and regulatory regimes, many argue, the market for financial innovation will flourish and succeed.

As suggested by the label attached to the innovation of interest in this study—the tax receivable agreement—it is obvious that tax law played a role in its design. More specifically, the tax rules addressing goodwill are likely to have played an important role in the rise of the supercharged IPO. Prior to 1993, the cost of creating *or* acquiring goodwill could not be amortized, but with the adoption of Section 197, acquirers could amortize the costs of this asset ratably over a fifteen-year period.⁵³ Because goodwill is often the most valuable asset sold in an IPO, the change in the law effectively enabled investors to “recover” (through tax deductions obtained by the company) a portion of their investment if the deal was structured to allow the basis step-up for Public Co. as described in the first wave of supercharged IPOs. In short, due to Section 197, the true cost of buying shares of stock in an IPO would be substantially less than the nominal or “headline” price in light of the cash savings down the road; experts estimate roughly 20 to 25 percent less.

The 1993 tax reform was followed by a major change in accounting standards, making goodwill even more valuable to the company. Prior to 2001, companies were required to charge a portion of the amortized goodwill to their income statement—signaling the depletion of a tax asset, and having the effect of reducing earnings and showing smaller company profits. In 2001, the Financial Accounting Standards Board (FASB) issued FAS 142,⁵⁴ eliminating this mandate. The importance of this reform should not be underestimated: it led to a vast increase in many companies’ annual reported profits, often by billions of dollars.⁵⁵ In short, the current tax and accounting rules together permit companies to reduce their *taxable* income through amortization deductions, while at the same time keeping their *reported* income to investors high. A company that is able to take advantage of Section 197 and FAS 142, in effect, straddles the best of both worlds. Because the supercharged IPO enables Public Co. to do just this, the reforms create a powerful incentive to undertake this type of deal when substantial goodwill exists inside Founders Co.

in an Enron World, 39 J. Econ. Iss. 595, 603 (2005); Atul K. Shah, *Creative Compliance in Financial Reporting*, 21 ACCT., ORGS. & SOC’Y 23–39 (1996); Atul K. Shah, *Regulatory Arbitrage through Financial Innovation*, 10 ACCT., AUDITING & SOC’Y 85–104 (1996); Atul K. Shah, *Exploring the influences and constraints on creative accounting in the United Kingdom*, 7 EUROPEAN ACCOUNTING REVIEW 83–104 (1998); *see also* D. MACBARNET, AND C. WHELAN CREATIVE ACCOUNTING AND THE CROSS-EYED JAVELIN THROWER (1999).

⁵³ I.R.C. §197. For a good discussion of how and why the change in the tax rules associated with goodwill has led to the proliferation of IPOs, see, Romina Weiss, *Fifteen Years of Antichurning: It’s Time to Make Butter*, TAX NOTES 227, 234–36 (January 12, 2009); *see also* Robert Willens, *Depreciating (Not Depreciating) Matt Kemp*, 6 Willens Report (May 31, 2012).

⁵⁴ Goodwill and intangible assets are not presumed to be wasting assets; instead, they are presumed to have indefinite useful lives and are tested periodically for impairment. *See* Financial Accounting Standards Board, *Summary of Statement No. 142* (2011).

⁵⁵ Ronad J. Huefner and James A. Largay, *The Effects of the New Goodwill Accounting Rules on Financial Statements*, The Online CPA Journal available at <http://www.nysscpa.org/cpajournal/2004/1004/essentials/p30.htm>.

The opportunity for tax arbitrage provides a second reason for the first wave of the supercharged IPO. Recall the deal generates new tax assets for Public Co., but at a tax cost to Founders Co. If the costs and benefits are exactly equal, say Public Co. amortizes an asset at a 35 percent tax rate and Founders Co. pays tax at a 35 percent rate on the TRA payments, it would not make sense to supercharge the IPO. If Public Co., however, is able to take tax deductions at a higher tax rate than that imposed on the taxable income received by Founders Co., then a supercharged IPO is tax-efficient. A tax rate differential, if it exists, is a second possible explanation for the emergence of the supercharged IPO. The table presented in the appendix provides numbers that confirm the idea that tax arbitrage opportunities are an essential component to the supercharged IPO.

The tax and accounting theories of financial innovation generate two testable hypotheses: the parties will supercharge the IPO if 1) Founders Co. has substantial goodwill or 2) an opportunity to engage in tax arbitrage exists. In Section IV below, we investigate these two hypotheses with empirical data and find that one plays a much stronger role in the parties' choice to supercharge the IPO.

2. *Information Asymmetry*

A second theory of financial innovation relates to information asymmetry: circumstances in which one party has more or better information than the other, creating an imbalance of power and setting the stage for opportunistic behavior. This situation often motivates the less informed party to find creative solutions to limit unfair advantages and/or equalize available information.⁵⁶ The less informed parties in the IPO context, of course, are the public investors. The owner-founders of the company have better information with respect to the value of the underlying assets, especially goodwill.⁵⁷

Recall that in the first wave of the supercharged IPOs, Public Co. gets a basis in the goodwill equal to the purchase price and it is this basis that is linked to the tax asset, enabling future tax savings in the form of amortization deductions. A higher basis affords more deductions, but as the company SEC filings quoted above indicate, these deductions could also attract increased and unwanted scrutiny by IRS auditors who could challenge the basis and reallocate the costs of the deal, thereby reducing the value of the tax asset. Public Co. and the shareholders, therefore, have an incentive to link the payments for the tax assets to the actual tax deductions obtained, thereby assuring that the owner-founders have a stake in the deductions as well as the accuracy of the underlying basis reported to the IRS. An up-front payment—un-tethered to the tax savings received down the road—would incentivize the owner-founders to overstate their value in an effort

⁵⁶ Paul Healy and Krishna G. Palepu, *Information Asymmetry, Corporate Disclosure and the Capital Markets: A Review of the Empirical Disclosure Literature*, 31 J. ACCOUNT. & ECON. 405 (2001) (discussing solutions to information asymmetry).

⁵⁷ [Consider the Facebook IPO—claim of overvaluation and insider knowledge].

to convince the company to overpay for the tax assets obtained in the IPO. In short the TRA operates to assure that relevant information is shared between the parties and at the same time restricts opportunism.

The information asymmetry, however, may also work to the disadvantage of the owner-founders. Investors, as discussed above in the context of the second wave of supercharged IPOs, may suffer an information deficit with respect to the company's tax assets whether they are newly-created by the deal, or pre-existing and transferred in the deal. If investors do not account for the value of these assets at the time of the stock purchase, then owner-founders rationally choose to supercharge the IPO with a TRA. In short, if investors simply refuse to pay for a portion of the company's assets due to the lack of information, owner-founders sensibly extract payment for those assets down the road with the help of the TRA. Absent the TRA, owner-founders would not be able to obtain a fair price for the company as it goes public under this theory of the deal.

The supercharged IPO theoretically cures the problem of information asymmetry in both the contexts just noted, but it is also possible that the innovation *creates* informational problems. Commentators and critics have argued that supercharged IPOs are "underhanded," "one-sided," and "bizarre," on the grounds that they are complicated and incomprehensible. Indeed one commentator notes that in analyzing a recent IPO, he "missed the major thrust of The Carlyle Group's byzantine 'cash tax savings'" plan associated with the TRA. This commentator noted that he "mistakenly thought Carlyle's co-founders were being indemnified against any future tax increase on carried interest. Instead it's a co-founder cash bleeding of affiliates."⁵⁸ The allegation, stated most directly is this: owner-founders are deceptively adding complex provisions into the IPO, thereby enabling the owner-founders to steal from unsuspecting and confused public investors through large TRA payments.⁵⁹ In short, it is argued, the supercharged IPO is not a means to compensate founders for the tax costs they incur for creating and transferring valuable tax assets or for assets left unvalued by the investors—it is mere theft.

The critics may have a point: if the experts fail to detect and understand the TRA, the investing public will surely fail to comprehend the nature of the agreement, making it a perfect vehicle for owner-founders quietly to unfairly extract money from the company. Innovators have long rationalized supercharged IPOs on the ground that they incur costs in creating tax asset for Public Co, or, alternatively, investors refuse to pay for pre-existing tax assets—but if these justification do not hold up empirically, then the owner-founders may have adopted an underhanded scheme as suggested by the critics.

⁵⁸ PEU Report, *Carlyle's "Cash Tax Savings" Won't Got to Unit Holders*, May 5, 2012 available at <http://peureport.blogspot.com/2012/05/carlyles-cash-tax-savings-wont-go-to.html>

⁵⁹ Nigle Jenkinson, Adrian Penalver, and Nicholas Vause, *Financial Innovation: What Have We Learnt*, 2008 Q. BULL. 330 (2008) (financial engineering can improve options for households and companies but can also create market imperfections);

The information asymmetry theory of innovation leads to two distinct hypotheses associated with information deficits and founders' opportunism. Specifically, this theory suggests that 1) investors' information deficits vis-à-vis existing tax assets will lead owner-founders to include the TRA in the IPO documents to assure they receive compensation for assets transferred, and 2) even in the absence of investors' information deficit, owner-founders may opportunistically slip the TRA into the IPO documents on the theory that investors will not focus on the minor details of the deal. In the empirical component of our paper, we find surprising results with respect to information asymmetry and opportunism.

3. *Risk aversion*

Students of financial innovation argue that uncertainty is a key motivator for creativity.⁶⁰ Financial uncertainty is often associated with market fluctuation, but the threat of political, social, and legal change may also pose unwanted and undesirable risks.⁶¹ Inventions enabling individuals and entities to manage risk are ubiquitous and often involve complex products, instruments, and processes.⁶²

There are various risks associated with supercharged IPOs. First, if tax arbitrage motivates the deal, the parties risk legal reform that removes the tax rate disparity. Indeed, various Members of Congress have critiqued the current rate differentials as unfair and inappropriate and have proposed legislation that would force recognition of income by owner-founders at a higher tax rate, thereby eliminating the arbitrage opportunity.⁶³ The risk that the tax costs will exceed benefits down the road provides an

⁶⁰ Frame and White, page 8; Tufano, page 20; VOLKER SCHMID, FINANCIAL INNOVATION WITH A PARTICULAR VIEW ON THE ROLE OF BANKS 4–6 (2004); C. SMITH, C. SMITHSON, AND D. WILFORD, MANAGING FINANCIAL BUSINESS, THE INSTITUTIONAL INVESTOR SERIES IN FINANCE 20 (1990); FINANCIAL INNOVATIONS LAW REPORT: FINANCIAL INNOVATIONS FOR CATASTROPHIC RISK: CAT BONDS AND BEYOND (2008) (discussing mechanism to insure against earthquakes, hurricanes, terrorism, and so forth).

⁶¹ Dionisis Th. Philippas and Costas Siriopoulos, *Influence of Financial Innovation to Validation of Operational Risk*, 35 MANAGERIAL FINANCE 940, 941 (2009) (risk can be associated with failed processes, people, systems, or external events).

