PUBLIC OR PRIVATE VENTURE CAPITAL?

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Abstract: The United States has an unparalled entrepreneurial ecosystem. Silicon Valley startups commercialize cutting-edge science, create plentiful jobs, and spur economic growth. Without angel investors and venture capital funds (VCs) willing to gamble on these high-risk, high-tech companies, none of this would be possible.

From a law-and-economics perspective, startup investing is incredibly risky. Information asymmetry and agency costs abound. In the United States, angels and VCs successfully mitigate these problems through private ordering and informal means. Countries without the robust private venture capital system that exists in the United States have attempted to fund startups publicly by creating junior stock exchanges where startup stocks can be traded—similar to the New York Stock Exchange, but on a smaller scale. These exchanges have largely failed, however, in part because they have relied on mandatory disclosure and other tools better suited to mitigating investment risk in established public companies.

The relative success of the United States in supplying private venture capital makes its recent infatuation with crowdfunding curious. Fortunately, while crowdfunding was originally designed to resemble public venture capital, with "funding portals" acting as the junior stock exchanges, its final implementing rules took important steps back toward the private venture capital model.

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INTRODUCTION

This Article compares two fundamental models for venture capital—the *public* model, which is found in several countries outside of the United States, and the *private* model, which is best exhibited in the United States. Venture capital is broadly defined as funds invested in rapid-growth, often high-tech startups.[1] These startups are speculative, high-risk, and sacrifice short-term profits for activities meant to pay off in the future.[2]

In the United States, startups raise funds privately from venture capital funds (VCs), angel investors, and venture lenders.[3] Other countries lack the infrastructure of private financing, a skilled high-tech labor force, and past entrepreneurial successes that exists in the United States, particularly in Silicon Valley,[4] and they have therefore resorted to public markets to supply startups with venture capital.[5] These markets

1. *See* Bernard S. Black & Ronald J. Gilson, *Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets*, 47 J. FIN. ECON. 243, 245 (1997) ("We define 'venture capital,' consistent with American understanding, as investment by specialized venture capital organizations . . . in high-growth, high-risk, often high-technology firms.").

2. Jennifer S. Fan, *Regulating Unicorns: Disclosure and the New Private Economy*, 57 B.C. L. REV. 583, 590 (2016) ("Venture capital is the term commonly used to describe investments in highly speculative businesses, often early-stage technology companies.").

3. The sources of private capital for startups generally progress as follows: friend-and-family or crowdfunding, angel investors, venture capitalists, and venture lenders. I have written about many of these. *See, e.g.*, Darian M. Ibrahim, *Equity Crowdfunding: A Market for Lemons?*, 100 MINN. L. REV. 561, 569 (2015) [hereinafter Ibrahim, *Equity Crowdfunding*] ("In equity crowdfunding, investors contribute money [over the Internet] in exchange for a tangible interest in the venture they are funding . . . ."); Darian M. Ibrahim, *Debt as Venture Capital*, 2010 ILL. L. REV. 1169, 1176 (2010) [hereinafter Ibrahim, *Debt as Venture Capital*] ("[A] robust venture debt industry exists in the United States."); Darian M. Ibrahim, *The (Not So) Puzzling Behavior of Angel Investors*, 61 VAND. L. REV. 1405, 1418 (2008) [hereinafter Ibrahim, *Angel Investors*] ("Angels fill the funding gap [before VCs invest] as to both time and capital, functioning as a 'conveyor belt' that moves young start-ups toward waiting venture capitalists.").

4. Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete*, 74 N.Y.U. L. REV. 575, 577–78 (1999) [hereinafter Gilson, *Legal Infrastructure*]; *see also* Andrew A. Schwartz, *Rural Crowdfunding*, 13 U.C. DAVIS BUS. L.J. 283, 286 (2013).

5. *See infra* Part III.

have taken the form of junior stock exchanges, or *public venture capital*, and thus far have not been successful at replicating the U.S. private venture capital results in propelling early-stage companies to lucrative trade sales[6] or public offerings.[7] Three of the most notable attempts at public venture capital have been London's Alternative Investment Market (AIM), Germany's Neuer Markt (NM), and Hong Kong's Growth Enterprise Market (GEM).[8] While other countries have also attempted to establish public venture capital,[9] the AIM, NM, and GEM are the most notable and offer differing approaches to regulation and differing outcomes for fruitful academic study. In addition, their small relative size and express intention to supply growth capital to startups makes these junior stock exchanges more akin to the ecosystem found in Silicon Valley, not the publicly-traded Nasdaq, though they were initially touted as a rival to the latter.[10]

The holy grail for a startup company is to exit through an initial public offering onto a country's senior stock exchange, which provides the most liquidity to investors.[11] This Article explores the AIM, NM, and GEM and examines why none of them have successfully served as a

6. Trade sales are sales of a startup company to a larger, established company within the same general field. Fan, *supra* note 2, at 590 n.48 ("The [National Venture Capital Association] Yearbook . . . notes: '[V]enture funds generally exit their positions in [successful mature portfolio] companies by taking them public through an initial public offering (IPO) or by selling them to presumably larger organizations (acquisition, trade sale, or increasingly a financial buyer).'").

7. Cécile Carpentier, Jean-François L'Her & Jean-Marc Suret, *Stock Exchange Markets for New Ventures*, 25 J. BUS. VENTURING 403, 403 (2010) (observing that junior stock exchanges in Europe "have had varying, but generally negative, outcomes"); Jay R. Ritter, *Differences Between European and American IPO Markets*, 9 EURO. FIN. MGMT. 421, 422 (2003) (excluding the AIM, mini-stock exchanges "have consistently failed following market downturns").

8. *See infra* Part III.

9. Toronto's Toronto Stock Exchange Venture Exchange (TSXV) is a notable one. It was not included in this study because a large portion of its listed companies are in the oil and gas and other natural resource industries, as opposed to tech startups. *See* Carpentier et al., *supra* note 7, at 403–04; Evan Rahn, *Venturing into the Unchartered: How Carefully Created Venture Exchanges Can Succeed While Bolstering the American Economy*, 42 J. CORP. L. 257, 268 (2016) ("Around 57% of the listed companies on the [TSXV] are mining companies."); *infra* note 77.

10. David B. Audretsch & Erik E. Lehmann, *The* Neuer Markt *as an Institution of Creation and Destruction*, 4 INT. ENTREP. MANAG. J. 419, 420 (2008) ("[T]he Deutsche Boerse AG founded the Neuer Markt as a privately organized market, which was at least at a rhetorical level modeled on the US's [Nasdaq] . . . ."); Laura He, *Future Still in Doubt for Hong Kong's 'Quirky' Small-Cap Exchange, the GEM*, SOUTH CHINA MORNING POST (June 24, 2017, 1:30 PM), https://www.scmp.com/business/markets/article/2099757/future-still-doubt-hong-kongs-quirky-small-cap-exchange-gem [https://perma.cc/P2XZ-DW2P] (noting the GEM was created to be Hong Kong's "very own Nasdaq").

11. Darian M. Ibrahim, *The New Exit in Venture Capital*, 65 VAND. L. REV. 1, 11 (2012) ("IPOs are the gold standard in VC success.").

stepping stone to that country's senior stock exchange (like the U.S.'s Nasdaq or NYSE). For startups to attract venture capital, from either public or private investors, they must solve two major problems. First, prior to investment, investors must mitigate *information asymmetry*, or the consequence of entrepreneurs knowing more about their businesses than investors do.[12] Second, after investment, investors must reduce *agency costs*, or the risk that entrepreneurs can mismanage or use investor funds for personal gain.[13]

Due to early-stage companies having sparse track records and technological uncertainty, information asymmetry and agency costs exist in extreme form in startup investing.[14] This Article offers a contrast in dealing with these problems. The U.S. approach is to tackle them through private ordering and informal mechanisms. Lacking the ability to address them in the same way, the foreign public approach relies on corporate and securities law, similar to our public markets for established companies. Although the public approach works for established companies, it cannot compensate for the exacerbated nature of the risks present in startup investing.[15] Finally, the Article argues that the United States took an ill-advised step toward creating its own public venture capital when it legalized crowdfunding in the Jumpstart Our Business Startups (JOBS) Act of 2012.[16] In a fortuitous turn, however, the Securities and Exchange Commission's (SEC's) final implementing rules in 2015—Regulation Crowdfunding (hereinafter "Regulation CF")—reversed course and situated crowdfunding as an important part of the private venture capital system that preceded it.[17]

Some caveats are in order. First, this is a law-and-economics article. There are likely cultural differences among countries that also explain differing levels of entrepreneurship, and thus a venture capital system's success or failure.[18] Legal design more broadly, such as the strength of

12. *See infra* Part IV.

13. *See infra* Part IV.

14. Ronald J. Gilson, *Engineering a Venture Capital Market: Lessons from the American Experience*, 55 STAN. L. REV. 1067, 1076 (2003) [hereinafter Gilson, *Engineering*].

15. *See* Carpentier et al., *supra* note 7, at 405 (echoing the "widely accepted assessment that a public VC market cannot succeed because it lacks the specific skills and tools to deal with the asymmetry of information and agency problems specific to new ventures").

16. *See infra* Part V.

17. *See infra* Part V.

18. *See, e.g.*, Douglas G. Baird & Edward R. Morrison, *Serial Entrepreneurs and Small Business Bankruptcies*, 105 COLUM. L. REV. 2310 (2015) (explaining how Chapter 11 bankruptcies lock entrepreneurs into a failing business when that entrepreneur's talents could be better used establishing new companies); John M. Czarnetzky, *The Individual and Failure: A Theory of the*

courts and other institutions, also plays a role.[19] The extensive LLSV literature finds that strong protections for minority shareholders is a key determinant of how well-developed a country's capital markets tend to be.[20] Further, this Article draws from publicly available information on public venture capital abroad, and the author has not spent time in those countries talking to people on the ground about their experiences.[21] Despite these caveats and limitations, this Article weaves together a compelling narrative underscoring the importance of private ordering in venture capital and an entrepreneurial economy.

I. TWIN GOALS: MITIGATING INFORMATION ASYMMETRY AND AGENCY COSTS

Two main problems exist when ownership and control of a corporation are separated: information asymmetry and agency costs.[22] Information asymmetry exists when one party knows more than another.[23] In investing, corporate management knows more about the company and its prospects than investors do.[24] Investors obviously wish to mitigate this asymmetry from the outset to make smart investments.[25]

Bankruptcy Discharge, 32 ARIZ. ST. L.J. 393, 435–36 (2000); Mirit Eyal-Cohen, *Through the Lens of Innovation*, 43 FLA. ST. U. L. REV. 951, 975–76 (2016).

19. The private ordering of the U.S. model would be untenable without strong courts that uphold contract rights. *See* Richard A. Posner, *Creating a Legal Framework for Economic Development*, 13 WORLD BANK RES. OBSERVER 1, 1 (1998) ("A modernizing nation's economic prosperity requires at least a modest legal infrastructure centered on the protection of property and contract rights.").

20. Rafael la Porta et al., *Law and Finance*, 106 J. POL. ECON. 1113, 1145–51 (1998) (discussing how a lack of protection for investors leads to high concentration of stock ownership); Rafael la Porta et al., *Legal Determinants of External Finance*, 52 J. FIN. 1131, 1131 (1997) (noting how countries with poor protection for investors have "smaller and narrower capital markets").

21. The benefits of qualitative research in legal studies were famously shown by Stewart Macaulay's study of Wisconsin businessmen. *See* Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55 (1963).

22. *See generally* ADOLF A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY (1933) (discussing the separation of ownership and control that has come to define public corporations).

23. *See* Bernard S. Black, *Information Asymmetry, the Internet, and Securities Offering*s, 2 J. SMALL & EMERGING BUS. L. 91, 91 (1998).

24. *Id.* at 92 ("[T]he single largest cost that stands between issuers and investors is the problem of asymmetric information. The issuer knows the quality of the securities being offering, but the investor does not and cannot easily find out.").

25. Good corporate management actually wants to mitigate the asymmetry too, as investors discount share price less. Roy Shapira, *Corporate Philanthropy as Signaling and Co-optation*, 80 FORDHAM L. REV. 1889, 1906 (2012) ("Insiders know more than outsiders. Both have incentives to mitigate the asymmetry.")