⁶² Scholars have noted that foreign exchange futures, swaps, options, interest rate futures, and so forth all emerged due to perceived uncertainty in the markets and the desire to eliminate it. A widely admired and relatively new form of catastrophic insurance, often labeled “cat bonds,” for example, is an innovation that enables individuals to protect against hurricanes, earthquakes, and even terrorism. J. David Cummins, *CAT Bonds and Other Risk-Link Securities: State of the Market and Recent Developments*, 11 RISK MNGT. & INSUR. REV. 23 (2008) (describing types of CAT bonds available); Neil A. Doherty, *Financial Innovation in the Management of Catastrophe Risk*, 10 J. APP. CORP. FIN. 84 (1997) (discussing design issues for successful innovation in this area of insurance); Tufano, p. 20–21. Of course, financial innovation can also create risk for investors. Susanne Trimbath, *Financial Innovation: Wall Street's False Utopia*, 5 J. ACCT. & ORG. CHANGE 108–111 (2009) (collateral mortgage obligations (CMOs) were created to spread risk and reduce agency costs but had the opposite effect).

⁶³ See Temporary Tax Relief Act of 2007 (H.R. 3996), as passed by the House of Representatives on November 9, 2007. The provision related to tax sharing agreements was not part of the final legislation enacted into law. See GINSBURG & LEVIN, *supra* note 10. See also David Cay Johnston, *Blackstone*

incentive for the owner-founders to negotiate an *immediate* payout (through an increased stock price at the time of the IPO or a lump sum payment simultaneous with the IPO). A TRA tied to the company's amortization deductions over the course of fifteen years, by contrast, subjects the owners to potential and unwanted tax increases.

There are, however, strong reasons for Public Co. to prefer the TRA over an up-front payment. The tax benefits to Public Co. are associated with the so-called basis step-up that occurs with the purchase of goodwill and other assets, but it is possible that IRS will disallow or limit that increase in basis in the context of an audit as discussed above.⁶⁴ Moreover, and perhaps more important, because tax assets are linked to a reduction in a company's tax burden associated with its taxable income, the company *must* earn sufficient income to take advantage of the tax assets. Absent sufficient company income the tax asset (be it a deduction or credit) could become partially or fully useless. These risks make it sensible for Public Co. to agree to make payments contingent on the actual rather than forecast value of the tax assets, insuring that Public Co. and its investors pay for what that they actually receive.

If the deal is supercharged not because the owner-founders created new tax assets, but because they transferred pre-existing assets which investors do not adequately value, then the TRA is sensible from both Founders Co.'s and the investors' viewpoint. If the founders simply try to sell shares at a higher price at the time of IPO, they risk losing investors who refuse to pay this price. The TRA assures that the owner founders will get paid for the assets and, at the same time, the investors need not incur the risk of paying for assets they do not understand.

The idea that risk aversion plays an important role in the choice to innovate is widely accepted and our analysis implies it has indeed played a role in the use of TRAs. Ideally, we would like to compare deals that involved large up-front compensation to the owner-founders versus down-the-road payments pursuant to a TRA to assess which party has the greater aversion to risk. Empirically, however, we are unable to examine the parties' level of risk because *every* supercharged IPO contains a TRA with nearly identical terminology and no alternative payout plans exist—thus we cannot use statistics and data to investigate whether the parties' aversion to risk plays a role in the design of supercharged IPOs. Given that 100 percent of the deal structures include post-IPO

devises way to avoid taxes on \$3.7 billion, N.Y. TIMES (2007). The tax benefits in question are largely attributable to the way the tax system treats goodwill; the TRA merely shifts these benefits from one party to another. A TRA by itself does not cost the Treasury any revenue, except insofar as it enables IPO sponsors to adopt a more tax-efficient structure.

⁶⁴ In fact, the regulators' response is often an expected feature of innovation. Robert C. Merton, *A Functional perspective of Financial Intermediation*, 24 FIN. MGMT. 23, 30 (1995) (discussing the innovation-regulation dialectic); Zachary J. Gubler, *The Financial Innovation Process: Theory and Application*, 36 DEL. J. CORP. L. 55 (2011) (exploring various ways to regulate financial innovation with the help of new institutional economics); Samuel M. Kidder, *What's Your Position? Amending the Bankruptcy Disclosure Rules to Keep Pace with Financial Innovation*, 58 UCLA L. REV 803 (2010) (exploring the problem of "empty creditors" and appropriate policy reform); Frank Partnoy, *Financial Innovation in Corporate Law*, 31 J. CORP. L. 799, 819–20 (2006) (exploring how corporate law might address the problem of hybrid financial instruments).

payouts and the parties explicitly refer to the risks and hazards associated with TRAs in the SEC filings, it is reasonable to infer that Public Co. and the shareholders' distaste for risk plays the stronger role in the design of supercharged IPOs.

Of course, supercharged IPOs generate their own risks. As discussed above, commentators are widely critical of the supercharged IPOs deal and many have noted the bad optics alone may make them a bad idea. If the extensive condemnation and disapproval emerging in the media ultimately has an effect on the value of the company, the benefits of the TRAs may not be worth the cost. In short, the number of companies that theoretically could supercharge their IPO—but who chose not to—may be linked to the risk associated with the bad press. This is a qualitative viewpoint that our data cannot confirm because companies going public through a traditional IPO do not announce the reasons for their chosen deal structures.

4. *Transaction Costs*

A fourth theory of financial innovation relates to transactions costs: the cost of engaging in a transaction beyond the price paid for the good or service that reduces the profitability of the investment. Quite a few scholars have argued that the presence of these costs provide a critical motivation for financial innovation,⁶⁵ and various empirical studies have found that transaction costs are the causal mechanism for various innovations.⁶⁶ In the IPO context, experts argue that TRAs are an excellent means to simplify the sale of a company, thereby limiting transaction costs.⁶⁷ In traditional transactions, the share price must account for the value of tax assets and valuing the assets requires parties to make numerous assumptions associated with a potential IRS audit, the company's future profitability, legal reform down the road, and the use of other types of tax planning strategies in order to identify the true value of the tax asset to Public Co. Negotiation and bargaining leads to delays, and may kill the deal altogether.⁶⁸ TRAs eliminate these hurdles, making the transaction considerably more straightforward and simple to execute.⁶⁹

⁶⁵ Tufano, at p.14–16; R.C. Merton, *On the Application of the Continuous Time Theory of Finance to Financial Intermediation and Insurance*, 14 GENEVA PAPERS ON RISK AND INSURANCE 225 (1989).

⁶⁶ J.J. McConnell and E.S. Schwartz, *The Origins of LYONS: A Case Study in Financial Innovation*, 4 J. APP. CORP. FIN. 40 (1992). Credit scoring is the process of assigning a single quantitative measure to a potential borrower representing an estimate of the borrower's future loan performance. This innovation allows credits to lend and monitor loans without meeting the borrower and cheaper, better information will make it more likely that the lender will price loans based on expected risk rather than refusing to loan monies. Jala Akhavein, W. Scott Frame, and Lawrence J. White, *The Diffusion of Financial Innovations: An Examination of the Adoption of Small Business Credit Scoring by Large Banking Organizations*, 78 J. BUS. 577, 579–80 (2005); Tufano, at page 16 (ATMs, smart cards, and other examples).

⁶⁷ Glenn E. Dance, *The Monetization of Tax Benefits Through Tax Receivable Agreements*, 10 J. PASSTHROUGH ENT. 5, 7 (2007).

⁶⁸ Willens, July 9 (deal killed due to inability to agree on value of tax assets).

⁶⁹ *Id.*

While many law and accounting experts believe that TRAs simplify IPOs, critics have argued that TRAs *create* complexity and confusion for investors who are unable to decipher the purpose or meaning of the agreement. A complicated deal may, in turn, lead IPO investors to discount the price they are willing to pay given the extra time and energy spent analyzing documents or, alternatively, if they simply do not understand fully the agreement, foregoing the purchase altogether. These transaction costs raise the question of why owner-founders would risk market punishment in the form of a lower price paid for the IPO shares. At the same time, IPOs tend to be complex deals by nature. If the investors have already taken a leap of faith despite this complexity, or have already discounted the price as a form of market punishment for the complexity, then adding an additional nuance in the form of a TRA may be rational on the theory that the owner-founders are not likely to suffer further penalty by way of an additional purchase price reduction. Imbedding a TRA into the deal, in short, may be rational in the first or second wave of the supercharged IPOs, or for no purpose other than to extract easy money in the post-IPO period—support for the critics' view that the plan is “underhanded.” Stated more directly, the owner-founders may be motivated by the desire to capture the benefits of newly-created tax assets or pre-existing tax assets left undervalued by investors, or simply by the desire to extort money from unsuspecting investors by inserting a TRA into the documents on the theory that investors will not take notice.

The transaction cost theory of financial innovation leads to three hypotheses, two of which can be investigated with our data. First, the idea that supercharged IPOs will be utilized in lieu of up-front payments due to the cost advantages of a TRA, cannot be tested because every supercharged IPO includes a TRA. Accordingly we cannot compare different forms of payment schemes. The second hypothesis, that the parties will agree to supercharge their IPO because the benefits (such as tax arbitrage opportunities, reduction in information asymmetries, and so forth) of such a deal will exceed its costs can be tested by examining the hypotheses outlined above that address each of these issues. And the third hypothesis, that owner founders will slip at TRA into the IPO documents for underhanded purposes can also be tested by investigating whether complex deals are more likely to include a TRA. We outline the empirical strategy for testing these hypotheses, and the others outlined above, in detail below.

5. *The Macroeconomy*

Up to this point, our analyses have focused on factors that operate in unique ways on the specific parties involved in the transaction, but macro-level variables beyond the parties' control may also affect the choice to supercharge an IPO—either in the form of the first or second wave, or because of the desire to wrest money from the company for no reason other than it is possible to do so. Scholars have argued that market factors are important stimuli to financial innovation. Some have argued that a growing economy generates high profit levels along with high levels of *expected* profits, which then impel creative financing, new instruments, and an overall bubble of financial innovation to

achieve those profits.⁷⁰ Others scholars have taken the position that whether or not the business cycle is expanding or contracting, market participants will innovate in order to improve performance and maintain a competitive edge—an edge that is maintained only with ceaseless innovation and improvement of products and processes.⁷¹

In short, the macroeconomic theory of financial innovation posits two hypotheses: 1) a growing economy generates new and creative deals, such as supercharged IPOs, or, in the alternative, 2) that the economy has no effect because financial experts will innovate in all economic contexts to maintain their competitive edge. Our empirical investigation suggests that the business cycle does affect the IPO markets, but in unexpected ways.