Within corporations, agency costs present themselves after the investment.[26] Due to the separation of ownership and control that characterizes modern corporations of any size, shareholders must delegate authority to directors to manage the corporation.[27] Agency costs in this context are the risk that directors use shareholders' investments unwisely or for personal gain.[28] Agency costs are often referred to as the risk of opportunism.[29]

The next sections examine the traditional ways to reduce information asymmetry and agency costs in corporations characterized by a separation of ownership and control, where agency costs are highest. Because these are typically public corporations, the solutions tend to be "public" as well. In other words, rather than rely on private ordering in a situation where meaningful contracting is difficult,[30] legal rules with private/public enforcement mechanisms serve as the risk reduction mechanism. These legal rules are primarily corporate and securities laws. While the public venture capital systems abroad use similar public risk-reduction tools, the next sections focus on the federal securities and state corporate laws of the United States.

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26. *See* Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 354–55 (1976) (defining agency costs).

27. DEL. CODE ANN. tit. 8, § 141(a) (2018) (empowering the board of directors to manage the "business and affairs of every corporation"); *see also* Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 559 n.61 (2002) ("All state corporate codes provide for a system of nearly absolute delegation of power to the board of directors, which in turn is authorized to further delegate power to subordinate firm agents." (citing MODEL BUS. CORP. ACT ANN. § 8.01 cmt. (1995) (reviewing statutes)).

28. *See* George S. Geis, *Business Outsourcing and the Agency Cost Problem*, 82 NOTRE DAME L. REV. 955, 974 (2007) (categorizing agency costs as resulting from an agent's "(1) insufficient effort or shirking; (2) lavish compensation or self-dealing; (3) entrenchment; and (4) poor risk management"). Agency costs also exist between majority and minority shareholders. *See* REINIER KRAAKMAN ET AL., THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH 21–22 (2004).

29. *See, e.g.,* Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U. L. REV. 967, 986–90 (2006) (explaining how VC board control can reduce or prevent opportunism by entrepreneurs); Rudolf Richter, *The New Institutional Economics: Its Start, Its Meaning, Its Prospects*, 6 EUR. BUS. ORG. L. REV. 161, 179 (2005) (noting that the central problem of transaction cost economics is ex-post opportunism).

30. Edward B. Rock & Michael L. Wachter, *Islands of Conscious Power: Law, Norms, and the Self-Governing Corporation*, 149 U. PA. L. REV. 1619, 1627 (2001) (describing "the current prevailing view of the corporation as a 'nexus of contracts,' with the contracts or agreements between the board of directors and the shareholders and creditors as the nodes of particular interest to corporate law"); Victor Brudney, *Corporate Governance, Agency Costs, and the Rhetoric of Contract*, 85 COLUM. L. REV. 1403, 1444 (1985) (arguing that despite the "nexus of contracts" moniker, corporations should not be treated as other contracts because they are not entered into in the same way).

A. Securities Law

Securities laws are the primary means of reducing information asymmetries for investors in public corporations. Tracing to the New Deal, the existing body of securities laws is a federally-imposed disclosure-based system, meaning that regulators will not pass judgment on the desirability of securities so long as companies disclose all relevant information to potential investors.[31] Investors come in different forms, from information traders[32] to ordinary retail investors.[33] Information traders, or those funds and institutions engaged in the securities-trading business, have the expertise and financial incentive to digest mandatory disclosures.[34] Ordinary retail investors do not,[35] although the argument is these investors still benefit from information-trader buying and selling and the corresponding movement of the stock price.[36]

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31. LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 92 (1914) (justifying a disclosure regime with the famous phrase: "Sunlight is said to be the best of disinfectants"); Paul G. Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 U. CHI. L. REV. 1047, 1076 (1995) ("Early in the process of drafting the Securities Act [of 1933], the administration considered and rejected merit review in favor of a pure disclosure statute . . . .").

32. Kevin S. Haeberle & M. Todd Henderson, *Making a Market for Corporate Disclosure*, 35 YALE J. ON REG. 383, 401–06 (2018) (contrasting information traders, who buy and sell based on early access to information relevant to a company's fundamentals, with noise traders, who trade based on early access to irrelevant information).

33. Donald C. Langevoort, *The SEC, Retail Investors, and the Institutionalization of the Securities Markets*, 95 VA. L. REV. 1025, 1025 (2009) (noting that retail investors are "individuals and households—as opposed to institutional investors").

34. Colleen Honigsberg, Robert J. Jackson, Jr. & Yu-Ting Forester Wong, *Mandatory Disclosure and Individual Investors: Evidence from the JOBS Act*, 93 WASH. U. L. REV. 293, 303 (2015) ("Empirical work has shown that institutional investors are better able to process financial disclosures than individual shareholders . . . ."); Robert Prentice, *Whither Securities Regulation? Some Behavioral Observations Regarding Proposals for Its Future*, 51 DUKE L.J. 1397, 1418 n.93 ("Institutional investors are used to the disclosure format and content of the full-fledged, SEC-mandated prospectus.").

35. Baruch Lev & Meiring de Villiers, *Stock Price Crashes and 10b-5 Damages: A Legal, Economic, and Policy Analysis*, 47 STAN. L. REV. 7, 19 (1994) ("[M]ost investors do not read, let alone thoroughly analyze, financial statements, prospectuses, or other corporate disclosures . . . .").

36. *See* Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 383 (1970). *But see* Kevin S. Haeberle, Information Asymmetry and the Protection of Ordinary Investors 42, 45–46 (June 21, 2019) (unpublished manuscript), https://ssrn.com/abstract=3222292 [https://perma.cc/X2WG-V7X7] (arguing that a sizeable portion of the ordinary-investor universe is actually helped by, not hurt by, the presence of information asymmetry).

Securities law scholars have long debated the effectiveness of mandatory disclosure's role in reducing information asymmetry.[37] They note that there are three types of information costs to mitigate: the costs of acquiring information, the costs of processing information, and the costs of verifying information.[38] Mandatory disclosure reduces the costs of acquiring information by forcing corporations to release information to the markets at pre-set times.[39] By further mandating that disclosures be standardized, the securities laws reduce the cost of processing information by allowing investors to compare complicated financial information apples-to-apples across firms.[40] Verification costs are reduced by antifraud rules like Rule 10(b)(5) of the Securities and Exchange Act, and the SEC standing with private litigants on enforcement.[41]

Securities laws also reduce agency costs.[42] Because mandatory disclosure forces companies to reveal important actions and information, shareholders can police management more effectively.[43] State corporate law (discussed below) is well-equipped to deal with agency costs in the form of managerial self-dealing; however, the business judgment rule defers to managers on decisions not involving self-interest or bad faith.[44]

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37. *Compare, e.g.*, Andrew A. Schwartz, *The Digital Shareholder*, 100 MINN. L. REV. 609, 649 (2015) [hereinafter Schwartz, *Digital Shareholder*] ("Mandatory disclosure addresses both information asymmetry and agency costs in public companies. The insiders who know lots of information about the company must share that information with the public, thus reducing information asymmetry."), *with* Steven L. Schwarcz, *Rethinking the Disclosure Paradigm in a World of Complexity*, 2004 ILL. L. REV. 1, 6 (2004) ("[I]n a world of complexity, disclosure can be insufficient to remedy the information asymmetry . . . ."); Fan, *supra* note 2, at 607 ("There are those in the legal academy who argue that increased disclosure, in and of itself, is not sufficient in the complex world in which we live.").

38. Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 594–95 (1984).

39. *See* Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711, 716 (2006) ("Disclosure duties reduce . . . information gathering costs."); *id.* at 738 ("Absent mandatory disclosure duties, information traders would engage in duplicative efforts to uncover nonpublic information.").

40. *See id.* at 738 ("[S]ecurities regulation mandates a specific format for disclosure, which further reduces the costs of analyzing information and comparing it to data provided by other firms.") (citations omitted).

41. *See id.* at 741 ("The ban on fraud and manipulation reduces verification costs, because explicit information cannot be misstated, material facts cannot be omitted, and implicit information cannot be manipulated.").

42. *See* Mahoney, *supra* note 31, at 1048.

43. Goshen & Parchomovsky, *supra* note 39, at 717 ("Disclosure duties help reveal management actions.").

44. *See* Aronson v. Lewis, 473 A.2d 805, 812 (Del. 1984) (stating the business judgment rule is a presumption that the directors "acted on an informed basis, in good faith and in the honest belief

Securities laws help fill that void, as mandatory disclosure works in connection with market mechanisms to discipline managerial mismanagement.[45] Institutional investors have the resources and incentives to process and respond to such disclosures, and analysts following the company will also take note.[46] Despite grumblings about the compliance costs, companies that list on the NASDAQ or NYSE effectively "bond" their reputations by opting into mandatory disclosure and SEC enforcement.[47] Foreign firms listing on U.S. exchanges increase their share values due to the bonding effect.[48]

B. Corporate Law

Unlike securities regulation, U.S. corporate law exists on a state level with Delaware as the dominant producer.[49] Although securities

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that the action taken was in the best interests of the company"), *overruled by* Brehm v. Eisner, 746 A.2d 244 (Del. 2000).

45. Goshen & Parchomovsky, *supra* note 39, at 718 ("Intense coverage by analysts . . . is the most effective antidote to management agency costs. In contrast to judges, analysts are capable of evaluating the quality of managements' business decisions and reflect their opinions in stock prices.").

46. Kelli A. Alces, *Legal Diversification*, 113 COLUM. L. REV. 1977, 2010 (2013) ("Sophisticated stock analysts can follow publicly traded companies, inform investors of the condition of those companies, and give advice about how to trade in the company's securities.").

47. John C. Coffee, Jr., *The Future as History: The Prospects for Global Convergence in Corporate Governance and Its Implications*, 93 NW. U. L. REV. 641, 673–74 (1999) [hereinafter, Coffee, *The Future as History*] (discussing how multinational firms with a choice of where to list their securities migrate to U.S. securities markets as a form of bonding); *see also* John C. Coffee, Jr., *Racing Towards the Top?: The Impact of Cross-Listings and Stock Market Competition on International Corporate Governance*, 102 COLUM. L. REV. 1757, 1830 (2002) [hereinafter Coffee, *Racing Towards the Top?*] ("Cross-listing may in part be . . . a bonding mechanism to assure public investors that they will not be exploited . . . ."). *But see* Kate Litvak, *Sarbanes-Oxley and the Cross-Listing Premium*, 105 MICH. L. REV. 1857, 1898 (2007) (empirically disputing the bonding hypothesis by showing that cross-listing premiums declined after the passage of the Sarbanes-Oxley Act of 2002).

48. Coffee, *The Future as History*, *supra* note 47, at 674 (noting "the finding, repeatedly observed by financial economists, that the announcement of a dual listing on a U.S. exchange by a foreign firm typically increases the firm's share value"); *id.* ("One explanation for the abnormal price movement on a U.S. listing is that such a listing represents a bonding mechanism: the foreign issuer is increasing the share value of its public shares by agreeing to comply with the generally higher disclosure standards that prevail in the United States.").

49. Brian Broughman, Jesse M. Fried & Darian Ibrahim, *Delaware Law as Lingua Franca: Theory and Evidence*, 57 J.L. & ECON. 865, 866 (2014) ("Delaware dominates the corporate-chartering market in the U.S.—it is the only state that attracts a significant number of out-of-state incorporations."); *cf.* Seth C. Oranburg, *Democratizing Startups*, 68 RUTGERS U. L. REV. 1013, 1020 (2016) (discussing Berle and Means's calls for federal incorporation after penning their seminal work on the separation of ownership and control that had come to characterize corporations).

regulation plays a role in reducing agency costs, that task has primarily been relegated to state corporate law.[50] Agency costs inside corporations come in two main forms: opportunism and mismanagement.

Opportunism—or a corporate manager benefiting himself financially at the expense of shareholders—is governed by directors' fiduciary duty of loyalty.[51] The duty of loyalty subjects conflicts of interest to rigorous scrutiny.[52] Basic self-dealing transactions between a director and the corporation are cleansed by a sound process or fair result to the corporation.[53] When a director usurps a corporate opportunity, a court will determine whether the director's taking of the opportunity constituted disloyalty.[54] Generally speaking, corporate law is considered effective at reducing agency costs arising from directors' conflicts of interest.[55]

Agency costs from mismanagement, on the other hand, are governed by the fiduciary duty of care. But while the duty of care instructs directors to act as reasonably prudent people, the business judgment rule

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50. STEPHEN M. BAINBRIDGE, CORPORATE LAW 82 (3d Ed. 2015) ("Much of corporate law is best understood as a mechanism for constraining . . . . . [agency] costs."); Goshen & Parchomovsky, *supra* note 39, at 748 ("[S]ecurities regulation complements corporate law in reducing management agency costs."); Sean J. Griffith, *Corporate Governance in an Era of Compliance*, 57 WM. & MARY L. REV. 2075, 2080 (2016) ("Mainstream corporate law scholarship . . . remains centrally focused on the agency cost problem . . . ."); Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 J. FIN. 737, 740–48 (1997) (discussing the agency problem as the central problem of corporate governance).

51. *In re* Walt Disney Co. Derivative Litig., 907 A.2d 693, 751 (Del. Ch. 2005) ("[T]here is no safe-harbor for divided loyalties in Delaware, and that the duty of loyalty, in essence, 'mandates that the best interest of the corporation and its shareholders take[] precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the stockholders generally.'"(quoting Cede & Co. v. Technicolor, 634 A.2d 345, 361 (Del. 1993) (citing Weinberger v. UOP, Inc., 457 A.2d 701, 710 (Del. 1983))).

52. Bayer v. Beran, 49 N.Y.S.2d 2, 6–7 (N.Y. Sup. Ct. 1944) (nowing how conflicts "between self-interest and fiduciary obligation, are, when challenged, examined with the most scrupulous care").

53. DEL. CODE ANN. tit. 8, § 144 (2004) (stating that conflicts of interest with a self-dealing director can be cleansed by disinterested director or shareholder approval or by proving the transaction is fair to the corporation).

54. *See* ROBERT C. CLARK, CORPORATE LAW 224–25 (1986) ("[T]he difficult issue is to determine what should be deemed, as between corporation and fiduciary, to belong to the corporation, and why."); D. Gordon Smith & Darian M. Ibrahim, *Law and Entrepreneurial Opportunities*, 98 CORNELL L. REV. 1533, 1561 (2013) ("There are a number of tests that courts may choose in defining corporate versus fiduciary opportunities . . . ."); Eric Talley, *Turning Servile Opportunities to Gold: A Strategic Analysis of the Corporate Opportunities Doctrine*, 108 YALE L.J. 277, 280 (1998) (referring to the opportunities doctrine as a "doctrinal quagmire").

55. Julian Velasco, *How Many Fiduciary Duties Are There in Corporate Law?*, 83 S. CAL. L. REV. 1231, 1233 (2010) ("Only violations of the duty of loyalty [are] likely to lead to liability.").

protects them from liability absent gross negligence.[56] The business judgment rule is a presumption that directors act on an informed basis, loyally, and free from bad faith.[57] Further, Delaware and other states allow shareholders to pre-exculpate directors from any duty of care breaches by including a provision to that effect in the corporate charter.[58] Therefore, in practice, corporate law has delegated policing simple mismanagement to market-based solutions (for example, unhappy shareholders selling their shares) rather than legal liability remedies.[59]

The problems of information asymmetry and agency costs in public company investing become even more pronounced when discussing *startup* investing.[60] Because startups have no track records, no proven product or service, and may be run by a first-time entrepreneur, investors face extreme levels of information asymmetry.[61] Even with mandatory disclosure, the question is: how much is there to disclose?[62] Agency costs arise before investment as entrepreneurs may have differing objectives and timeframes for liquidity and exit than investors.[63] For

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56. Kenneth B. Davis, Jr., *Once More, the Business Judgment Rule*, 2000 WIS. L. REV. 573, 573, n.1 (describing the elements of the business judgment rule as "(1) good-faith, (2) no self-dealing or self-interest, (3) an informed decision, and (4) a reasonable belief that the decision is in the best interest of the corporation"); Stephen M. Bainbridge, *The Business Judgment Rule as Abstention Doctrine*, 57 VAND. L. REV. 81, 81 (2004) (describing the business judgment rule as "corporate law's central doctrine, pervasively affecting the roles of directors, officers, and controlling shareholders").

57. Aronson v. Lewis, 473 A.2d 805, 812 (Del. 1984), *overruled by* Brehm v. Eisner, 746 A.2d 244 (Del. 2000).

58. DEL. CODE ANN. tit. 8, § 102(b)(7) (2018).

59. *See* Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110 (1965); J.A.C. Hetherington & Michael P. Dooley, *Illiquidity and Exploitation: A Proposed Statutory Solution to the Remaining Close Corporation Problem*, 63 VA. L. REV. 1, 43 (1977) ("[T]he existing business organization regulatory system depends to a far greater extent on competitive market restraints than on legal restraints . . . ."); Andrea M. Matwyshyn, *Imagining the Intangible*, 34 DEL. J. CORP. L. 965, 1003–04 (2009); Robert B. Thompson, *Exit, Liquidity, and Majority Rule: Appraisal's Role in Corporate Law*, 84 GEO. L.J. 1, 6–7 (1995) ("A developed market for shares can be an investor's most valued protection, offering liquidity that often is more useful than any legal provision.").

60. Gilson, *Engineering*, *supra* note 14, at 1076 ("The special character of venture capital contracting is shaped by the fact that investing in early stage, high technology companies presents these problems [of uncertainty, information asymmetry, and agency costs] in an extreme form.").

61. *Id.* at 1077 ("[T]he fact that the portfolio company's technology involves cutting-edge science assures that there will be a substantial information asymmetry in favor of the entrepreneur even if the venture capital fund employs individuals with advanced scientific training.").

62. Darian M. Ibrahim, *Crowdfunding Signals*, 53 GA. L. REV. 197, 215 (2018) [hereinafter Ibrahim, *Crowdfunding Signals*] ("Disclosure . . . no matter how robust, can only do so much when companies have limited track records . . . .").

63. Gilson, *Engineering*, *supra* note 14, at 1077 ("Because the entrepreneur's stake in a portfolio company with venture capital financing can be fairly characterized as an option, the entrepreneur's

example, either entrepreneurs wish to keep the startup private longer to continue to extract private benefits such as a high salary,[64] or they wish to sell the startup earlier to pursue another venture.[65]

Any system of venture capital that is to thrive must successfully address information asymmetry and agency costs in startup investing. Otherwise, rational investors will not take the risks of funding these ventures. The next Part builds on the preceding discussion to ask whether the public mechanisms of securities regulation and corporate law can adequately mitigate information asymmetry and agency costs in startup investing as they do in public company investing.

II. PUBLIC VENTURE CAPITAL: JUNIOR STOCK EXCHANGES

Countries other than the United States do not have the same robust private venture capital system as found in Silicon Valley.[66] A few quotes from commentators who have studied venture capital in other countries are indicative of the general consensus. Spanning the globe, commentators note that: "Europe is often considered as a polar case to that of the U.S., with its immature venture capital industry"[67]; "New Zealand has long had a much thinner pool of VC and angel financing [than the United States], even for its size"[68]; and "[t]he United States has

interests will sharply diverge from those of the venture capital investors, especially with respect to the risk level and duration of the investment.")

64. Michael Klausner & Kate Litvak, *What Economists Have Taught Us About Venture Capital Contracting*, *in* BRIDGING THE ENTREPRENEURIAL FINANCING GAP 54, 56 (Michael J. Whincop ed., 2001) ("Because the entrepreneur reaps private benefits from his involvement with the firm . . . he may be unwilling to sell or liquidate the firm, or to step down as CEO where doing so is the most financially attractive alternative available to the investor.").

65. Darian M. Ibrahim, *Should Angel-Backed Start-Ups Reject Venture Capital?*, 2 MICH. J. PRIV. EQUITY & VENTURE CAP. L. 251, 260–61 (2013) (discussing this argument); *see also* BASIL PETERS, EARLY EXITS: EXIT STRATEGIES FOR ENTREPRENEURS AND ANGEL INVESTORS (BUT MAYBE NOT VENTURE CAPITALISTS) (1.2 ed. 2009).

66. Darian M. Ibrahim, *Financing the Next Silicon Valley*, 87 WASH. U. L. REV. 717, 743 (2010) [hereinafter Ibrahim, *Financing the Next Silicon Valley*] (discussing attempts at replicating Silicon Valley abroad).

67. Laura Bottazzi & Marco Da Rin, *Euro.NM and the Financing of European Innovative Firms* 1 (IGIER, Working Paper No. 171, 2000); *see also* Valérie Revest & Sandro Sapio, *Financing Technology-Based Small Firms in Europe: What Do We Know?*, 39 SMALL BUS. ECON. 179, 185 (2012) [hereinafter, Revest & Sapio, *Financing Technology-Based Small Firms*] (noting that "venture capital in continental Europe [is] lagging behind" in part due to "the weaker development of pension funds in bank-based European financial systems").

68. Andrew A. Schwartz, *The Gatekeepers of Crowdfunding*, 75 WASH. & LEE L. REV. 885, 892 (2018) [hereinafter Schwartz, *The Gatekeepers of Crowdfunding*].

a much more fully developed venture capital market than Germany. The differences are of both size and substance."[69]

The U.S. got lucky. As Ron Gilson explains, Silicon Valley—home to the United States' most vibrant VC ecosystem—developed due to California's historical prohibition on employee covenants not to compete (allowing labor mobility and knowledge spillover), military funding of new technologies during World War II, and the presence of Stanford University.[70] Boston's high-tech region, known as Route 128, similarly enjoyed help from military funding during World War II, the presence of the Massachusetts Institute of Technology, and the first U.S. venture capital firm.[71] Further, the United States is a stock-market-centric economy, which Gilson and Bernard Black argue is a prerequisite to having a strong private venture capital system.[72] European economies, such as Germany, are bank-centric,[73] and startups are not traditionally good candidates for bank financing due to their lack of track records and sacrificing of near-term profits for a long-term focus.[74]

Without sufficient private venture capital,[75] other countries have established public venture capital in the form of junior stock exchanges. These junior stock exchanges are exchanges where startups can list their stock for purchase, and public investors can buy in. This Article explores three such attempts at public venture capital: London's Alternative

69. Black & Gilson, *supra* note 1, at 246.

70. Gilson, *Engineering*, *supra* note 14, at 1069; *see also* Abraham J.B. Cable, *Fool's Gold? Equity Compensation & the Mature Startup*, 11 VA. L. & BUS. REV. 613, 616 (2017) ("The Silicon Valley labor force benefits from conditions that are likely to be as effective in protecting their interests as any disclosure-based registration system could provide.").

71. *See* SPENCER E. ANTE, CREATIVE CAPITAL: GEORGES DORIOT AND THE BIRTH OF VENTURE CAPITAL 129–46 (2008).

72. Black & Gilson, *supra* note 1, at 245 (explaining that IPO exits are "available only through a stock market . . . [and allow] venture capital providers to enter into implicit contracts with entrepreneurs concerning future control of startup firms, in a way not available in a bank-centered capital market").

73. *See* John W. Sell, *The Neuer Markt is Dead. Long Live the Neuer Markt!*, 12 INT'L ADVANCES IN ECON. RES. 191, 192 (2006) (Germany's "heavy reliance on bank financing meant that Germany's equity markets remained small when compared to other economies of similar size and development.").

74. *See* David B. Audretsch & Julie A. Elston, *Can Institutional Change Impact High-Technology Firm Growth?: Evidence from Germany's Neuer Markt*, 25 J. PROD. ANAL. 9, 10 (2006) ("While the American entrepreneurial revolution was fuelled by plentiful venture capital, angel capital and informal capital, the highly restrictive and traditional financial institutions seemingly pre-empted the possibility of developing high-technology startups in Germany."). *But see* Ibrahim, *Debt as Venture Capital*, *supra* note 3, at 1186 (explaining how venture lending to U.S. startups is prevalent because of the robust system of private venture capital in the U.S.).

75. Black & Gilson, *supra* note 1, at 245 ("Other countries have openly envied the U.S. venture capital market and have actively, but unsuccessfully, sought to replicate it.").

Investment Market (AIM), Germany's Neuer Markt (NM), and Hong Kong's Growth Enterprise Market (GEM). Other junior stock exchanges sprouted up around the same time, spanning Europe,[76] North America,[77] and Asia.[78] The AIM, NM, and GEM are three of the most notable examples of junior stock exchanges, and they offer stark contrasts in their methods of reducing information asymmetry and agency costs. Further, the AIM, NM, and GEM have had varying levels of success and failure—mostly failure in the ultimate goal of propelling companies to the equivalent of the U.S. initial public offering (IPO). As an important preliminary note, these exchanges are too small to compare to the United States' Nasdaq,[79] and often supply the first growth capital to startups, making Silicon Valley their apt comparison.[80] Therefore, the comparison

76. *See* Ritter, *supra* note 7, at 422 (discussing how junior stock exchanges were established in the late 1990s in "Italy (the Nuovo Mercato), the Netherlands (Nieuwe Markt), Belgium (Euro.NM Belgium), and France (the Nouveau Marché)").