B. Use and Diffusion: Four Competing Models

We now turn from the drivers of financial engineering, to the parties who use and diffuse the innovation. Scholars have noted that successful innovations quickly spread, and have offered theories for how and why this diffusion process takes place. Indeed, notwithstanding the drawbacks associated with their complexity and the criticisms they generate, one prominent commentator has noted that supercharged IPOs along with the

⁷⁰ Recently, theorists have argued that an economic expansion and the desire for continually increasing profits led individuals and firms to innovate in the banking industry causing the well-known savings and loans crisis in the 1970s and subprime mortgage in 2007–2008. See Janet L. Yellen, *A Minsky-Meltdown: Lessons For Central Bankers*, President's Speech to the 18th Annual Human P. Minsky conference on the state of the U.S. and World Economics, available at <http://www.frbsf.org/news/speeches/2009/0416.html>. Some theorists suggest a feedback loop may exist: financial innovation responds to volatile markets, which then become less volatile because of the innovation. See Karen E. Dynan, Douglas Elmendorf and Daniel E. Sichel, *Can Financial Innovation Help to Explain the Reduced Volatility of Economic Activity?*, 53 J. MONETARY ECON. 123 (2006)

⁷¹ Mahbrouk Abir and Mamoghli Chokri, *Dynamic Financial Innovation and Performance of Banking Firms: Context of an Emerging Banking Industry*, 51 INT'L RES. J. FIN. AND ECON. 17, 18 (2010) (innovation necessary for competitive advantage); M.E Porter, *Competitive Strategy* (2004); P.W Roberts and R Amit, *The Dynamics of Innovative Activity and Competitive Advantage: The Case of Australian Retail Banking, 1981–1995*, 14 ORG. SCI. 107 (2003) (innovation key for competitive advantage); David A. Zalewski and Charles J. Whalen, *Incorporating Subsidiary into Macroeconomic Policy*, in FINANCIAL INSTABILITY AND ECONOMIC SECURITY AFTER THE GREAT RECESSION, CHARLES J. WHALER, ED (2011) (discussing rediscovery of early theorists such Hyman Minsky). HYMAN MINSKY, *STABILIZING AN UNSTABLE ECONOMY* (1986); Hyman Minsky, *Evolution of Financial Institutions*, 20 J. ECON. ISSUES 345 (1986); Irving Fisher, *The Debt Deflation Theory of Great Depressions*, 1 ECONOMETRICA 337 (1933); WESLEY C. MITCHELL, *BUSINESS CYCLES (1913)*. For useful summaries and extensions of Minsky's work, see Michael Carter, *Financial Innovation and Financial Fragility*, 23 J. of ECON. ISSUES 779 (1989); Marc Jarsulic, *Financial Instability and Income Distribution*, 22 J. ECON. ISSUES 545 (1988). See also Michael D. Bordo, *An Historical Perspective on the Crisis of 2007–2008*, NBER Working Paper 1459 (Dec. 2008) (arguing that scholars as early as Wesley Mitchell in 1913 argued that business cycle upswings lead to financial innovation) available at <http://www.nber.org/papers/w14569.pdf>; see also Richard Bookstaber, *Fighting Demons: Addressing the Perils of Financial Innovation*, 29 MULTINATIONAL MONITOR 55, 57 (2008) (often hedge fund managers are faced with the choice of increasing leverage to meet target returns or see his business diminish. There are thus strong incentives to push leverage to the edge).

attendant TRAs are becoming “almost standard procedure.”⁷² In this section, we discuss the mechanisms by which the supercharged IPOs may have spread across geographic areas and industries since the first deal emerged in 1993.

1. *Elite lawyers and accountants*

TRAs are a legal and accounting inventions, coming into widespread use in 2007 after the tax and accounting reforms were firmly in place. The quality of the lawyers and accountants working on the deal may be a strong predictor for the presence of innovative deal structuring on the theory that this group closely tracks any and all reforms that could affect deals and deal structures. More specifically, students of innovation have found that that creative, sophisticated and experienced individuals and firms are apt to understand and promote the use of the most advanced deal structures. Over time, of course, useful innovations will diffuse more widely and become standard among both the elite and non-elite professionals, as with poison pills and other anti-takeover devices, but the early adopters are likely to be elite lawyers and accountants who spend time and energy engineering the best deal possible for their clients.⁷³ We test this theory of diffusion in the empirical component of our study by investigating the types of lawyers and accountants involved supercharged IPOs.

2. *Professional networks and geographic clusters*

Innovations often spread because individuals and firms locating in geographic clusters share information about exciting new innovations with clients, friends, and colleagues. The legal and accounting professionals involved with supercharged IPOs are especially apt to operate as agents helping to spread ideas across geographic areas, industries, and firm types.⁷⁴ Indeed, various scholars have found that network ties operate as an especially important diffusion mechanism when the innovators are located in close geographic proximity. We explore the network theory of diffusion by examining the use of supercharged IPOs in the major professional networks around the country, including New York, Chicago, Boston and Los Angeles. We uncover data that imply one specific professional network is largely responsible for the bulk of supercharged IPOs, thereby providing strong support of the network theory of diffusion.

3. *Industry culture*

The architects of the supercharged IPO are lawyers and accountants, but it is possible that certain types of clients will be more likely than others to utilize innovative

⁷² Robert Willens, "Up-C" Incorporations Feature "Tax Receivable Agreements," Vol. 5, Issue 135 (July 15, 2011).

⁷³ [Cite to article about Cravath partner's innovation in the legal context.]

⁷⁴ See Jennifer Brown, *The Spread of Aggressive Corporate Tax Reporting: A Detailed Examination of the Corporate-Owned Life Insurance Shelter*, 86 ACCT. REV. 23, 33 (2011) (discussing diffusion of tax shelter activity).

financial discoveries in an effort to retain a competitive edge in the industry.⁷⁵ Private equity and asset management firms, for example, are widely viewed to be aggressive planners in both the tax and accounting spheres—and, indeed, qualitative data suggest that the innovation spiral that occurred on the IPO landscape was engineered with the help of private equity firms seeking to enhance the benefits of the early-supercharged IPO. The principals of these firms often have substantial experience structuring deals, and for this reason have a deep understanding of the stakes involved in the deal. Because of their chosen line of work, private equity and hedge fund managers exhibit a high level of tax sophistication and thus the theory of industry culture as a diffusion mechanism leads to the hypothesis that irrespective of geography, the firms will be early adopters of good innovations in the IPO context.⁷⁶ We find that these groups do affect the likelihood of supercharging an IPO—but not the positive way anticipated by the theory.

4. *Media attention*

Supercharged IPOs have received substantial attention in the popular journals, including the New York Times, the Wall Street Journal, Forbes, and many others.⁷⁷ At the same time, extensive commentary on this new-style deal has simultaneously appeared in specialized legal, tax, and accounting outlets.⁷⁸ This widespread attention and interest, both positive and negative, works to educate firms, lawyers, and financial intermediaries on the latest and most innovative deal structures and raises awareness of an alternative to the traditional approach to going public.⁷⁹ Irrespective of whether the innovation is advantageous to all the parties or solely to the owner-founders of the company, the media theory of diffusion leads to the hypothesis that as media attention increases—so too the use of the supercharged IPO along with the complex TRAs.

⁷⁵ Institutional and cultural constraints in general may also help explain why some companies adopt innovative tax structures and some do not. While measuring the precise impact of these factors is challenging, seasoned practitioners often point to variation in corporate culture or managerial sophistication to explain how different clients react to new tax ideas. Some academic research backs this common observation. When the Sarbanes-Oxley legislation changed internal auditing controls—and reined in Enron-style corporate culture—the use of corporate tax shelters declined significantly. Victor Fleischer, *Options Backdating, Tax Shelters, and Corporate Culture*, 26 VA. TAX REV. 1031 (2006). Managerial sophistication matters too: Private equity-backed companies tend to be more aggressive in their tax planning. See Sharon P. Katz, Brad Badertscher, *The Impact of Private Equity Ownership on Portfolio Firms' Corporate Tax Planning*—HBS Working Knowledge (August 28, 2009), <http://hbswk.hbs.edu/item/6259.html> (last visited August 29, 2011).

⁷⁶ This prediction is analogous to predicting that when a cutting-edge oncologist is a patient herself, she will tend to choose a more aggressive form of cancer treatment than the average patient would. [cite]

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⁷⁸ 10 J. PASSTHROUGH ENT.; THE INVESTMENT LAWYER, THE DEAL MAGAZINE.

⁷⁹ See Nancy Staudt, Taxpayer Standing, EMORY L.J. (public attention to a legal issues prompts lawyers and clients to follow suit).

IV. THE EMPIRICAL INVESTIGATION

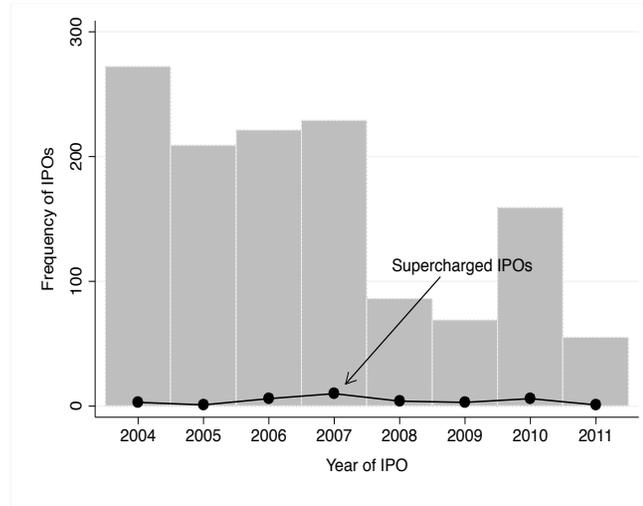
Supercharged IPOs have emerged amidst controversy, but they have also spread fast across the financial landscape. In this section, we turn from the theoretical literature to empirical data in an effort to understand and explain why some parties choose to supercharge their IPO while others pursue conventional deal structures. We begin, in Section IVA, with a description of our data and an explanation of our models. In Section IVB, we present our empirical results. Section V investigates the implications of our findings for the parties involved in IPOs and for legal reformers.

A. The Data and the Models

For purposes of data collection, we investigate the IPOs that took place between January 1, 2004 and May 1, 2011. We selected this time period because supercharged IPOs were rare prior 2007, but began to flourish after that time. By including time periods both before and after that year, we are able to identify the factors that help to explain the rise and diffusion of the innovative deals. To identify the population of interest, we obtained the registration statements under the Securities and Exchange Act of 1933, also known as the SEC form S-1, for each new securities offering.⁸⁰ This process generated 1326 IPOs between the years 2004-2011. Only a small portion of the IPOs—just two percent—were supercharged with a TRA. Figure 1 below depicts the distribution of the IPOs, the grey bars indicate conventional IPOs and the black line at the bottom of the graphs depicts the supercharged IPO adoption curve. Every year between 2004 and 2011, owner-founders supercharged between one and six IPOs, with the exception of 2007 when the parties supercharged ten of the IPOs.