77. The TSXV was not used for comparison for two reasons. First, it has historically been dominated by natural resource companies, not technology startups. Tim Shufelt, *TSX Ventures into New Territory*, THE GLOBE & MAIL, January 23, 2018 (Ontario edition). Recently it has taken a turn toward marijuana and cryptocurrency companies; still not a good comparison. *Id*. ("Frenzied trading in pot stocks and blockchain companies has abruptly transformed the TSX Venture Exchange from a market almost wholly dependent on natural resources into a clearinghouse for some of the hottest trends in investing."). Second, Canada is developing a "burgeoning private capital industry" more like the U.S., making TSXV substitute and competitor to private venture financing. Carpentier et al., *supra* note 7, at 406 ("VC is indeed present in Canada . . . this country [is] generally credited with having one of the highest levels [of VC] in the world relative to its population or its economy."); Tim Shufelt, *Small-Cap Blues: Why the Venture Bourse Is in the Dumps*, THE GLOBE & MAIL, June 3, 2017 (Ontario edition).

78. A report on GEM compares it to "AIM, Catalist, ChiNext, Mothers, NasdaqCX and TSX Venture. These junior exchanges are selected for comparison with GEM as they cover a reasonable portion of the global growth company landscape spanning the Asia-Pacific, European and Americas Regions." HONG KONG EXCHANGES AND CLEARING LIMITED, CONSULTATION PAPER: REVIEW OF THE GROWTH ENTERPRISE MARKET (GEM) AND CHANGES TO THE GEM AND MAIN BOARD LISTING RULES 4 (2017) [hereinafter Consultation Paper].

79. *See* Jose M. Mendoza, *Securities Regulation in Low-Tier Listing Venues: The Rise of the Alternative Investment Market*, 13 FORDHAM J. CORP. & FIN. L. 257, 288–89 (2008) ("While the average market capitalization for an AIM company is close to $70 million, NASDAQ's average is closer to $ 1 billion . . . ."); Serena Ng, *NASDAQ Pulls Harder for Listing Switches*, WALL STREET J., Feb. 26, 2009, at C1 (discussing how NASDAQ drew companies with a combined market capitalization of $80 billion away from NYSE in 2008, while NYSE only drew companies with a combined market capitalization of $8 billion from NASDAQ in the same year); Andrew Beattie, *The Birth of Stock Exchanges*, INVESTOPEDIA (Jun. 25, 2019), https://www.investopedia.com/articles/07/stock-exchange-history.asp [https://perma.cc/3NEK-QZRB] (noting how NASDAQ is one of the "two largest stock exchanges in the world" along with NYSE).

80. He, *supra* note 10 (noting how the GEM was modeled on Nasdaq, but its real function was to offer technology startups an early option for raising capital); *see Alternative Investment Market: What Is it and How Does it Work?*, THE TELEGRAPH, (Mar. 24, 2016, 3:48 PM), https://www.telegraph.co.uk/investing/online-investments/alternative-investment-market-defined/ [https://perma.cc/SHA7-DX7X] (describing the type of companies looking to join the AIM as

of junior stock exchanges abroad to U.S. *private* venture capital—not our public stock exchanges—is appropriate both because of the similarities in size and purpose.[81]

A. London's Alternative Investment Market (AIM)

The London Stock Exchange (LSE) established the Alternative Investment Market, or the AIM, as a junior stock exchange in 1995.[82] The AIM caters to companies that are early in their growth cycles and do not meet the listing requirements for the LSE.[83] The AIM is notable for offering "light-touch" regulation, meaning less stringent disclosure requirements and admission standards than the LSE and other major stock exchanges globally.[84]

The AIM's "light-touch" regulation is often credited as a significant factor for its success, as it reduces listing costs and ongoing costs of remaining listed.[85] While the AIM's regulation is "light-touch," what regulation exists is critical to the success of the AIM.[86] The AIM is based on a principle of self-regulation, and the low regulatory burden works in concert with that perspective.[87] Companies listed on the AIM are expected to comply with relatively low disclosure requirements and obligations.[88] But both the LSE and the AIM's own regulatory service

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smaller companies looking for "a well-established, regulated place to access new capital and move into new growth phases").

81. Mendoza, s*upra* note 79, at 263 ("AIM covers a funding gap for companies whose specific characteristics preclude them from listing in senior markets such as NASDAQ, the NYSE, or the LSE.")

82. Revest & Sapio, *Financing Technology-Based Small Firms*, *supra* note 67, at 14 ("The London Stock Exchange . . . [created] the Alternative Investment Market (AIM) in June 1995.").

83. *See* Mendoza, *supra* note 79, at 263, 298; James Chen, *Alternative Investment Market (AIM)*, INVESTOPEDIA (Aug. 12, 2019), https://www.investopedia.com/terms/a/alternative-investment-market.asp [https://perma.cc/U4XB-HAS7].

84. The AIM has a "comply-or-explain" policy for items beyond the basics. *See* Mendoza, *supra* note 79, at 295 ("The genius of AIM's regulatory model lies with the comply-or-explain option provided to each listed company to adapt to the exchange's flexible and reduced set of rules."); *id.* at 301 ("AIM does not impose stringent admission requirements on companies seeking entry to the market. The few objective listing criteria set forth by the exchange can be complied with easily . . . ."). This resembles the United States rule that public companies must have codes of conduct for senior management or explain why they do not. Sarbanes-Oxley Section 406, 15 U.S.C. § 7264 (2012).

85. *See* Mendoza, *supra* note 79, at 296 ("[C]ompanies seeking an AIM listing are not subject to significant admission requirements.").

86. *See id.*

87. *See id.*

88. *See id.*

have shown that they will tweak AIM rules as needed.[89] The AIM's quick responses to issues that arise helps to bolster the "light-touch" model, as it promotes investor confidence in the market.[90]

In place of regulation, the AIM hinges investor protection on the use of Nominated Advisors, or "Nomads."[91] Nomads are experienced financial firms, similar to investment banks in the United States, that every company listing on the AIM must hire.[92] Examples of Nomads include finnCap Group PLC, Cenkos Securities PLC, and W.H. Ireland Ltd.; names more familiar to U.S. readers include Cantor Fitzgerald and Grant Thornton.[93]

Like investment banks in the United States, Nomads serve as reputational intermediaries between non-established companies and investors, renting their reputations to the companies that hire them.[94] A Nomad acts as "gatekeeper, advisor, and ultimately, regulator, of AIM."[95] The Nomad's primary role is to vet a startup before listing on the AIM.[96] Even after listing, the Nomad is broadly charged with serving

89. *See id.* at 299 ("The oversight roles of its own regulation service, and that of the LSE, also play a part in the success of AIM's model. Both have proven to be highly responsive regulators, adjusting AIM's rules promptly and according to market need.").

90. *See* Mendoza, *supra* note 79, at 292–93.

91. Steven M. Davidoff, *Regulating Listings in a Global Market*, 86 N.C. L. REV. 89, 138 (2007) ("The key to AIM regulation is the nominated advisor."); *see also Choosing Your Advisers*, LONDON STOCK EXCHANGE, https://www.londonstockexchange.com/companies-and-advisors/aim/for-companies/choosing/advisor.htm [https://perma.cc/3BSX-5YQ5].

92. *See* Janet Austin, *How Do I Sell My Crowdfunded Shares? Developing Exchanges and Markets to Trade Securities Issued by Start-ups and Small Companies*, 8 HARV. BUS. L. REV. ONLINE 21, 27 (2018) ("A NOMAD is a firm of experienced corporate finance professionals who are approved by the London Stock Exchange."); Stephane Rousseau, *London Calling?: The Experience of the Alternative Investment Market and the Competitiveness of Canadian Stock Exchanges*, 23 BANKING & FIN. L. REV. 51, 63 (2007); Mendoza, *supra* note 79, at 316 n.323 (noting that, among qualifications, "Nomad applicants must (i) have practiced corporate finance for a period of at least two years"); *id.* at 302 ("AIM requires Nomads to soundly understand an applicant's business plans, management structure, and financial and legal status before certifying that a firm is qualified for listing.").

93. *See Our Services*, FINNCAP, https://www.finncap.com/our-services [https://perma.cc/GV8R-789V]; *Our Services*, CENKOS SECURITIES, https://www.cenkos.com/our-services/corporate-finance [https://perma.cc/MTL2-HXAC]; *Corporate & Institutional Broking*, W.H. IRELAND PLC, https://www.whirelandplc.com/corporate-broking/ [https://perma.cc/X3GN-UC72]. The AIM's Nomad Database includes forty-five registered Nomads. *See Nomad Search*, LONDON STOCK EXCHANGE, https://www.londonstockexchange.com/exchange/companies-and-advisors/aim/for-companies/nomad-result.html?name=&city=&contact=&sector=&search=search&page=1 [https://perma.cc/83QZ-78R8].

94. Davidoff, *supra* note 91, at 138 (same); Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 601 (discussing Nomads as reputational intermediaries).

95. Mendoza, *supra* note 79, at 316.

96. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 601.

as that startup's regulator, though a Nomad's liability for "its" company's noncompliance is less clear.[97] Despite the Internet and its corresponding troves of information, intermediaries remain critical players in securities transactions.[98] Hiring a top Nomad reduces information asymmetry indirectly by signaling a company's quality to potential investors.[99] In other words, if a top Nomad vouches for a company by serving as its Nomad, a potential investor without knowledge of the company can make a rational assumption, based on its knowledge of the Nomad, that the Nomad must have confidence in the company.

London's status as a global financial center provides another factor working in the AIM's favor: its investor base tends to be institutional rather than retail.[100] In 2005, institutional investors controlled over 40% of shares in the AIM market.[101] Institutional investors, due to their sophistication and experience with investing, are less vulnerable to being duped than retail investors.[102] The prevalence of institutional investors

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97. Disciplinary measures against Nomads and other sponsors appears to resemble SEC enforcement of gatekeepers in the U.S. *See generally* Stephen Choi, *Market Lessons for Gatekeepers*, 92 NW. U.L. REV. 916 (1998); Justin Hurwitz, *Trust and Online Interaction*, 161 U. PA. L. REV. 1579 (2013).

98. *See* Iris H-Y Chiu, *Securities Intermediaries in the Internet Age and the Traditional Principal-Agent Model of Regulation: Some Observations from European Union Securities Regulation*, 2 VA. L. & BUS. REV. 307, 312 (2007) ("Research has shown that the arrival of advanced technology, the Internet, and widened access to information has not rendered intermediaries irrelevant.").

99. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 600–01 ("The LSE considers the Nomad-company relationship so important that if a company terminates its Nomad, trading in the company's securities is suspended until it hires a new Nomad."); *see London Stock Exchange: AIM: The Role of the Nominated Advisor and Other Advisors*, NI BUSINESS INFO [hereinafter *The Role of the Nominated Advisor*], https://www.nibusinessinfo.co.uk/content/role-nominated-adviser-and-other-advisers [https://perma.cc/L33D-Z32L] (noting that in addition to the Nomad, a company wishing to list on the AIM must retain a broker, a reporting accountant, a legal advisor, and a public relations firm).

100. Mendoza, *supra* note 79, at 297 ("[W]ealthy individuals with experience in securities trading, institutional investors, and entities specializing in AIM investments comprise most of AIM's investor base . . . ."); *see* Hse-Yu Chiu, *Can UK Small Businesses Obtain Growth Capital in the Public Equity Markets—An Overview of the Shortcomings in UK and European Securities Regulation and Considerations for Reform*, 28 DEL. J. CORP. L. 933, 957 (2003) ("In the UK, institutional investors dominate the retail market. As a result, the nature of the capital market in the UK is sophisticated and caters to large value transactions."). *But see* Mendoza, *supra* note 79, at 297 ("[T]he LSE does attract more retail investors to AIM by offering certain advantages, including tax breaks for individuals that invest in its low-tier market segment.").

101. Rousseau, *supra* note 92, at 57.

102. Mendoza, *supra* note 79, at 297, note 207; Austin, *supra* note 92, at 29–31; Sam Meadows, *AIM Offers Tax Perks and Divis—But Some Investors Lose Everything*, DAILY TELEGRAPH (London), Sep. 8, 2018, at 5.

on the AIM is a draw for companies considering listing there, with the AIM viewed as providing "a community of knowledgeable professionals."[103] One piece sums up the AIM's design nicely: "AIM was the first-mover in supplying the marketplace with a lower regulatory burden, while enhancing listed companies' reputations and providing access to institutional investors seeking firms with long-term growth potential."[104]

The AIM has been held out as an initially successful junior stock exchange that led to imitators.[105] The AIM reached a high of 399 new listings in 2005, but they had dropped to forty-seven new listings a decade later.[106] In total, an excess of 3,600 companies have participated with the AIM, raising more than £98 billion.[107] Of that money raised on the AIM, approximately 60% was the result of further issues by already listed companies—not new company listings.[108] The AIM catered to a broader range of companies than simply high-tech startups, allowing it to weather tech market cyclical fluctuations and downturns.[109]

In terms of supplying public venture capital, however, the AIM has been less successful. To mimic the U.S. private venture capital approach, a junior stock exchange should be a stepping stone to an exit onto the country's senior stock exchange—the equivalent of a U.S. IPO.[110] The AIM, meanwhile, has not vaulted companies to the LSE; but it has, in

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103. Rousseau, *supra* note 92, at 57.

104. Mendoza, *supra* note 79, at 288.

105. *Id*. at 262–63 (noting how light-touch regulation "propelled AIM's rise as one of the world's fastest growing exchanges, as measured by the number of initial public offerings . . . . AIM's thriving success led to an outbreak of similar trading venues across Europe.").

106. Austin, *supra* note 92, at 27.

107. *FAQs*, LONDON STOCK EXCHANGE, https://www.londonstockexchange.com/companies-and-advisors/aim/faq/faq.htm [https://perma.cc/2GEE-ET7V].

108. *Id.*

109. Mendoza, *supra* note 79, at 292 (Europe's "New Markets narrowly focused on high-tech companies, whose massive downturn during the dot com bubble burst helped bring about their demise. AIM companies' broader range of economic activities could be what allowed it to endure the demise of the technology sector worldwide.").

110. Douglas Cumming & Jeffrey MacIntosh, *Boom, Bust, and Litigation in Venture Capital Finance*, 40 WILLIAMETTE L. REV. 867, 870 (2004) ("IPOs and acquisitions are relatively more desirable forms of exit for higher quality entrepreneurial firms . . . . Other forms of exit such as secondary sales, buybacks and write-offs are more suited to lower quality firms."); Darian M. Ibrahim, *The New Exit in Venture Capital*, 65 VAND. L. REV. 1, 11 (2012) ("IPOs are the gold standard in VC success."); *see also* PAUL GOMPERS & JOSH LERNER, THE VENTURE CAPITAL CYCLE 7–8 (2nd ed. 2004).

fact, pulled LSE-listed companies *to it*.[111] This is a form of success, but not the type that mimics Silicon Valley.

Further, while the decrease in companies listing on the AIM noted above is partially attributable to global economic downturn in the late 2000s,[112] the AIM has its share of homemade troubles. The AIM's regulators have been charged with insufficient monitoring of Nomads and permitting them to have unchecked conflicts of interest.[113] Nomads are able to act as both Nomads and brokers—two roles that can have conflicting motives.[114] The fact that Nomads are hired and paid by their client companies adds another moral complexity to the Nomads role as gatekeeper.[115]

Also, few disciplinary actions or fines have been brought against poor-performing Nomads, thus undercutting the reputational capital they seek to impart to listed companies.[116] Further, while "light-touch" regulation reduces transaction costs for companies seeking capital, it leaves investors open to potential fraud.[117]

111. *See* Michael Potter, Explaining the Continued Rise of London's Alternative Investment Market (May 20, 2010) (unpublished manuscript) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1648835 ("[O]nly 111 companies have moved from the AIM to the LSE compared with 231 moving in the opposite direction.").

112. David Blackwell & Brooke Masters, *AIM Listings Fall off a Precipice*, FIN. TIMES (London), May 20, 2008, at 23.

113. Ben Turney, *Does the London Stock Exchange Deserve its License to Regulate AIM*, UK INV'R MAG., July 2015, at 26–27 (on file with author).

114. *See* Valérie Revest & Alessandro Sapio, *Does the Alternative Investment Market Nurture Firm Growth? A Comparison between Listed and Private Companies,* 22 INDUS. & CORP. CHANGE 953, 959 (2013) [hereinafter Revest & Sapio, *Alternative Investment Market*].

115. Kevin Campbell & Isaac T. Tabner, *Bonding and the Agency Risk Premium: An Analysis of Migrations Between the AIM and the Official List of the London Stock Exchange*, 30 J. INT'L FIN. MKTS., INSTS. & MONEY 1, 6 (2014).

116. Joseph Gerakos, Mark Lang & Mark Maffett, *Post-Listing Performance and Private Sector Regulation: The Experience of London's Alternative Investment Market*, 56 J. ACCT. & ECON. 189, 213 (2013); Rousseau, *supra* note 92, at 98–99 (explaining the potential civil liability for Nomads); *see also* Revest & Sapio, *Alternative Investment Market*, *supra* note 114, at 959 (stating that the only real constraint on Nomads to act appropriately is the threat to one's reputation for immoral dealing).

117. Mendoza, *supra* note 79, at 285 ("The most caustic critics contend that investors in AIM can be easily manipulated and even defrauded, given its sub-optimal disclosure and corporate governance standards."); *see also* Davidoff, *supra* note 91, at 112 ("The AIM in particular is a controversial market. It has come under criticism for low returns, high volatility, illiquidity, and scandalous practices by its listed issuers."); *id.* at 149 (noting commentators view AIM as "primarily a product of managerial opportunism or a simple inability of the issuer to meet the standards of more highly regulated markets"); *AIM Stock Market "Like a Casino,"* BBC NEWS (Mar. 9, 2007, 10:08), http://news.bbc.co.uk/2/hi/business/6433637.stm [https://perma.cc/F6N7-TYXY] (quoting former SEC commissioner comparing the AIM to a casino).

B. Germany's Neuer Markt (NM)

Germany established the (now defunct) Neuer Markt (NM) as a subsidiary of the Frankfurt Stock Exchange in 1997.[118] Unlike the "light-touch" regulation of the AIM, the NM imposed very strict disclosure and listing requirements on its companies.[119] These disclosures included *quarterly* financial reporting that complied with either U.S. Generally Accepted Accounting Principles (GAAP) or International Accounting Standards (IAS).[120] These quarterly reports had to be published in both English and German, to increase transparency.[121] "Before the Neuer Markt was launched in 1997, quarterly reporting of results was unheard of."[122] Furthermore, NM issuers had to file prospectuses that detailed "information concerning sources and application of funds, affiliated enterprises, profits, losses and dividends per share, and information about risk factors."[123] These requirements are akin to the disclosure requirements applicable to large, public companies in the United States.

For example, compare the NM's strict disclosure requirements with the AIM, discussed above. The AIM only requires companies to "prepare a semi-annual report, containing a balance sheet, income and cash flow statements, and comparative figures for the corresponding period in the previous year," plus annual audited financials (with a six-month grace period from years' end).[124] The NM disclosures took Louis Brandeis's famous saying that "[s]unlight is said to be the best of disinfectants" to the extreme.[125] But while this may be thought to work

118. Audretsch & Elston, *supra* note 74, at 12–13 ("A special feature of the *Neuer Markt* was the high concentration of startups in high technology sectors. These high-tech sectors include Biotechnology, Financial Services, Industrials & Industrial Services, Internet, Information Technologies, Media & Entertainment, Medical Services & Health Care, Software, and Telecommunications.").

119. Audrestch & Elston, *supra* note 74, at 15 ("Admission and reporting requirements for *Neuer Markt* listed firms are more stringent than the rules for the first . . . [or] second . . . segments of the Frankfurt exchange."); Audretsch & Lehmann, *supra* note 10, at 420 (Neuer Markt features "were designed to meet the needs of institutional investors in small, young, and high-growth firms and in particular to gain investors' trust. Thus, the listing guidelines were even higher than those for an admission to the Official Trading." (citations omitted)).

120. Audretsch & Lehmann, *supra* note 10, at 420–21.

121. *See* Audretsch & Elston, *supra* note 74, at 15.

122. Silvia Ascarelli & G. Thomas Sims, *German Exchange Unplugs Neuer Markt—Planned Closure Symbolizes End of Europe's Tech Craze; Its Equity Culture, Too?*, WALL ST. J., Sept. 27, 2002, at A12.

123. Audretsch & Lehmann, *supra* note 10, at 421.

124. Mendoza, *supra* note 79, at 311.

125. *See* Oranburg, *supra* note 49, at 1019.

for U.S. public markets,[126] disclosure can only do so much in the context of nascent startups with unproven technologies and inexperienced managerial teams.

Further, on the NM, each listed company was required to have "at least two designed sponsors which were responsible for guaranteeing liquidity and tradability of the shares" and compliance with the financial reporting requirements.[127] The designated sponsors had to agree to act in that capacity for the listing company for at least twelve months.[128] During the trading period, the designated sponsors needed to always be available for contact.[129] This resembles the Nomad function on the AIM, but rather than standing alone as a reputational-intermediary based system, designated sponsors merely layered on top of the NM's stringent disclosure requirements.

Created near the peak of the Internet's dot.com bubble in the late 1990s, the NM "quickly grew from 2 to 343 firms."[130] It was hailed as "helping not just to create a new type of firm that otherwise might not exist, but also to transform the sources of innovation and growth in the German economy."[131] Supporters anticipated that the NM would provide stable financing for small and medium sized companies, including new companies and those in "high-risk new technologies."[132] The stringent disclosure requirements were anticipated to increase confidence through transparency.[133] According to the *Wall Street Journal*: "the access to capital that [the NM] provided for German startups was supposed to unleash a German equity culture to rival the U.S."[134]

The NM's fall was as swift as its rise. Due to exclusive catering to technology startups, the NM suffered particularly hard when the dot--com bubble burst in the late 1990s and early 2000s.[135] But the NM's

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126. *See* Coffee, *The Future as History, supra* note 47, at 674–76, 691–92 (discussing the "bonding" argument that foreign firms list their securities in the U.S. because the stringent SEC disclosure rules and enforcement mechanisms in the U.S. signal quality).

127. Audretsch & Lehmann, *supra* note 10, at 421.

128. Christoph F. Vaupel & Laurenz Uhl, *Listing on the* Neuer Markt, 15 BUTTERWORTHS J. INT'L BANKING & FIN. L. 424, 427–28 (Nov. 2000).

129. *Id.* at 428.

130. Audretsch & Elston, *supra* note 74, at 12.

131. *Id.* at 10.

132. Audretsch & Lehmann, *supra* note 10, at 420.

133. *See* Sell, *supra* note 73, at 193.

134. Brian M. Carney, *Teutonic Tailspin: A German Market's Rise and Fall*, WALL ST. J., Oct. 1, 2002, at A20.

135. Sell, *supra* note 73, at 193 (attributing NM's failure to the "bursting of the 'tech bubble,' the bankruptcies of a number of listed firms, and several insider trading prosecutions"); *see also*

problems ran much deeper. First, the listed companies were plagued by fraud despite "heavy-touch" regulation and sponsor requirements. The first company listed on NM, MobilCom, saw its shares enjoy a significant "rise at its peak, but [they] have since lost nearly all their value," in part due to a "self-dealing scandal involving [the founder's] wife's investment vehicle."[136] Another NM company, Comroad, went public in 1999, but in April 2002 "it was revealed that nearly all of the company's $94 million in reported revenue for 2001 was fictitious."[137]

Second, the NM's investor base was not sophisticated like the AIM's. Instead, NM investors were described as being "like the dot-com speculators in the U.S., mostly a young crowd . . . [looking for] easy money."[138] One study found that 42% of the NM's IPOs were backed by sophisticated institutional investors.[139] However, NM's structure, such as a six-month lock up period, made investing in NM-listed issuers less palatable for VCs.[140] Nor were the NM's regulators adequate at policing the fraud and protecting investors.[141] According to one commentator, the NM failed due to "an apparent lack of sophistication of both investors and regulatory authorities."[142]

The first domino to fall in NM's collapse was the announcement in early 2000 by several listed companies that they would fail to meet their initial forecasts.[143] In September of 2000, the first of the NM bankruptcies was announced, quickly followed by several others.[144] Prompted by this turmoil, NM's parent company issued an announcement that penny-stocks and insolvent companies would be

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Davidoff, *supra* note 91, at 144 ("[T]he popping of the technology bubble resulted in a ninety percent decline in aggregate market capitalization on the Neuer Markt in just one year, from 2001 to 2002.").