⁸⁰ We identified all S-1s from the Knowledge Mosaic database available at <http://www.knowledgemosaic.com/net/home/kmhome.aspx>. Because we are interested in initial public offerings of equity securities where the investors implicitly price the assets and liabilities of the issuer (including tax assets and liabilities), we excluded all debt offerings, secondary offerings, SPACs, offerings that would trade on OTCBB, Pink Sheets, penny stock offerings (\$1 or under), 401k plan offerings, and offerings of non-operating companies (mutual funds, ETFs, commodity pools). We are not interested in secondary offerings, private or PORTAL offerings, and do not care whether the IPO was successful or not.

Figure 1: IPOs: traditional and supercharged



Note: Grey bars indicate the total number of traditional IPOs per year and the black trend line depicts the supercharged IPO adoption curve. Between 2004 and 2011, companies supercharged between 1 and 10 IPOs per year.

For purposes of investigating and comparing traditional and supercharged IPOs, we devised three statistical models. The first model explores the theories outlined above with respect to the rise of the supercharged IPO, including tax and accounting regulations, information asymmetry, transaction costs, and the business cycle. To understand how we put our theory and hypotheses to work, consider the following model:

$$\Pr(\text{SuperIPO}_i=1) = b_0 + b_1\text{TaxArbitrage}_i + b_2\text{Goodwill}_i + b_3\text{ExistingTaxAssets}_i + b_4\text{NeedlesslyComplex}_i + b_5\text{Macroeconomy}_i + \sum b_j C_{ij} + e \quad (1)$$

where SuperIPO_i in equation (1) is the parties' decision to supercharge the IPO with a tax receivable agreement (TRA), and is coded equal to 1 if the deal is supercharged and equal to 0 otherwise.⁸¹ As discussed above, our first hypothesis relates to the parties' ability to take advantage of tax and accounting rules.⁸² Because tax rates imposed on many of the relevant parties were all constant and unvarying between 2004-2011, we were required to find a proxy to test our arbitrage theory. We know that many IPOs involve individuals who sell partnership shares to Public Co. and this sale generates a 15 percent capital gains

⁸¹ Explain that we took random sample.

⁸² To test our theory of tax arbitrage, we will create the variable, arbitrage, reflecting the difference between corporate and capital gains taxation rates. We expect a large and positive difference in these rates (corporate rates are higher than individual capital gains rates) will generate an increase in the TRAs because the seller's cost of paying taxes will be low and the investors' benefit of a stepped up basis followed by large depreciation deductions will be high.

rate on subsequent TRA payments, while Public Co. will take deductions at a 35 percent rate.⁸³ Accordingly, we created *Arbitrage_i*, a variable that is binary and equal to 1 if Founders Co. was a partnership and equal to 0 otherwise. Our second hypothesis relates to the extent of the parties' ability to utilize the advantageous tax and accounting rules vis-à-vis goodwill. This ability will vary depending on the underlying basis of the goodwill asset, a number that we cannot directly observe.⁸⁴ As a proxy, we created the variable, *Goodwill_i*, which is a continuous measure of the market value of the Public Co. (based on post-IPO trading) less the net book value of Founders Co. immediately prior to the IPO in \$1 billion increments.⁸⁵ If the IPO is structured as a taxable deal, this amount will correlate well with the amount of the potential basis step-up attributable to goodwill, often the most valuable asset in an IPO.⁸⁶

To test our information asymmetry theory and the idea that investors do not value tax assets due to an information deficit, we created the variable *Existing TaxAssets_i*, a continuous variable that captures the value of Founders Co.'s tax assets in \$10 million increments at the time of the IPO and listed on the company's balance sheets. A positive correlation between existing tax assets and the decision to supercharge an IPO would lend support to the theory that investors disregard tax assets when purchasing shares and thus owner-founders rightfully seek to extract this value with the help of a TRA. In an effort to dig deeper into our theory of information asymmetry and, specifically, owner-founders' misconduct, we created the variable, *NeedlesslyComplex_i*, which is continuous and measures the number of pages in ten page increments in the IPO public filings. As the page number increases, the temptation to include a TRA will increase on the theory that public investors will neither observe nor understand the additional material imbedded in the deal. We expect a pre-existing complicated deal structure to enable owner-founders to add a TRA without incurring market sanctions associated with a decrease in the price paid for Public Co.'s shares.

Finally, one group of theorists argues that economic growth will inspire financial innovation, but another argues that market factors will have no affect at all. We test these theories with the help of *Macroeconomy_i*, a dichotomous variable that the measures

⁸³ Explain

⁸⁴ Firms also vary in their expected marginal tax rate going forward. For firms that do not expect to have taxable income for a long time, a basis step-up is not worth very much. While NOLs can be carried forward, the discounted present value of such tax savings can be small, and is often assumed to be zero on the firm's financial statements. Specifically, the issuer must assess the likelihood that any deferred tax assets will be used and report a valuation allowance on the financial statements. Because a large number of firms use a valuation allowance of 100%—under the accounting rules, an indication that the value of the reported tax shield is not “more likely than not” to be realized—we use a dummy variable to indicate firms with a valuation allowance of 100%.

⁸⁵ Our measure of market capitalization is incomplete. We gathered data from the CRSP database (Daily Stock File) where possible, and from the website YCharts for firms where CRSP data was missing. Additionally, some firms in the sample withdrew their IPO offerings because of market conditions or other reasons, and so no measure of market value is available.

⁸⁶ We plan to check the accuracy of this proxy for the firms that use a TRA by looking at the firm's reported amount for deferred tax assets as a measure of the value of the basis step-up. We will then gross up that figure by dividing that amount by the percentage of the firm sold in the offering.

whether the economy is growing or shrinking as assessed by the NBER.⁸⁷ Finding a positive correlation between upswings in the economy and the supercharged IPOs would support the first group of theorists while a null finding would support the second group.

Our hypotheses forecast a positive correlation between the first three variables of model (1) and the use of supercharged IPOs, thus we expect that $b_1, b_2,$ and $b_3 > 0$. If the coefficients on these variables are not positive, then these factors do not play the expected role in the parties' decision to adopt this deal structure. Indeed, if these coefficients are equal to zero or negative, $b_1, b_2,$ and $b_3 \leq 0$, the evidence favors the critics' interpretation of these deals: owner-founders are not motivated by a desire to reduce taxes and save investors' money, but perhaps by the desire to extract large sums from Public Co. irrespective of the effect on investors. If bad behavior is present, we expect the coefficient on *NeedlesslyComplex* to be positive, $b_4 > 0$, if the coefficient is negative, $b_4 < 0$, then complex deals discourage the use of the TRAs perhaps out of fear of market punishment or perceived improprieties—a finding that would undermine the claim that owners-founders are acting in an underhanded fashion. We expect the coefficient on the macroeconomy to be positive, $b_5 > 0$, if a growing economy generates financial innovation as theorists have argued. If the coefficient on the macroeconomy is negative, $b_5 < 0$, a contracting economy generates innovation, and if it is equal to zero, $b_5 = 0$, macroeconomic factors have no affect on the parties' behavior.

Model (1) identifies our strategy for understanding the general incentives for supercharging the IPO. Extant theory, however, also provides an intuition for how and why successful innovations diffuse across industries and geographic zones. Notwithstanding the drawbacks associated with complexity and bad optics, Robert Willens has noted that supercharged IPOs along with the attendant TRAs have become “almost standard procedure in these types of incorporations.”⁸⁸ To investigate this diffusion process, we rely on two models:

$$\begin{aligned} \text{Pr}(\text{SuperIPO}_i=1) = & b_0 + b_1\text{EliteLawyers}_i + b_2\text{EliteAccountant}_i + \\ & b_3\text{NetworkBoston}_i + b_4\text{NetworkNYC}_i + b_5\text{NetworkChicago}_i + \\ & b_6\text{NetworkBayArea}_i + b_7\text{NetworkLA}_i + b_8\text{PrivateEquity}_i + \\ & b_9\text{Media}_i + \sum b_j C_{ij} + e \end{aligned} \quad (2)$$

where *SuperIPO_i* in equation (2) is the parties' decision to supercharge the IPO with a tax receivable agreement (TRA), and is coded equal to 1 if the deal is supercharged and equal to 0 otherwise. Our first theory of diffusion relates to the use of elite lawyers and accountants, individuals who are likely to create, track, and use the most up-to-date- and innovative deal structures. To test this theory, we rely on *EliteLawyer_i* and

⁸⁷ The NBER business cycle dating committee publishes information with respect to the macroeconomy and identifies whether the nation is in a period of growth or contractions. See <http://www.nber.org/cycles/recessions.html>.

⁸⁸ Robert Willens, "Up-C" Incorporations Feature "Tax Receivable Agreements," Vol. 5, Issue 135 (July 15, 2011).

EliteAccountant_i, dichotomous variables coded equal to 1 if the lawyer or accountant on the deal is from an elite firm and equal to 0 otherwise.⁸⁹ Our second theory relates to legal networks; we expect corporations that hire lawyers and consultants from shared professional networks are more likely to discover innovative ideas and put those ideas to work. We test this theory with the help of a group of indicator variables indicating whether the lawyers on the deal were located in Boston, New York City, Chicago, the Bay Area, or Los Angeles—the five most popular metropolitan areas for firms doing IPO work. The variables, *NetworkBoston_i*, *NetworkNYC_i*, *NetworkChicago_i*, *NetworkBayArea_i* and *NetworkLA_i* are all coded equal to 1 if the firm is from that city and equal to 0 otherwise.

Our third theory of diffusion posits that industry culture fosters the dissemination of innovative financial strategies. Private equity and hedge fund firms are widely believed to be particularly innovative and likely to be early adopters of creative financing plans. We test this theory with *PrivateEquity_i*, a dichotomous variable that is equal to 1 if the firm is a private equity firm or hedge fund and equal to 0 otherwise. Finally, we investigate our fourth theory, which posits that media attention will promote the use and diffusion of supercharged IPOs. We test this hypothesis with the variable *Media_i*, a continuous variable that measures the extent of media coverage in national journals (both popular and those geared to tax, accounting, and banking audiences) with respect to supercharged IPOs. In summary, we expect a positive correlation between supercharged IPOs and all the variables in model (2): $b_1 - b_9 > 0$.

Model (3) also investigates the diffusion process, but seeks to identify the “first movers.”

$$\begin{aligned} Date_SuperIPO_i = & b_0 + b_1 EliteLawyers_i + b_2 EliteAccountant_i + \\ & b_3 NetworkBoston_i + b_4 NetworkNYC_i + b_5 NetworkChicago_i + \\ & b_6 NetworkBayArea_i + b_7 NetworkLA_i + b_8 PrivateEquity_i + \\ & + \sum b_j C_{ij} + e \end{aligned} \quad (3)$$

Our dependent variable in model (3), *Date_SuperIPO*, is the date on which a company filed an S-1 statement with the SEC and included a plan to supercharge the IPO. The eight independent variables are identical to those outlined in model (2),⁹⁰ and we expect a positive correlation between the date of the supercharged IPO and all the variables in model. In short, we hypothesize that early movers will be firms that use elite lawyers and accountants, are in key professional networks, and have ambitious firm cultures and organizations: $b_1 - b_8 > 0$.

⁸⁹ Chambers and Partners identified 5 law firms in the top tier: Cleary Gottlieb Steen & Hamilton; Davis Polk & Wardwell; Skadden, Arps, Slate, Meagher & Flom; Sullivan & Cromwell; and Wachtell, Lipton, Rosen & Katz. Chambers identified 6 law firms in the second tier: Cravath, Swaine & Moore; Debevoise & Plimpton; Kirkland & Ellis; Latham & Watkins; Simpson Thacher & Bartlett; and Weil, Gotshal & Manges. For the ranking methodology, please consult <http://www.chambersandpartners.com/Rankings-Explained>. Name elite 4 accounting firms

⁹⁰ We excluded media coverage.

In addition to the explanatory variables just described in models (1), (2), and (3), we have a control set, which includes the location of Founders Co.'s incorporation, Founders Co.'s market capitalization in \$1 billion increments, and a time trend indicating the filing date of the first S-1 (when relevant). These variables assure that our models account for unexpected or unobservable factors associated with the choice to incorporate domestically or in a tax haven, the value of the company at the time of the IPO, and the time period of the filing. Finally we weighted our data to account for the fact that we used a unique sampling frame for purposes of collecting data. We included every supercharged IPO that took place on the market into our dataset, but took a random sample of the traditional IPOs. By weighting the data to account for the different probabilities of selection, we improve our chances of producing unbiased estimates.

B. Competing Theories of Supercharged IPOs: The Empirical Results

We now turn to our empirical findings. Our dependent variable in models (1) and (2) is the presence of a supercharged IPO. As explained above, this is a binary variable and thus we use probit models for purposes of estimation. Probit coefficients are difficult to interpret so we present our results with respect to models (1) and (2) in an alternative and easy to comprehend form: the tables depict the likelihood that the parties will supercharge their IPO given a unit increase in the independent variable. Recall that we explained our coding protocols for each variable above—this is important information if our results are to be interpreted correctly. For example, a positive sign on a coefficient presented in the tables below would indicate that as the independent variable increases (moves from 0 to 1 if it is binary), the parties are more likely to supercharge the IPO; a negative sign indicates that the parties are less likely to supercharge the deal as the independent variable increases.⁹¹ In model (3) we use a continuous dependent variable, the date a company files an S-1 indicating a supercharged IPO is planned, and consequently we use a linear regression model. These coefficients are directly interpretable: a positive coefficient indicates that as the independent variable increases, the probability of an early S-1 filing increases, a negative coefficient indicates that as the independent variable increases, the probability of an early S-1 filing decreases.

1. *The rise of the supercharged IPO*

To begin our investigation, we focus on model (1), which presents the competing models for the rise of the supercharged IPO outlined above. Recall model (1) seeks to identify the factors that theorists have identified for innovation more generally—tax and accounting rules, information asymmetry, transaction costs, and the macroeconomy. We investigate these factors in an effort to identify how they affect IPOs and the choice to supercharge the deal. Table 1 immediately below presents our results; columns A and B indicate to different specifications of model (1).

⁹¹ For example, we coded the variable *CorpTaxAbuse* equal to 0 if the government did not allege abuse in the case and equal to 1 if the government did make such an allegation. Thus if the sign on the *CorpTaxAbuse* variable is positive (negative) then the presence of such an allegation makes it more (less) likely that the government will win in Court.

Table 1: Competing theories of innovation: the rise of the supercharged IPO

The Rise of the Supercharged IPO			
Results depict the likelihood of a supercharged IPO given unit increase in the independent variable ⁹²			
Competing Theories	Variables	Model 1 (A)	Model 1 (B)
Tax & Accounting Regs	Tax Arbitrage	.10 (.03)***	.10 (.03)***
	Goodwill	-.0009 (.007)*	.007 (.002)
	Tax Arbitrage x Goodwill		-.002 (.002)
Information Asymmetry: Investor Info Deficit	Pre-existing Tax Assets	.00006 (.00005)	.00005 (.00006)
Information Asymmetry: Founders' Opportunism	Needlessly Complex	.0001 (.0002)	.0002 (.0002)
The Macroeconomy	Business Cycle	-.015 (.01)**	-.016 (.01)**
Control Set	Market Capitalization	.002 (.001)**	.0009 (.002)
	Organized in Delaware	.004 (.003)**	.004 (.003)**
	Organized in Tax Haven	.006 (.01)	.006 (.01)
	Time Trend	.001 (.0007)	.001 (.0007)
Observations		315	315
Pseude R2		.40	.40

Note: We used dprobit to generate the findings presented in table 1 in STATA. *** indicates the findings are statistically significant at the .01 level, ** indicates statistical significance at the .05 level, and * indicates significance at the .10 level.

Our first theory posits that tax and accounting regulations will affect the choice to innovate in the IPO context. To test this theory, we focus first on tax arbitrage opportunities—this emerges when the owner-founders are taxed at a 15 percent rate and Public Co. is taxed at a 35 percent rate. As presented in table 2, column A, we find that when the parties have tax arbitrage opportunities, they are 10% more likely to adopt a supercharged IPO. This finding is highly statistically significant, suggesting that when partnerships are present and tax arbitrage opportunities exist, the parties have a strong motivation to supercharge an IPO. This empirical finding is consistent with our cost-benefit analysis presented in table 1 above, which illustrated the idea that owner-founders would agree to a supercharged IPO in the context of differential rates imposed on the

⁹² Column A Model: `probit TRA partnership Goodwill_Bill net_taxass_tenmill pages_10 cycle MarketCap__bill StateIncorp_Del StateIncorp_Haven y [pweight=weight]`; column B model: `xi: dprobit TRA i.partnership*Goodwill_Bill net_taxass_tenmill pages_10 cycle MarketCap__bill StateIncorp_Del StateIncorp_Haven y [pweight=weight]`

parties but not when all parties suffered the same rate in light of the overall net loss in the latter deals.⁹³

We also examined the presence of goodwill—which allows the parties to take advantage of the variance in the tax and accounting rules as discussed above.⁹⁴ Our findings, surprisingly, show a negative correlation: as Founders Co.'s goodwill increases, the likelihood of supercharging the IPO decreases. More specifically, for every \$1 billion increase in goodwill, the parties are .09% less likely to adopt the innovative IPO structure at statistically significant levels. The size of this coefficient, however, is miniscule implying that goodwill is having very little and close to zero effect on deal structures. For example, People's United Financial, Inc. went public in late 2006 with over \$6 billion in goodwill—meaning the probability that the company would supercharge the IPO decreased by .6% -- less than 1%.⁹⁵

To investigate the twin findings with respect to tax and accounting in more detail, we created an interaction term—a term that identifies how two variables interact together in affecting the parties' choices. Models with interaction terms are more complex to interpret: the variable tax arbitrage in table 1, column B now indicates how tax rates affect the parties when Founders Co. has no goodwill; the variable goodwill indicates the role of goodwill in the absence of tax arbitrage opportunities, the variable “tax arbitrage x goodwill” reflects the likelihood of supercharging an IPO when both factors are present. The finding with respect to tax arbitrage in column B indicates that the parties continue to be 10 percent more likely to supercharge their IPO even when they have no goodwill, a finding that is consistent with our qualitative analysis of the costs and benefits in table 1 above. The consistency of the results with respect to tax arbitrage across models strongly suggests they are robust and tax motives are playing a major role in the choice to innovate. With respect to goodwill alone, we find the coefficient changes from negative to positive, but is not statistically significant—suggesting that goodwill alone is not playing a strong role in the parties IPO planning—a result that is also robust across different model specifications.⁹⁶ Now consider how tax arbitrage and goodwill interact when simultaneously present—column B indicates the parties are less likely to supercharge the deal in these circumstance, but not at statistically significant levels. In short, our models suggest that tax arbitrage—and not the book-tax differences associated with goodwill—is the primary motivator for supercharging and IPO. Our qualitative and quantitative analyses suggest this, and the raw data supports this conclusion: 44 percent of all the parties capable of engaging in tax arbitrage executed a TRA while only 1 percent of the parties who had no arbitrage opportunities but had goodwill present adopted a TRA.⁹⁷

⁹³ See *supra* notes and accompanying text.

⁹⁴ See *supra* notes and accompanying text.

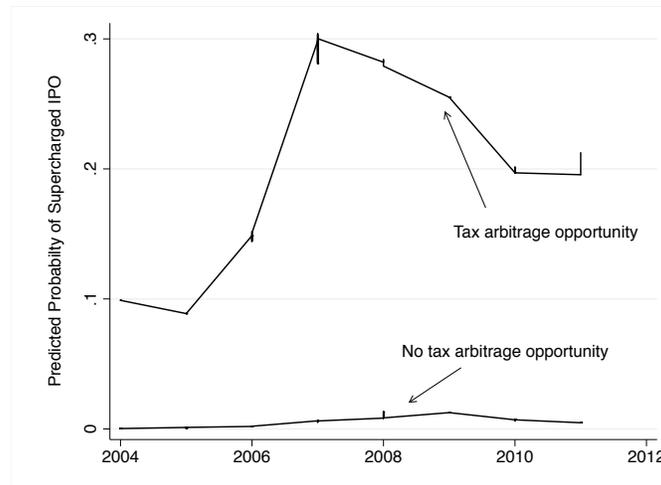
⁹⁵ We also created a indicator variable for companies with goodwill coded equal to 1 for companies with goodwill over \$500 million and equal to 0 otherwise. The sign of the coefficient in this model changed signs from negative to positive, but was not statistically significant.

⁹⁶ See also note *supra* note 109 explore the effects of goodwill using an indicator variable.

⁹⁷ Explain how tax arbitrage works when no goodwill. Section 741, etc.

Figure 1 below presents our findings with respect to tax arbitrage in visual form. Our model predicts that holding all other variables constant, firms with tax arbitrage opportunities have, on average, a 25 percent likelihood of supercharging their IPO whereas firms without this capability have a 0.04 percent likelihood of adopting this innovative deal structure. Figure 1 below depicts the firms' probabilities of supercharging their IPO over the course of years. It is easy to see that those with tax arbitrage opportunities are more likely to supercharge in every year of our data.

Figure 2: Predicted probability that firms with and without tax arbitrage opportunities will supercharge their IPO



Note: Figure depicts the probability of a supercharged IPO on the y-axis and the year of the IPO on the x-axis.