136. Carney, *supra* note 134, at A20.

137. *Id*.

138. *Id*.

139. Tereza Tykova, *Who Are the True Venture Capitalists in Germany?* 2–3 (Ctr. for European Econ. Research, Working Paper No. 04-16, 2004).

140. *See* Wolfgang Bessler & Andreas Kurth, *Exit Strategies of Venture Capitalists in Hot Issue Markets: Evidence from the "Neuer Markt" in Germany*, 10 J. ENTREPRENEURIAL FIN. & BUS. VENTURES 17, 18 (2005).

141. Coffee, *Racing Towards the Top?*, *supra* note 47, at 1805–06 (citation omitted) ("Observers report that many of the scandals plaguing the Neuer Markt were the product of a shortfall in deterrence attributable to the lack of enforcement of insider trading restrictions in Germany. In this light, there may be outer limits on the ability of bonding to work, which are set by the strength of the legal protections in the jurisdiction of listing.").

142. Mendoza, *supra* note 79, at 293.

143. Audretsch & Lehmann, *supra* note 10, at 421.

144. *Id*.

removed from the NM in October 2001.[145] By the end of 2002, "more [than] one third of all listed companies[] had left the NM,"[146] and the NM had "plunged 95% from its all-time high 2 1/2 years [prior], reached at the peak of the Internet bubble."[147] The NM was shut down that same year—a five-year run start to finish.[148] What had once been the hope of revitalizing the German technological sector is now a cautionary tale for other growth stock exchanges.[149]

C. Hong Kong's Growth Enterprise Market (GEM)

Asian nations have attempted their own junior stock exchanges.[150] Among these, Hong Kong's Growth Enterprise Market (or GEM) was launched in late 1999 to form a "venture board for smaller and emerging technology companies' stocks."[151] In a hybrid approach to the AIM and NM models, the GEM would have less stringent listing requirements than the main Hong Kong stock exchange (AIM-like), but an "enhanced disclosure based regime" (NM-like).[152]

To list on the GEM, companies must have a cash flow of HK$30 million, a minimum expected market capitalization of HK$150 million, and a minimum public float at time of listing of HK$45 million.[153] In terms of disclosure, the GEM was intended to operate an "enhanced

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145. *Id.*

146. *Id.*

147. Ascarelli & Sims, *supra* note 122, at A12.

148. Audretsch & Lehmann, *supra* note 10, at 420 ("The dramatic number of delistings due to fraud and insolvencies . . . led the Deutsche Boerse AG to terminate the Neuer Markt in 2003."); Revest & Sapio, *Financing Technology-Based Small Firms*, *supra* note 67, at 13 (describing the Neuer Markt as a "notable failure[]").

149. *See* Carney, *supra* note 134, at A20.

150. Austin, *supra* note 92, at 26–27 (explaining the market for startups in Korea); Jarunee Wonglimpiyarat, *Equity Financing and Capital Market Funding Policies to Support Entrepreneurial Development in Asia: Comparative Cases of Thailand, Malaysia, Singapore, and Taiwan*, 15 J. PRIV. EQUITY 10, 18 (2012); *Overview of Market System*, JAPAN EXCHANGE GROUP, https://www.jpx.co.jp/english/equities/listing-on-tse/new/guide/tvdivq0000002g9b-att/b5b4pj000000ok3f.pdf [https://perma.cc/NGS4-NGR9]; *see also* Consultation Paper, *supra* note 78, at 20–22 (discussing Asian attempts at junior stock exchanges).

151. Consultation Paper, *supra* note 78, at 20; Hui Hu & Milind Sathye, *Predicting Financial Distress in the Hong Kong Growth Enterprises Market From the Perspective of Financial Sustainability*, 7 SUSTAINABILITY 1186, 1187 (2015) ("[T]echnology companies dominate the GEM . . . .").

152. Consultation Paper, *supra* note 78, at 20 (internal quotation marks omitted).

153. *See Amendments to HKEx's Main Board and GEM Listing Rules Take Effect on 15 February 2018*, NEWSLETTER (Charltons Solicitors, Hong Kong), Dec. 19, 2017, at 1, https://www.charltonslaw.com/amendments-to-hkex-main-board-and-gem-listing-rules-take-effect-on-15-february-2018/ [https://perma.cc/68Z2-VGZ].

disclosure based regime with prominent 'buyer beware risk warnings in listing documents.'"[154] As part of the prospectus-type listing document, applicants have to provide financial statements for at least the prior two years as part of their GEM listing document.[155] In addition, GEM Transfer Applicants (companies that have been listed on the GEM and not subject to disciplinary action for at least two and wish to transfer to the Hong Kong's main exchange) are required to have a sponsor.[156] The GEM also required that new applicants to the GEM appoint a sponsor, which serve a similar function to Nomads on the AIM and designated sponsors on the NM.[157] However, litigation against poor-performing sponsors is rare.[158]

The GEM's outcome, like its structure, is somewhat of a hybrid between the AIM and NM. Taking a look back in time, after the dot.com bust of the early 2000s, "many GEM issuers experienced a decline in their share prices and some experienced losses and/or long periods of suspension and their shares were often illiquid."[159] As a result, investors and companies lost confidence in GEM.[160] This spurred an internal review of the structure of GEM, with consideration of a plan to create a new market and leave the old exchange behind.[161] Instead, the Hong Kong main exchange decided to overhaul the listing rules.[162] As a result, the GEM underwent major revisions in both 2008 and 2018.

First, in 2008, after years of companies moving from Hong Kong's main stock exchange (the Main Board) to the GEM rather than vice versa,[163]similar to the AIM,[164] Hong Kong sought to reposition the GEM

154. Consultation Paper, *supra* note 78, at 20.

155. *Id.* at 9, 31.

156. *Id.* at 9.

157. *Chapter 6A: Sponsors and Compliance Advisers*, H.K. EXCHANGES & CLEARING LTD. 6A.02 (July 6, 2019), https://www.hkex.com.hk/-/media/HKEX-Market/Listing/Rules-and-Guidance/Listing-Rules-Contingency/GEM-Listing-Rules/General/chapter_6a.pdf?la=en [https://perma.cc/CZF5-QPVZ] ("A new applicant must appoint a Sponsor under a written engagement agreement to assist it with its initial application for listing.").

158. Hu & Sathye, *supra* note 151, at 1196 ("Hong Kong has been described as one of the least litigious regions in the world. The lack of litigiousness severely restricts the ability of investors to bring lawsuits against auditors for alleged 'audit failures.' Apart from the legal barriers, the prevalence of Confucianism in Hong Kong has led to a culture of settling differences using negotiation instead of the formal legal system.").

159. Consultation Paper, *supra* note 78, at 20.

160. *Id.* at 5.

161. *Id.* at Appendix II, 6–7.

162. *Id.*

163. *Id.* at 21.

164. *See supra* note 111 and accompanying text.

more explicitly as a "stepping stone" to the Main Board.[165] The 2008 changes streamlined the listing process and focused on helping small and medium companies enter the Hong Kong capital markets.[166] The 2008 changes were successful in revitalizing the GEM and bringing back some of the confidence lost during the early 2000s.[167]

Second, still lacking notable upward movement of companies from the GEM to the Hong Kong senior exchange,[168] GEM's rules were revised again in 2018.[169] The new revisions reimagined GEM as its own self-sufficient exchange, not as a stepping stone to a more senior exchange.[170] In addition to the lack of upward movement, there were concerns about the companies that did transfer from the GEM to the Main Board. Criticisms of these companies focused on the need for more due diligence and transparency about these companies' operations.[171] Thus, while the GEM's future is uncertain, its goal has evolved from providing a space for startups to mature before seeking placement on Hong Kong's main exchange.[172]

III. PRIVATE VENTURE CAPITAL: THE UNITED STATES

Thus far, junior stock exchanges have been unable to replicate the United States' success with private venture capital. The AIM's "light-touch" regulation may be attractive to startups, but investor protection suffers without an adequate substitute. Too much weight is put on reputational intermediaries. Conversely, the NM's strict disclosure rules did not solve the problem, likely because firms had too little to disclosure and what disclosure was provided was not adequately

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165. Consultation Paper, *supra* note 78, at 9 (noting the "limited success of the 'stepping stone' positioning" of the GEM); Hu & Sathye, *supra* note 151, at 1189 ("[T]he GEM provides a fund-raising venue and an exit ground, especially for high-growth and high-risk enterprises.").

166. Consultation Paper, *supra* note 78, at 21.

167. *Id.*

168. *See* He, *supra* note 10 (quoting a Credit Suisse researcher as stating that "the GEM has filed in its original mission to become a thriving Nasdaq-style stock exchange," and that "[n]ot many investors want to trade here[;] [i]n contrast, it has attracted a lot of speculators").

169. Enoch Yiu, *HKEX Unveils Tougher Listing Rules*, SOUTH CHINA MORNING POST, Dec. 16, 2017, at 3.

170. *Id.*

171. Consultation Paper, *supra* note 78, at 9.

172. *See* Enoch Yiu, *GEM Poised to Lose its Lustre as Listing Reforms Kick In*, SOUTH CHINA MORNING POST, Jan. 30, 2018, at 4 ("Among other changes, GEM is no longer to be a pathway to a main board listing."); *see generally* He, *supra* note 10 (concluding that the "high aspirations the GEM would become a magnate for Asian technology startups . . . . hasn't quite worked out that way").

policed for its veracity. The GEM's hybrid approach has likewise proven unsuccessful at fostering startup growth for eventual listing on a major exchange.

The private system of venture capital found in the United States handles the extreme information asymmetry and agency costs present in startup investing differently than a junior stock exchange.[173] There is far less reliance on public solutions, namely corporate and securities law, even with the United States supplying both in spades.

First, private startups do not have to issue disclosures to the public on a periodic basis as public companies do. Even when selling securities to investors, these sales also require no disclosure to most investors who buy startup stock.[174] This is because, to ease the transaction costs of selling securities to wealthy, sophisticated investors, the SEC adopted Regulation D and specifically Rule 506.[175] Under Rule 506, sales to "accredited investors,"[176] including angel investors,[177] require no specific disclosures under the theory that such investors can fend for themselves.[178] While there are other exemptions (including Rules 504[179]

173. Gilson, *Engineering*, *supra* note 14, at 1078 ("[M]ultiple forms of incentive and monitoring techniques, including contractual, control, and market mechanisms, operate in connection with each contracting node to resolve the problems of uncertainty, information asymmetry, and agency associated with early stage, high technology financing.").

174. Thomas Murphy, *Playing to a New Crowd: How Congress Could Break the Startup Status Quo by Raising the Cap on the JOBS Act's Crowdfunding Exemption*, 58 B.C. L. REV. 775, 797 (2017) ("[S[tartup financing has traditionally been dominated by angel investors and venture capitalists, both of which fall under the existing Securities Act exemptions . . . .").

175. Mark A. Sargent, *The New Regulation D: Deregulation, Federalism, and the Dynamics of Regulatory Reform*, 68 WASH. U. L.Q. 225, 229–35, 285–89 (1990).

176. Ibrahim, *Angel Investors*, *supra* note 3, at 1444 ("[S]ome angel groups require only that members be accredited investors."); *see* 17 C.F.R. § 230.502(b)(1) (2019); Interpretative Release on Regulation D, 48 Fed. Reg. 10,045 (Mar. 10, 1983) (to be codified at 17 C.F.R. pt. 231) ("[I]f accredited investors are the only purchasers in offerings under Rule[] . . . 506, Regulation D does not require delivery of specific disclosure . . . ."); Jill E. Fisch, *Can Internet Offerings Bridge the Small Business Capital Barrier?*, 2 J. SMALL & EMERGING BUS. L. 57, 73–74 (1998) (noting that the old ACE-Net online system developed by the Small Business Administration to match angels and entrepreneurs required the angels to be accredited investors).

177. Ibrahim, *Angel Investors*, *supra* note 3, at 1406 ("Angel investors are wealthy individuals who personally finance the same high-risk, high-growth start-ups as venture capitalists but at an earlier stage. Well-known angels include Microsoft co-founder Paul Allen, EDS founder H. Ross Perot, and Dallas Mavericks' owner Mark Cuban.")

178. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 571 ("[M]ost Rule 506 offerings, and virtually all startups' sales to angels and VCs, are limited to accredited investors due to the disclosure and other requirements involved when bringing unaccredited investors into the mix."); Fan, *supra* note 2, at 592 ("The theory behind Regulation D is that accredited investors are financially sophisticated and therefore do not need all the protections of the securities laws."); *see also* SEC v. Ralston Purina Co., 346 U.S. 119, 125 (1953).

179. 17 C.F.R. § 230.504 (2019).

and Section 3(a)(11)[180]) for private company sales of securities, Rule 506 is the startup's most commonly-used exemption.[181] Therefore, in contrast to publicly-supplied venture capital, mandatory disclosures are not the mechanism by which private venture capital attempts to mitigate information asymmetry.

Second, as an agency-cost reducing mechanism, like in public companies, entrepreneurs who control the startup's board of directors owe angels and VCs fiduciary duties under state corporate law.[182] However, VCs rarely sue entrepreneurs absent special circumstances or outright theft.[183] Instead, as discussed in the next sections, the U.S. system of private venture capital uses private ordering and informal means to reduce both information asymmetry and agency costs in startup investing.

A. Reducing Information Asymmetry Through Private Ordering or Informal Means

Angels and VCs are the primary sources of private venture capital to startups in the United States. These investors take big risks, but they are skilled in startup investing and can reap big rewards. Eschewing mandatory disclosure, angels and VCs reduce information asymmetry through private ordering and informal, reputational-based means.[184] VCs, and more sophisticated angels, use detailed investment contracts to

180. 15 U.S.C. § 77d(a)(6) (2012).

181. Abraham J. Cable, *Fending for Themselves: Why Securities Regulations Should Encourage Angel Groups*, 13 U. PA. J. BUS. L. 107, 132 (2010) ("The exemption from registration that most startup companies rely on is Rule 506 of Regulation D . . . ."); Rutheford B. Campbell, Jr., *The Wreck of Regulation D: The Unintended (and Bad) Consequences for the SEC's Crown Jewel Exemptions*, 7 OHIO ST. ENTREPREN. BUS. L.J. 287, 295 (2012) ("Regulation D offerings overwhelmingly are made under Rule 506. Even offerings of one million dollars or less—offerings that are suited for Rule 504—are overwhelmingly made under Rule 506. Similarly, the data show offerings of one million to five million dollars—offerings that are suited for Rule 505—are also overwhelmingly made under Rule 506.").

182. DEL. CODE ANN. tit. 8, § 141(a) (2016); *see also* Cede & Co. v. Technicolor, 634 A.2d 345, 360 (Del. 1993).

183. *See generally* Janet Cooper Alexander, *Do the Merits Matter? A Study of Settlements in Securities Class Actions*, 43 STAN. L. REV. 497, 570–71 (1991); John F. Coyle & Gregg D. Polsky, *Acqui-Hiring*, 63 DUKE L.J. 281, 307–08 (2013) (finding that in any litigation that did occur, entrepreneurs were always plaintiffs). *But see* Equity-Linked Inv'rs., L.P. v. Adams, 705 A.2d 1040 (Del. Ch. 1997) (involving an industrial investor suing a board, including company's founder, to stop a new financing deal).

184. Gilson, *Engineering*, *supra* note 14, at 1069 ("[T]he keystone of the U.S. venture capital market is private ordering—the contracting structure that developed to manage the extreme uncertainty, information asymmetry, and agency costs that inevitably bedevil early-stage, high-technology financing.").

reduce information asymmetries with entrepreneurs.[185] Most notably, VCs have long contracted for "staged financing," or financing a startup in chunks over time instead of all at once.[186] Staged financing reduces information asymmetry directly by allowing VCs to gather, process, and verify more information about startups between each stage of financing.[187] While public venture capital could replicate staged financing in theory, in practice staged financing is orderly, tight-knit (in terms of investor identity), and at logical intervals,[188] not sporadic like raising money with attendant secondary trading on a public exchange.

Staged financing also reduces information asymmetry indirectly by allowing entrepreneurs to signal their quality by agreeing to less than all the financing up front.[189] A low quality entrepreneur might want all financing up front in case their performance then lagged. Entrepreneurs also grant angel groups and VCs preferred stock as opposed to the entrepreneur's common stock.[190] Preferred stock is paid first, thereby signaling the entrepreneur's confidence that the startup's value will exceed the extent of the angel or VC preferences.[191] It is unlikely that

185. Ibrahim, *Financing the Next Silicon Valley*, *supra* note 66, at 742–48 (discussing the more formal, professional angel groups and their similarity to VCs).

186. Gilson, *Engineering*, *supra* note 14, at 1073 ("The initial venture capital investment usually will be insufficient to fund the portfolio company's entire business plan. Accordingly, investment will be 'staged.' A particular investment round will provide only the capital the business plan projects as necessary to achieve specified milestones set out in the business plan."); Steven N. Kaplan & Per Stromberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts*, 70 REV. ECON. STUD. 281, 304 (2003).

187. Gilson, *Engineering*, *supra* note 14, at 1081 ("By accepting a contractual structure that imposes significant penalties if the entrepreneur fails to meet [sic] specified milestones based on the business plan's projections—the venture capital fund's option to abandon then becomes exercisable—the entrepreneur makes those projections credible."); *id.* at 1079 ("Even if the venture capital fund chooses to continue the portfolio company's project by providing another round of financing, a performance penalty still can be imposed by assigning the portfolio company a lower value in the new round.").

188. Spencer Williams, *Venture Capital Contract Design: An Empirical Analysis of the Connection Between Bargaining Power and Venture Capital Contract Terms*, 23 FORDHAM J. CORP. & FIN. L. 105, 135 (2017) ("The different stages can be separated by time (with investors having the option to invest more at each stage) or can be tied to the achievement of specific technological or business milestones.").

189. *See* Ibrahim, *Crowdfunding Signals*, *supra* note 62, at 209–10; Gilson, *Engineering*, *supra* note 14, at 1080 ("Because the incentive created by staged financing is more valuable to a good entrepreneur than a bad one, an entrepreneur's willingness to accept an intense incentive is a signal of the entrepreneur's difficult-to-observe skills.").

190. *See generally* Fried & Ganor, *supra* note 29 (discussing the resulting agency costs that may arise for entrepreneurs from this setup).

191. Otherwise the entrepreneur receives nothing. *See* Ibrahim, *Crowdfunding Signals*, *supra* note 61, at 210.

public investors could negotiate the bells and whistles of preferred stock due to collective action problems.[192]

However, in liquidation or other defined exit events, most individual angel investors, forego the contract-based approach, relying instead on informal mechanisms to reduce information asymmetry.[193] Both angel and VC investing are characterized by an intense geographic component.[194] Both angels and VCs invest locally where they live and work. Sometimes the investors have had prior dealings with an entrepreneur.[195] Without prior first-hand knowledge of an entrepreneur, investors use a "network of trust"—business associates, lawyers, even fellow investors—to find promising investments in their areas.[196] The knowledge and experiences of a trusted referrer can substitute for the investor's lack of prior dealings with an entrepreneur.

Further, angels and some VCs invest in high-tech fields in which they have special expertise.[197] Many angels are ex-entrepreneurs who successfully cashed-out of a tech startup before becoming investors, and they may be interested in leveraging their expertise and experience in selecting target companies.[198] Informal mechanisms and private ordering

192. *See* Ibrahim, *Crowdfunding Signals*, *supra* note 61, at 230.

193. This is not the case for angel groups, which more closely resemble early-stage VCs than traditional angels in their practices. Ibrahim, *Financing the Next Silicon Valley*, *supra* note 66, at 743 ("Angel groups are professionalizing the practice of angel investing.").

194. *See* Stephen Prowse, *Angel Investors and the Market for Angel Investments*, 22 J. BANKING & FIN. 785, 789 n.5 (1998) (noting angels' preference for local investments); Schwartz, *Digital Shareholder*, *supra* note 37, at 622 ("[T]here is tremendous competition for [angel and VC] investments and such investors are interested in certain types of companies, often in limited geographic areas. Importantly, angels and VCs rely heavily on connections, making it difficult to get funded in the absence of pre-existing relationships with such investors or their acquaintances.").

195. Ibrahim, *Angel Investors*, *supra* note 3, at 1431 ("Angel investing is highly localized, relationship-driven, and industry-specific.").

196. *See* Prowse, *supra* note 192, at 789 ("The primary criterion that angels use to screen proposals is whether the entrepreneur is previously known and trusted by them or by an associate who they trust."); Schwartz, *The Gatekeepers of Crowdfunding*, *supra* note 68, at 905–06 ("Unfortunately, entrepreneurs who are 'out of the loop' for one reason or another appear to have a difficult time getting startup financing."); Mark C. Suchman, *Dealmakers and Counselors: Law Firms as Intermediaries in the Development of Silicon Valley, in* UNDERSTANDING SILICON VALLEY: THE ANATOMY OF AN ENTREPRENEURIAL REGION 71, 7980 (Martin Kenney ed., 2000) (discussing the matchmaker role Silicon Valley lawyers play between entrepreneurs and investors).

197. Ibrahim, *Angel Investors*, *supra* note 3, at 1431–32 ("Angels like to invest in start-ups where they know either entrepreneur or the substantive area . . . and preferably both. This preexisting knowledge . . . reduces information asymmetry by minimizing the entrepreneur's advantage of private information."); *see* Teresa Hogan et al., *Drivers of External Equity Funding in Small High-Tech Ventures*, J. SMALL BUS. MGMT. 236, 239 (2017).

198. MARK VAN OSNABRUGGE & ROBERT J. ROBINSON, ANGEL INVESTING: MATCHING START-UP FUNDS WITH START-UP COMPANIES—THE GUIDE FOR ENTREPRENEURS, INDIVIDUAL

are substitutes to mandatory disclosure for mitigating information asymmetries in startup investing, and seem to work much better.

B. Reducing Agency Costs Through Private Ordering and Informal Means

Once investors decide to invest in a startup, their focus turns from reducing information asymmetry to reducing agency costs. In short, angels and VCs must monitor their investments to ensure they are put to good use, favoring not only the entrepreneur but the VCs too. As in pre-investment diligence, angels and VCs rely on private ordering and informal tools to reduce agency costs, foregoing the public law solution of suing for breach of fiduciary duty under generalized corporate law.

The VCs staged financing tool discussed above not only reduces information asymmetry; it also reduces agency costs by aligning the entrepreneur's incentives with the VC's.[199] The entrepreneur must produce value for the VC to receive further financing.[200] Further, the entrepreneur is motivated to please the VC to continue to receive the VC's value-added services, including advice and connections.[201] Should a VC become disenchanted with an entrepreneur and forego the next round of financing, it sends a negative signal to other VCs, thus minimizing the entrepreneur's likelihood of receiving funds from other investors.[202]

INVESTORS, AND VENTURE CAPITALISTS 108 (2000) (stating that 75% to 83% of angel investors have prior entrepreneurial experience).

199. Gilson, *Engineering*, *supra* note 14, at 1080 ("Because of the option-like character of the entrepreneur's interest in the portfolio company, she will go forward with the project under conditions that favor her and disfavor the venture capital fund. Shifting this decision to the venture capital fund reduces this source of agency cost.").

200. D. Gordon Smith, *The Exit Structure of Venture Capital*, 53 UCLA L. REV. 315, 323–24 (2005) ("[The VC's] threat of abandonment, coupled with the prospect of dilution to the entrepreneur from repeated outside investments, mitigates the entrepreneur's holdup incentive . . . ." (citation omitted)).

201. Black & Gilson, *supra* note 1, at 254 ("A venture capitalist can choose not to make or return telephone calls to or from a portfolio company or its suppliers, customers, or prospective employees. The fund's power to withhold its management assistance and reputational capital reinforces its incentive and power to monitor."); Cumming & MacIntosh, *supra* note 110, at 874 ("There is ample evidence that early-stage and high-tech ventures receive more advice and intensive monitoring than their late-stage counterparts, and high-risk projects receive significantly more advice.").

202. Further contractual provisions such as board seats and negative covenants further reduce agency costs between staged financing rounds. Gilson, *Engineering*, *supra* note 14, at 1082 ("[G]iving the venture capital fund disproportionate representation or even control of the portfolio company's board of directors, and the restriction of the entrepreneur's discretion through the use of negative covenants, gives the fund interim control—the power to act to reduce agency costs in the

Informally, local investing allows hands-on monitoring in a way that public investing through a junior stock exchanges does not. Investors can regularly visit a startup's offices, attend board meetings in person,[203] and chat informally over coffee as occasion arises.[204] While large investors in public companies may take advantage of closer-than-normal contact with chief executive officers (CEOs), angels, and VCs are known to develop more personal, intense relationships with entrepreneurs than typically found in the public investor-CEO context. Intense geographic concentration of investments also creates a reputation market where all players in entrepreneurial finance are known to each other.[205] Should entrepreneurs act opportunistically toward a VC, other VCs will learn about it and blacklist the entrepreneur going forward.[206] Entrepreneurs are concerned with this possibility given the need for follow-on funding for the current venture and the need to seek capital from the same community of investors for subsequent ventures.