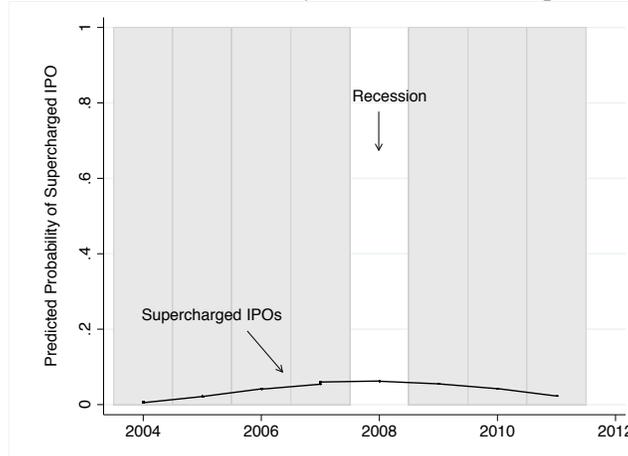
We now consider the information asymmetry theory of innovation. Our model, presented in table 1, columns A and B above, indicates that this theory has no role to play in the choice to supercharge an IPO. First, we find that for every \$1 million of tax assets, the parties are .006% more likely to execute TRA. Not only is this size of the coefficient virtually zero, the finding is not statistically significant. This suggests that owner-founders do not use tax assets as a justification for extracting funds in the post-IPO period on the grounds that investors naively ignore the value of these assets. Moreover, our results indicate that founders are not slipping TRAs into complex IPO documents for opportunistic reasons as suggested by our finding on the variable, needlessly complex. Table 2, columns A and B, indicate that as the S-1 filing increase by 10 pages, the parties have a .01% increase the likelihood of supercharging the IPO—a finding that is both very small substantively and not statistically significant. The null findings that emerge in both specifications of the models with respect to information asymmetry imply this factor does affect IPOs as we theorized above.

The transaction cost theory of IPOs can be assessed indirectly with the series of findings just discussed vis-à-vis tax and accounting regulations and information asymmetry. As we noted above, theorists have argued that TRAs eliminate transaction costs in certain circumstances. Our models suggest that this is only true when tax arbitrage is present—goodwill standing alone is not sufficient reason to supercharge and IPO and will not produce benefits that exceed costs. Moreover, our models suggest that Founders Co. is not using the supercharged IPO as a means to assure investors pay for tax assets, nor are they slipping TRAs into the IPO in order to surreptitiously extract money from Public Co.—indicating that the costs of adopting these strategies exceed their benefits. Our models, in short, support the idea that TRAs may eliminate transaction costs when tax arbitrage exists, but likely exacerbate costs in other contexts and thus are not worth the effort and the “bad optics.”⁹⁸

Finally, the macroeconomic theory of innovation posits two hypotheses: financial experts will innovate with a growing economy or, alternatively, experts will innovate in all periods as a means to maintain a competitive advantage. Our findings challenge the extant theoretical literature. We find that as the economy becomes stronger, the parties are less likely to supercharge their IPOs. Both columns A and B in table 1 indicate that in a growing economy, the probability of a supercharged IPO decreases by 16%, and this finding is statistically significant. Figure 2 depicts the likelihood of a supercharged IPO in periods of economic growth and decline. The grey areas represent growth, and the white area represents the “Great Recession” that took place from late 2007 to early 2009. The black trend line in the figure indicates the probability of a supercharged IPO. It is easy to see that the probabilities increase in the recessionary period, and decrease in periods of economic growth though the differential is substantively small. The parties have a 4% likelihood of supercharging their IPO in periods of economy growth, and a 7% likelihood of supercharging in periods of economic decline at statistically significant levels.

⁹⁸ See *supra* notes and accompanying text.

Figure 2: The Effects of the macroeconomy on the choice to supercharge an IPO.



Note: The gray and white areas indicate periods of economic growth and stagnation, respectively, and determined by the NBER dating committee. Supercharged IPOs are 3% more likely to occur in periods of recession.

Finally, we turn to our control set. We find that companies organized in Delaware are more likely to innovate than those organized elsewhere, including tax havens. Because Delaware is widely viewed as an agreeable place for companies to incorporate for legal reasons—it is not surprising that sophisticated companies choose this state over others. Notably, TRAs are not associated with tax havens, implying that owner-founders are willing to push the boundaries of their tax planning but only so far. As we will see below, however, firms organized in tax havens appear to be the early-movers when it comes to adopting the supercharged IPO deal structure. A firm's market capitalization has no effect on the choice to supercharge; and our time trend suggests that TRAs have gotten more popular in recent periods, but not at statistically levels.

2. *The early adopters and the proliferation of the supercharged IPO*

We now turn to the factors that explain the use and proliferation of supercharged IPOs. We begin first with model (2), which identifies the parties most likely to adopt the innovative IPO, and then turn to model (3), which explores the “first movers.” Table 2 presents our findings. The coefficients should all be interpreted as above: a positive coefficient indicates that as the independent variables increases, the likelihood of a supercharged IPO increases (model (2)) or the likelihood of being an early mover increases (model (3)); a negative coefficient indicates that as the independent variables increases these probabilities decrease.

With respect to model (2) and general innovation trends, we present our findings in column 1 of table 2. Our first theory posits that lawyers will have an impact on deal structures, and we find that elite lawyers increase the likelihood of supercharging an IPO at statistically significant levels, but only by 1.5%. Accountants at the big four firms

have an even smaller effect, they increase the likelihood of a supercharged IPO by 0.05% and this finding is not statistically significant. Our second theory posits that irrespective of the elite nature of the legal or accounting advice, but professional networks have the strongest role to play. We find that firms going public in an IPO that hire New York lawyers are 2% more likely to supercharge their deal than firms anywhere else. Our models indicate that the firm networks located in Los Angeles, Chicago, and the Bay Area have little to no effect on deal structure. It is worthwhile to note that the raw data, which must always be taken with a grain of salt given the lack of control, supports this finding: New York City law firms were involved in 74% of the supercharged IPOs. The remaining supercharged deals were spread across the various markets.

We hypothesized that the type of firm going public would affect the choice to supercharge and IPO. Our model indicates that private equity firms and hedge funds are 2% less likely to supercharge their IPOs, at statistically significant levels. We expected the opposite result given the ambitious and aggressive nature of these types of firms, but we were wrong. Again, the raw data confirm this empirical finding: just 10 out of the 22 supercharged IPOs involved private equity and hedge fund firms.

Finally, we expected that the media frenzy would have a positive effect on the parties' choice to supercharge the deal. While we do uncover a positive coefficient it is very small, and the finding is not statistically significant. Our results indicate that elite law firms and firms located in New York City have the greatest effect on deal structure, and not the culture of the firm going public or media coverage of the innovative nature of the deals.

With respect to the control set, we find that firms with large market capitalizations and those organized in tax havens have little or no effect on the choice to supercharge the IPO. Firms organized in Delaware, however, have an increased likelihood of innovating in the IPO context by 1% at statistically significant levels.

Table 2: Competing theories of use and diffusion: the spread of the supercharged IPO

The Diffusion Process			
Results depict the likelihood of a supercharged IPO given unit increase in the independent variable			
Competing Theories	Variables	Adoption Any Time ⁹⁹ (1)	Early Adoption ¹⁰⁰ (2)
Elite Firms	Elite Law Firm	.014 (.009)**	.91 (.71)
	Big 4 Accounting Firm	.005 (.003)	1.14 (.96)
Professional Networks	Network-Boston	No supercharged IPOs	No supercharged IPOs
	Network-NYC	.02 (.1)***	-.31 (.87)
	Network Chicago	-.0006 (.01)	-2.01 (.74)***
	Network-LA	No supercharged IPOs	No supercharged IPOs
	Network-Bay Area	.0001 (.008)	-3.32 (1.85)***
Firm Culture	Private Equity Firm	-.02 (.008)***	-.56 (.73)
Media Frenzy	Media	-.006 (.00)	
Control Set	Market Cap	.00004 (.0003)	-.00004 (.0002)
	Organized in Delaware	.01 (.005)**	2.42 (.99)**
	Organized in Tax Haven	.02 (.03)	4.49 (1.50)***
	Time Trend	.004 (.003)**	
Observations		324	33
Pseude R2		.24	.48

Note: We used dprobit to generate the findings presented in table 2, column 1 in STATA. *** indicates the findings are statistically significant at the .01 level, ** indicates statistical significance at the .05 level, and * indicates significance at the .10 level.

We now turn to model (3) and seek to identify the first movers in the supercharged IPO context. The extant literature argues that first movers tend to be aggressive firm owners who do not shirk from risk and enjoy the prestige and attention of first mover status.¹⁰¹ This would suggest that venture capital firms and hedge funds would be early adopters of the supercharged IPO. Perhaps also those organized in tax havens. As presented in table 2, column 2, we find that venture capital firms and hedge funds were not the early movers. These firms adopted the supercharged deal structure, but only after it was tried and test but various other firms. Moreover, elite lawyers and accountants did not take the lead in supercharging IPOs, nor did the professional networks that we

⁹⁹ dprobit TRA elite_issue_counsel Accounting_Big4 City_IssuerLaw_NYC City_IssuerLaw_Chicago City_IssuerLaw_BayArea sponsor_VCPE Media_2007 MarketCap StateIncorp_Del StateIncorp_Haven y [pweight=weight]

¹⁰⁰ reg neg_month_year elite_issue_counsel Accounting_Big4 City_IssuerLaw_NYC City_IssuerLaw_Chicago City_IssuerLaw_BayArea sponsor_VCPE MarketCap StateIncorp_Del StateIncorp_Haven [pweight=weight] if TRA==1

¹⁰¹ Cites.

identified in Boston, Chicago, Los Angeles, New York, and the Bay Area. Indeed, these firms were all less likely to supercharge a deal early.

The variables that have the strongest ability to predict early mover status are found in our control set. Firms organized in Delaware have an increased likelihood of supercharging their IPO early, but it is the firms located in a tax haven that are the most likely to be the first movers. This latter finding is consistent with the extant literature in the sense that it predicts that aggressive and risk-taking firms will be the most likely to adopt a new – and untested – innovative financial plan. Once tested by the market, other firms will follow.

C. Summary

We specified three models for purposes of understanding the rise, use, and diffusion of supercharged IPOs. With respect to the underlying justification for adopting the supercharged deal structure, we found the primary motivator was the ability to engage in tax arbitrage, and secondarily, a shrinking economy. Our data suggests that owner-founders do not supercharge their deals out of a belief that investors do not understand the value of tax assets or in an effort to squeeze profits out of the new public company for opportunistic reasons. Perhaps these last two justifications, widely discussed in the literature, are simply not worth the cost associated with the more complex deal and the “bad optics.”

Our findings with respect to the use and diffusion of the innovative deal structure indicate that owner-founders going public are likely to be organized in Delaware, and at the same time are likely to hire elite lawyers most likely from the New York City region. We also investigated the identity of the first movers and found that the variable exerting the largest effect is the location where the firm going public is organized. Firms organized in tax havens are the most likely to use aggressive IPO structures before the broader market tests the financial innovation.

V. IMPLICATIONS OF EMPIRICAL FINDINGS FOR PARTIES AND LEGAL REFORMERS

Our study has a number of important implications for IPO planners, policy reformers, and scholars interested in financial innovation more generally. In this section, we briefly discuss each of these topics and explore the ways in which our findings can advance the work of planners, reformers, and scholars. We note that at least with respect to IPO planners and legal reformers—the success one group makes the work of the other group more challenging.

A. Implications for IPO Planning and Strategizing

1. *Dividing the costs and benefits of the supercharged IPO*

We have investigated the differences between traditional and supercharged IPOs,

the myriad reasons for why supercharged IPOs entered the market, and the explanations for why they diffused across geographic areas and industries. We have not yet, however, addressed a key pending question: who wins and who loses in these innovative deals? Shedding light on this issue will enable owner-founders and public investors to enter deals that most advance their economic interests, and perhaps more importantly, avoid deal structures that undermine their welfare. Our qualitative analyses below suggest that *all* the parties profit from the deals, but the division of this profit is dependent on the specific structure of the IPO.

To illustrate the potential benefits of a supercharged IPO as well as the allocation of the benefits between the parties, we assume the factors discussed above when outlining the details of the innovation¹⁰². First, we assume Founders Co. has exactly one asset, valued at \$10 million. Second, we assume that Public Co. is subject to a 35 percent tax rate, so if the company amortizes the \$10 million asset over 15 years, it will save \$2,421,920 in taxes—in present value terms.¹⁰³ Third, we assume that Founders Co. and its owners will be subject either to a 15 or 35 percent tax rate, meaning they will pay either 15 or 35 cents on each dollar of declared income. Recall, if the owner-founders are subject to a rate that is lower than that imposed on Public Co., tax arbitrage opportunities are present. These assumptions reflect real-world scenarios and make it possible to analyze the economic effects of the supercharged IPOs.

In the appendix, we provide a detailed explanation of all the costs and benefits associated with supercharged IPOs, but here we simply summarize the key points of our findings for purposes of illustrating who wins and who loses. In the first generation of the supercharged, IPO, Founders Co. incurs an up-front tax on monies received in the stock sale along with a tax on future payments made pursuant to the TRA. Public Co. has a large asset that it can amortize, but any tax savings must be shared with the owner-founders. Table 3 presents the total after-tax benefits in the deal, as well as the division of these benefits between the parties.¹⁰⁴ As indicated in column (1) of the table, when tax arbitrage opportunities are present, the parties stand to gain \$613,110 in total tax savings if they use a supercharged IPO rather than a traditional IPO, and this surplus is divided in a 41-59 split—with Public Co. getting the bulk of the benefit. This finding indicates that contrary to the critics, owner-founders are not taking advantage of naïve public investors, but are sharing the benefits of the supercharged IPO in a way that actually works to investor's advantage. When tax arbitrage opportunities are not present, as indicated in column (2) of table 3, we see that supercharging the IPO leads to a net loss—meaning that the parties would pay more in total taxes than they would save in taxes. This confirms our empirical finding above: tax arbitrage is a strong motivator for using this financial innovation and when it is absent the parties will not employ the first generation of the supercharged IPO.

¹⁰² See notes [–] and accompanying text.

¹⁰³ Put the equation in the footnote.

¹⁰⁴ See the appendix for details on how we calculated the costs, benefits, and division of total after-tax profits.

Table 3: Division Benefits in Supercharged IPOs

Supercharged IPOs with and without tax arbitrage opportunities				
	First Generation of Supercharged IPO		Second Generation of Supercharged IPO	
	Tax arbitrage	No tax arbitrage	Tax arbitrage	No tax arbitrage
	(1)	(2)	(3)	(4)
Total after-tax benefits in present value terms	\$613,110	(\$1,798,610)	\$2,113,080	\$1,701,360
Division of Surplus (Owner-Founders : Public Co.)	41 : 59	Net Loss	83 : 17	79 : 21

Note: Supercharged IPOs with tax arbitrage entail a 15 percent tax rate on owner-founders and a 35 percent tax rate on Public Co.; no tax arbitrage deals entail a 35 percent tax rate on all parties. A 5 percent interest rate was assumed for purposed of calculating the present value numbers.

Now consider the second generation of supercharged IPOs, a deal structure that does not generate up-front taxes on Founders Co. Assuming pre-existing tax assets worth \$10 million exist inside the company and are transferred to Public Co., we can see in table 3 that the parties would rationally supercharge the IPO whether or not tax arbitrage opportunities exist. As indicated in columns (3) and (4), the second generation IPOs lead to a total tax savings of \$2,113,080 and \$1,701,360, and in each case the owner-founders take the bulk of this benefit. Recall, the second generation IPO is justified on the grounds that public investors will not pay for the hidden but valuable tax assets inside the company—if this is indeed true—then it is sensible for the owner-founders take the bulk of the tax savings from these undervalued assets and the division should not be viewed as an unfair windfall. Indeed, that the public investors get *any* of the value of the tax assets is surprising given the theory they do not pay for them.¹⁰⁵

2. *You get what you pay for*

Traditionally, deal lawyers have been perceived as transaction cost engineers: adding value by reducing information costs, reining in agency costs, and aligning incentives between the parties. But our empirical findings, along with the explanation of profit sharing described above, together suggest that tax lawyers add value too. Through their expertise and knowledge of tax arbitrage opportunities, tax lawyers are in a position to

¹⁰⁵ Our empirical data suggests that the owner-founders are seeking a fair price for their company through the second wave of the supercharged IPO. But our data cannot confirm whether or not the public investors are underpaying for tax assets by paying a low stock price for companies with these types of assets on the balance. If this theory of investors' behavior is inaccurate—investors do account for tax assets when setting the price for the stock—then the TRA works as a windfall to the owner-founders. Put differently, the tax assets should belong entirely to the Public Co. and its investors.

enable the parties to save substantial amounts of money in reduced taxes. More interesting, perhaps, is the implication that you get what you pay for: our data show that firms were more likely to engage in tax arbitrage when they employed elite tax counsel. Theoretically, of course, it is also possible that the clients were behind the supercharged IPO, and that more aggressive clients engaged elite tax counsel to execute more aggressive transactions. Our empirical findings regarding elite counsel, however, remain significant after controlling for private equity-backed issuers and other types of aggressive financial engineers.

3. *Why corporations?*

Our empirical results show that tax arbitrage is the key means by which firms are able to achieve large tax savings in the IPO context. Firms organized as partnerships position themselves to take advantage of this opportunity, and indeed are vastly more likely to use a supercharged IPO than firms organized as corporations. The tax arbitrage created when founders sell equity at capital gains rates while generating a tax asset that can be amortized at ordinary rates is, according to our study, the key driver of this innovation. This finding adds to the puzzle of why so many firms organize as corporations rather than partnerships. Organizing a start-up as a corporation often leaves literally millions of dollars on the table. Savvy tax counsel continue to advise more firms to organize as partnerships, and the availability of exiting by way of a supercharged IPO may entice more founders to choose the partnership form. At the same time, the frictions that steer many founders toward incorporation in the first place are unchanged by the possibility of a supercharged IPO,¹⁰⁶ and it is unclear whether unsophisticated founders will be willing to further complicate the organization of their start-ups.

B. Legal Reformers

Our study demonstrates that with the help of a supercharged IPO, companies, their founders, and investors all stand to save millions in taxes. This suggests that while that these innovative deals are rational from a planning perspective, they are enormously costly to the public fisc. Put differently, while a small group of private and public investors have found a means to avoid tax costs, they do so to the detriment of the larger taxpaying public. Policymakers who worry about the tax base as well as the progressive rate structure have not overlooked this reality. Indeed, in 2009, in the wake of the highly controversial Blackstone supercharged IPO that involved millions of dollars of post-IPO payment pursuant to a TRA, Congress introduced legislation that targeted the tax arbitrage driving these types of supercharged deals. The goal of the legislation was to eliminate the rate disparity that currently exists between partnerships and corporations, thereby eliminating the arbitrage opportunities in supercharged IPOs. More specifically, under current law, gain on the sale of property is generally taxed at ordinary income rates if the transferred property is subject to depreciation or amortization in the hands of the purchaser. In this circumstance, there is no arbitrage opportunity. Gain on the sale of a partnership interest, however, is taxed at capital gains rates except to the extent that the

¹⁰⁶ Explain frictions.

value is attributed to so-called “hot assets,” like inventory and unrealized receivables—the types of assets that are not at issue in the supercharged IPOs. The proposed legislation would have extended ordinary income treatment to the sale of partnership interests if the gain was attributable to a depreciable or amortizable asset (such as goodwill, which is often in play in the supercharged IPO) and the parties executed a TRA in the context of a supercharged IPO.

The legislation would effectively target the perceived problem of supercharged IPOs and the TRAs that accompany them, but it is unclear why legislators should worry about tax arbitrage only in this context. This narrow approach, for example, would change the tax treatment associated with the tax benefits of amortization shared through a TRA but would not address deals that accomplished exactly the same outcome with a higher purchase price or an up-front lump sum payment, two alternatives to the TRA discussed above.¹⁰⁷ Recall that the TRA is a means by which Public Co. and its investors pay only for what they actually obtain in the form of a future tax savings, the proposed reform would essentially penalize selling partners only if they, rather than the investors, assumed most of the risk that the expected tax benefits may not be realized.

It may be more fruitful for policymakers to reconsider the tax treatment of the sale of a partnership interest more generally and not only in the context of supercharged IPOs with TRAs. This approach has recently been in the news in the context of the so-called enterprise value tax, which would tax the selling partners of investment services partnerships at ordinary income rates. Such tax treatment would represent an expansion of the hot asset rules, and is, in the opinion of at least one author fully justified.¹⁰⁸ If the sale of a partnership interest gave rise to ordinary income, the arbitrage disappears altogether in all contexts, and policymakers need not concern themselves with whether the tax benefits of amortization are shared or not.

C. Implications for the Literature on Financial Innovation

Finally, we turn to the implications of our study for the extant literature on financial innovation. We find that our study builds upon and extends the literature in important ways.

1. *Mixed motive innovation: moving from theory to empirics*

Scholars have long studied financial innovations and have put forth strong theoretical arguments for why and when they come into the marketplace. Scholars often set forth a range of views on a single innovation, thereby suggesting that multiple motives are present in the context of financial creativity. Some have argued that mortgage derivatives, for example, were designed to better allocate risk,¹⁰⁹ while others have

¹⁰⁷ See notes [--] and accompanying text.

¹⁰⁸ Cite Fleischer.

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argued that mortgage derivatives were designed to exploit naïve investors.¹¹⁰ Some argue that hybrid financial instruments provide an efficient allocation of risk to bank investors,¹¹¹ while others argue that these innovations are designed to avoid the corporate tax and manipulate bank regulatory requirements.¹¹² Scholars interested in financial innovation tend to put forward a range of plausible competing theories, but rarely subject them to empirical testing.

Our study contributes to this theoretical literature by providing an empirical method for rooting out multiple drivers—or the key driver—of a particular financial innovation. By investigating the various theoretical explanations for the supercharged IPO, and then subjecting each of the theories to empirical testing, we were able to locate the primary impetus for the supercharged IPO. And just as important, we were able to eliminate theories that did not hold up under our empirical investigation. Many scholars and commentators have argued that supercharged IPOs are nothing more than a means by which owner-founders steal from naïve investors—our study does not support this claim. Instead, our empirical findings show that the financial innovation of the supercharged IPO was engineered to reduce tax costs—to take advantage of a tax arbitrage between the founders of firms organized as partnerships, selling equity at a 15 percent tax rate, with Public Co. and its investors taking amortization deductions at up to a 35 percent tax rate. Of course this finding does not eliminate the suspicion that supercharged IPOs are nonetheless inherently unfair and problematic. Unlike innovations that reduce nontax transaction costs, it is less clear that this tax-driven financial innovation increases overall social welfare. While one can hypothesize that TRAs reduce information costs by allocating the value of tax assets to the parties in the best position to value the information (the founders), our data suggests that parties actually do this in the IPO context only when the founders can also benefit from a tax arbitrage.

The value of our study is this: it enables scholars and policymakers to identify the true motive underlying an innovation of interest, reject empirically unsupported claims, and shed light on underlying reform issues that are hidden in the controversy but nonetheless important to policymakers. In short, we believe that it is useful to know what drives financial innovation, and while our study is but one example of financial innovation, our methodology of looking at the characteristics of firms that actually adopt new innovations can help researchers distinguish between the various types of financial innovation, both positive and negative.

2. *Diffusion through professional networks*

Our findings suggest that diffusion of financial innovation takes place much like other forms of innovation: through professional networks. In the same way that tacit knowledge and know-how is transferred across technology firms in Silicon Valley, knowledge of financial innovation spreads through the New York tax bar, private equity

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and asset management professionals, and accounting professionals. [Can we conduct a few interviews in LA in January? add qualitative evidence from practitioners here]

3. *Inefficient market pricing of tax assets*

Our study also suggests a larger puzzle: are IPO markets inefficient at pricing tax assets? The mere existence of a TRA suggests that something is amiss, as markets should adjust the price efficiently whether the tax benefits are assigned to the buyer or the seller. It seems that markets do not do this efficiently, but our data cannot explain whether IPO investors are simply indifferent to tax (which many people say, but seems implausible), or whether there is some incomplete price adjustment to the presence of tax assets, or whether accounting myopia over current earnings (which are unaffected by a TRA) dominates. Our discussion of transaction costs and risk assessment, however, suggest that IPO markets are no inefficient at price tax assets. First, as noted above, in traditional transactions, the share price must account for the value of tax assets and valuing the assets requires parties to make numerous assumptions associated with a potential IRS audit, the company's future profitability, legal reform down the road, and the use of other types of tax planning strategies in order to identify the true value of the tax asset to Public Co. Negotiation and bargaining leads to delays, and may kill the deal altogether and thus a more rational approach is to supercharge the IPO with a TRA, thereby eliminating these risks, delays and costs.¹¹³

VI. CONCLUSION

A new innovation on the IPO landscape has emerged in the last two decades, allowing owner-founders to extract literally millions of dollars from newly public companies in the post-IPO period. These IPOs—labeled supercharged IPOs—have been subject to widespread debate and controversy: lawyers, financial experts, journalists and Members of Congress have all weighed in on the topic. Some have argued that supercharged IPOs are a “brilliant, just brilliant” means for selling shares to the public in an efficient and fair manner, while others have argued supercharged IPOs are nothing more than a mechanism for owner-founders to steal from the unsuspecting public. Still others argue that the real loser is the public-at-large—supercharged IPOs have enabled owner-founders and investors to avoid paying their fair share of taxes—all at the cost of the taxpaying public.

In this paper, we explore the supercharged IPO and explain how and why the deal structure differs from the traditional IPO and how the innovation developed over time. We then outline the various theories of innovation with respect to the emergence of new and clever ideas generally, along with theories as to why these ideas diffuse across industries and geographic areas. We note that the extant theoretical literature provides support for both legitimate and opportunistic uses of the supercharged IPO. With the help of a large- N quantitative study, we find that the parties are employing the innovative

¹¹³ See notes [–] and accompanying text.

deal structure not in the under-handed way as alleged by some commentators but primarily for tax planning purposes and with the help of elite lawyers primarily located in the New York City area. Our findings suggest that the true loser in the deals may, in fact, be the taxpaying public. We conclude our study with an investigation of our empirical results and the ways in which 1) it advances the literature on innovation, 2) can be used to by firms going public in the future, and 3) can be relied upon by legal reformers for purposes of crafting reform that best advances their underlying goals.

APPENDIX ON COSTS AND BENEFITS OF THE SUPERCHARGED IPO

The supercharged IPO has substantially different costs and benefits than a traditional IPO. Understanding these differences, along with the parties' choice as to how to distribute the net benefits of a supercharged IPO is key to understanding the underlying motives for pursuing this complex deal. Understanding the benefits and their divisions across parties is also important if readers are to understand fully whether the supercharged IPO is a valuable device for all the parties, or whether the deal is advantageous to some but not others.

To illustrate the economic costs and benefits of supercharged IPOs as well as the allocation of these costs and benefits, we assume many of the factors discussed above. First, because the most valuable asset in many IPOs is goodwill, we assume Founders Co. has exactly one asset valued at \$10 million. Second, we assume that Public Co. is subject to a 35 percent tax rate, and thus amortizing the asset it receives from Founders Co. ratably over 15 years will save the former substantial money in taxes. Third, we assume that Founders Co. and its owners will be subject either to a 15 *or* 35 percent tax rate, meaning they will pay either 15 or 35 cents on each dollar of declared income. Recall, if the owner-founders are subject to a lower rate than Public Co., tax arbitrage opportunities are present. These assumptions reflect real-world deals,¹¹⁴ and demonstrate the circumstances in which we can expect supercharged IPOs to emerge.

In the first generation of the supercharged, IPO, Founders Co. will be viewed as having sold their company to Public Co., for \$10 million (the value of the asset) and it will pay either \$1.5 million in taxes (a 15% rate) or \$3.5 million in taxes (a 35% rate). Public Co., in turn, will have an asset with a \$10 million basis, which can be ratably amortized over fifteen years at a 35 percent rate, producing a tax savings of \$2,421,920, in present value terms. The TRA accompanying the deal requires Public Co. to transfer 85 percent of the tax savings obtained through the amortization back to the owner-founders, who will, in turn, be subject to either a 15 or 35 percent tax rate on each additional payment.

Table A1 presents the economic details of the deal. To begin, the first row of the table indicates the value of the tax assets to each party. If the deal is structured as a traditional IPO, then the tax asset—the \$2,421,920 tax savings over 15 years in present value terms—belongs to the owners-founder, but if the deal is supercharged the asset belongs to Public Co. The second row of the table A1 indicates the value of the tax assets in the context of a TRA, which requires Public Co. to transfer 85 percent of the tax savings to the owner founder. In this scenario, the owner-founders have a right to \$2,058,630 and Public Co. has a right to \$363,280, both in present value terms. Row 3 of the table now accounts for the taxes imposed on the parties under the terms of the deal; in a world where the owner-founders pay taxes at a 15 percent (tax arbitrage is possible), they will pay \$1,808,790 in taxes and if they are subject to a 35 percent rate (no tax

¹¹⁴ These types of deals emerged as part of an “innovation spiral” discussed in the appendix.

arbitrage is possible) they will pay \$4,220,5200 in taxes all in present value terms and all in the context of the first wave of the supercharged IPO.

Table A1: The costs and benefits of a TRA in traditional and supercharged IPOs

Tax Receivable Agreements with and without tax arbitrage opportunities: Costs and benefits to owner-founders and Public Co. in present value dollars					
Nature of Costs and Benefits	Traditional IPO	1 st Wave Supercharged IPO		2 nd Wave Supercharged IPO	
		Tax Arbitrage	No Tax Arbitrage	Tax Arbitrage	No Tax Arbitrage
Value of Tax Assets w/o TRA					
To Owner-Founders	\$2,421,920	\$0	\$0	\$0	\$0
To Public Co.	0	2,421,920	2,421,920	2,421,920	2,421,920
Value of Tax Assets w/ TRA					
To Owner-Founders	0	2,058,630	2,058,630	2,058,630	2,058,630
To Public Co.	0	363,280	363,280	363,280	363,280
Tax Costs in Deal w/ TRA					
To Owner-Founders	0	(1,808,790)	(4,220,520)	(308,790)	(720,520)
To Public Co.	0	0	0	0	0
Net Value of Deal w/ TRA					
To Owner-Founders	0	249,830	(2,161,890)	1,749,830	1,338,110
To Public Co.	0	363,280	363,280	363,250	363,250
Division of Surplus (Owner-Founders : Public Co.)	100 : 0	41 : 59	Net Loss	83 : 17	79 : 21

* Supercharged IPOs with tax arbitrage entail a 15 percent tax rate on owner-founders and a 35 percent tax rate on Public Co.; no tax arbitrage deals entail a 35 percent tax rate on all parties. A 5 percent interest rate was assumed for purposes of calculating the present value numbers.

As indicated in the last two rows of the table in the context of the first wave of supercharged IPO, when tax arbitrage opportunities are present, the parties stand to gain a total of \$613,110 (\$249,830 + \$363,280) and this surplus is divided in a 41-59 split—with Public Co. getting more of the benefit. This indicates that contrary to the critics, owner-founders are not taking advantage of naïve public investors, but are sharing the benefits of the supercharged IPO in a way that works to the investors' advantage. Note when the parties are taxed at the same 35 percent rate—no arbitrage opportunity exists—supercharging the IPO would lead to a net loss. This confirms our empirical finding above, that tax arbitrage is a strong motivator for using this financial innovation and when this opportunity is unavailable other justifications must be present.

We now conduct the same cost-benefit analysis for the second wave of supercharged IPOs with and without tax arbitrage opportunities. Assume that Founders Co. transfers preexisting tax assets, say net operating losses, to Public Co. and generating \$10 million in deductions over the course of fifteen years. The present value of this tax savings is \$2,421,920 in present value terms, but Public Co. must hand-over 85 percent or \$2,058,630 to Founders Co., leaving \$363,280 for the Public Co all in present value terms. Assuming a tax rate differential and a 15 percent rate on the owner-founders, the latter will pay tax on these payments, and thus will net \$1,749,830 in present value terms. Column 3 of table A1 presents the data for the parties and indicates that the deal produces an 80:20 division of surplus—unambiguously favoring the owner founders. If the both parties are subject to a 35 percent tax rate and not tax arbitrage opportunities exist, the deal continues to produce \$363,250 for Public Co., but slightly less for the owner-founders. The latter nets \$1,338,110, producing a 79:21 division of the surplus and continuing to favor the owner-founders. This uneven division in the second wave of the supercharged IPOs raises an important question: have the investors undervalued the stock by disregarding the value of the tax assets or have the investors taken account of these assets when buying Public Co. stock in the IPO? This question is important because it goes to the heart of the controversy outlined above—is Founders Co. acting in an underhanded fashion as so many commentators have argued or it is acting in a manner that permits fair compensation for the value transferred to the shareholders. Our empirical study cannot affirmatively answer this question, but the available evidence suggests that owner-founders are not stealing from naïve investors, but are pursuing deal structures that advance the interests of all the parties involved.