The U.S. private venture capital system has been highly effective, and it is one of the "crown jewels of the American economy."[207] The U.S. venture capital system has created numerous new public companies[208]

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period between financing rounds."); *id.* at 1079 ("[P]otential investors know they are being solicited only because investors in the prior round are dissatisfied with the portfolio company's performance."); Black & Gilson, *supra* note 1, at 253 ("[VCs] receive strong control levers, disproportionate to the size of their equity investment.").

203. VCs usually take board seats. Brian J. Broughman, *The Role of Independent Directors in Startup Firms*, 2010 UTAH L. REV. 461, 468 (2010) ("Board seats in VC-backed firms are typically allocated on a class-specific basis as specified in the financing documents. This makes it possible to classify each director into one of three categories: (1) VC, (2) entrepreneur, or (3) independent director.").

204. Ibrahim, *Angel Investors*, *supra* note 3, at 1433; *see also* Margaret M. Blair & Lynn A. Stout, *Trust, Trustworthiness, and the Behavioral Foundations of Corporate Law*, 149 U. PA. L. REV. 1735, 1757 (2001) ("Where trust can be harnessed, it can substantially reduce the inefficiencies associated with both agency and team production relationships. Trust permits transactions to go forward on the basis of a handshake rather than a complex formal contract . . . and it avoids the uncertainty and expense associated with trying to enforce formal and informal agreements in the courts.").

205. Gilson, *Engineering*, *supra* note 14, at 1085–87 (discussing the reputation market).

206. *See* Black & Gilson, *supra* note 1, at 262–63 (arguing that reputational constraints imposed by geographic proximity between VCs and entrepreneurs check the potential for VC opportunism); Smith, *supra* note 200, at 320.

207. Gilson, *Engineering*, *supra* note 14, at 1068.

208. In 2016, more than 7,750 companies were venture-backed and received $69.1 billion in funding. *2017 NVCA Yearbook Highlights Busy Year for Venture Industry and NVCA*, NAT'L VENTURE CAP. ASS'N (Mar. 6, 2017), https://nvca.org/pressreleases/2017-nvca-yearbook-highlights-busy-year-venture-industry-nvca/ [https://perma.cc/R5KH-EMCZ]. Of that, 81% of the companies (6,600 companies) and 44% of the venture dollars ($30.7 billion) were for angel/seed and early stage VC investments. *Id.* In 2017, a total of $85 billion in funding went to more than 8,000 venture-backed companies. NAT'L VENTURE CAP. ASS'N, NVCA 2018 YEARBOOK 5 (2018). Only 47% of VC investments (fewer than 3,900) were angel/seed investments in 2018. *Id.* at 6.

and millions of new jobs,[209] and it brings cutting-edge science to the marketplace.[210] While there are many historical reasons for the U.S. success,[211] investors' ability to reduce information asymmetry and agency costs through private ordering and informal means keeps the system alive and well.[212]

IV. THE U.S. MOVE TO CROWDFUNDING: A CURIOUS CASE AND FORTUITOUS TURN

Given the success of the U.S. private venture capital system, coupled with the failure of foreign public venture capital to accomplish the same goals, the recent U.S. infatuation with crowdfunding presents something of a mystery. Crowdfunding is loosely defined as a startup raising money over the Internet from a large number of investors, including people who may not be regular investors.[213] Equity crowdfunding implicates the U.S. securities laws, whereas rewards or donation-based crowdfunding does not.[214]

Legalizing crowdfunding was a key goal of the JOBS Act.[215] As this Part discusses, crowdfunding's original design had a de facto resemblance to a junior stock exchange.[216] And like junior stock

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209. Will Gornall & Ilya A. Strebulaev, *The Economic Impact of Venture Capital: Evidence from Public Companies* 6–8 (Stanford Graduate School of Business Working Paper No. 3362, 2015), https://www.gsb.stanford.edu/faculty-research/working-papers/economic-impact-venture-capital-evidence-public-companies [https://perma.cc/9D3Z-PTEL] (stating roughly four million more people were employed by venture capital-backed public companies in 2014 than in 1974); NAT'L VENTURE CAP. ASS'N, NVCA 2018 YEARBOOK DATA PACK PUBLIC VERSION 29, https://nvca.org/download/67354/ (last visited Sept. 9, 2018) (noting 832 of the 3,377 IPOs in the United States from 2004 through 2017 were backed by venture capital).

210. Gilson, *Engineering*, *supra* note 14, at 1077 ("Research and development by large companies with access to the public capital markets simply is not a substitute for the activities of early stage companies, financed through the private equity market . . . .").

211. *See supra* note 70 and accompanying text.

212. *See* Bottazzi & Da Rin, *supra* note 67, at 14 ("Venture capital is the typical source of financial muscle for American entrepreneurial firms."); Ibrahim, *Financing the Next Silicon Valley*, *supra* note 66, at 733, 749–51 ("Private venture capital backed the Internet revolution of the 1990s and is now a driving force behind innovation in clea[n] technology alternatives to fossil fuels.").

213. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 567.

214. *Id.* at 569.

215. Jumpstart Our Business Startups Act, Pub. L. No. 112-106, §§ 301–05, 126 Stat. 306, 315–23 (2012) (codified in scattered sections of 15 U.S.C.).

216. Funding portals, the hosts of crowdfunding offerings, are not technically exchanges, however; their main concern is becoming broker-dealers. Crowdfunding, 80 Fed. Reg. 71,388, 71,460–61 (Nov. 16, 2015) (to be codified at 17 C.F.R. pts. 200, 227, 232, 239, 240, 249, 269, 274) (funding portals not required to register as broker-dealers if they do not offer investment advice, hold funds, etc.).

exchanges that opened up capital markets for entrepreneurs and investment opportunities for investors, crowdfunding's goals included broadening access to capital for U.S. entrepreneurs and democratizing startup investing by allowing ordinary investors to participate in offerings previously reserved for angels and VCs.[217] The previous U.S. private placement exemptions, including the often-used Rule 506 discussed earlier, exclude unaccredited investors absent significant disclosure.[218] But per crowdfunding proponents, why should Silicon Valley investors and entrepreneurs be the only ones who reap the big rewards?[219] And why not give more startups the funds to serve as a stepping stone to a successful exit via IPO or trade sale? On the other hand, as discussed in the previous Part, junior stock exchanges have not been successful at supplying growth capital to young companies or large returns to risk-prone investors. Therefore, that crowdfunding—located in the heart of private venture capital country—would instead resemble a foreign junior stock exchange is curious.

A. U.S. Crowdfunding Designed as Public Venture Capital

Crowdfunding in its original form, as set forth in Title III of the JOBS Act in 2012, did not resemble the successful angel and VC approach that preceded it.[220] Instead of tracking Rule 506, crowdfunding more closely resembled the junior stock exchange approach found abroad in that anyone could invest and disclosure was required.[221] Per Title III, startups seeking funds from the "crowd" list investment opportunities on "funding portals," which are simply websites such as WeFunder and SeedInvest that post the startups seeking capital, the terms of investment,

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217. Jean Eaglesham, *Crowdfunding Efforts Draw Suspicion*, WALL ST. J., Jan. 18, 2013, at C1 (quoting President Obama as calling crowdfunding a "game changer" that allows "ordinary Americans . . . to go online and invest in entrepreneurs they believe in"); Andrew A. Schwartz, *Inclusive Crowdfunding*, 2016 UTAH L. REV. 661, 662 (2016) ("Inclusivity is core to the nature of crowdfunding as a distinct form of capital raising."); Mark Hiraide, *Ready Capital*, L.A. LAW., Dec. 2016, at 18 ("Many hail the JOBS Act . . . as allowing everyday people to invest in an asset class previously reserved for venture capitalists."); Seth C. Oranburg, *Bridgefunding: Crowdfunding and the Market for Entrepreneurial Finance*, 25 CORNELL J.L. & PUB. POL'Y 397, 404 (2015) ("While the angels and VCs currently provide the vast majority of traditional startup investment, the JOBS Act may allow a new type of investor to enter the marketplace: the general public.").

218. *See supra* notes 175–78 and accompanying text; *see also* Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 572.

219. *See* Schwartz, *The Gatekeepers of Crowdfunding*, *supra* note 68, at 905–06.

220. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 566 ("Due to Title III's [of the JOBS Act] extreme departure from traditional entrepreneurial finance, there is a significant risk that it will fail . . . .").

221. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 572, 593–94.

and so forth.[222] Subject only to some initial checks into the criminal histories of entrepreneurs, funding portals had to list crowdfunding opportunities for any startups that wanted to use the funding portal's services.[223] Further, anyone—including unaccredited, unsophisticated investors—could invest, subject to certain limits.[224] The funding portal thus looks, on initial blush, like a junior stock exchange.[225] It is a publicly available opportunity for anyone to invest in a high-risk startup.

Of the three junior stock exchanges studied in this Article, the closest analogy to the original design of U.S. crowdfunding is the NM. While startups seeking funds from the crowd do not have to release quarterly financials, disclosures are still significant relative to the small amounts being raised.[226] Crowdfunding startups must disclose their business plan,[227] financials,[228] use of proceeds,[229] and other information similar to

222. Joan M. Heminway, *The New Intermediary on the Block: Funding Portals Under the CROWDFUND Act*, 13 U.C. DAVIS BUS. L.J. 177, 190–91 (2013) (discussing the concept of a funding portal).

223. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 604 (under Title III as originally written, "a funding portal must basically act as a 'neutral third party'"). *But see* 15 U.S.C. § 77d-1(a)(5) (2012) (requiring funding portals to "take . . . measures to reduce the risk of fraud . . . including obtaining a background or securities enforcement regulatory history check on each officer, director, and person holding more than 20 percent [of an issuer's equity]").

224. The limit for investing is the greater of $2,000 or 5% of annual income for investors whose annual income is below $100,000, and the greater of $10,000 or 10% of annual income for those investors with annual incomes above $100,000. Ibrahim, *Equity Crowdfunding*, *supra* note 3, at 572.

225. Joan M. Heminway, *Investor and Market Protection in the Crowdfunding Era: Disclosing to and for the "Crowd"*, 38 VT. L. REV. 827, 836 (2014) ("[T]he websites through which securities are crowdfunded serve in a role that makes them transactional intermediaries in the manner of securities brokers or even securities exchanges, these exchanges . . . must be registered brokers or registered funding portals, a new type of securities trading intermediary created in the CROWDFUND Act.").

226. *See* Schwartz, *The Gatekeepers of Crowdfunding*, *supra* note 68, at 901 (noting that crowdfunding startups "must provide numerous disclosures to investors, intermediaries and the SEC"); Louis Bevilacqua, *How Much Does it Cost to Raise Money Through Equity Crowdfunding?*, BEVILACQUA PLLC (Sept. 26, 2016), http://bevilacquapllc.com/much-cost-raise-money-equity-crowdfunding/ [https://perma.cc/S9PA-TX83] (estimating crowdfunding disclosure costs between $3,000 and $20,000).

227. Jumpstart Our Business Startups Act, Pub. L. No. 112-106, § 302(b)(1)(C), 126 Stat. 306, 317 (2012) (stating a startup must disclose "a description of the business of the issuer and the anticipated business plan of the issuer").

228. An issuer must have an independent public accountant review—and sometimes audit depending on the target offering amount—their financial statements. 17 C.F.R. § 227.201(t)(2)–(3) (2019). This latter requirement does not apply to first-time issuers, who can produce financial statements done for them in the past. *Id.*

229. Jumpstart Our Business Startups Act, Pub. L. No. 112-106, § 302(b)(1)(E), 126 Stat. 306, 317 (2012) (startup must disclose a "description of the stated purpose and intended use of the proceeds of the offering sought by the issuer with respect to the target offering amount").

what a public company is required to disclose.[230] Commentators have lamented the crowdfunding disclosure requirements as too onerous.[231] But disclosure was crowdfunding's primary means of investor protection. As originally designed, crowdfunding did not employ an AIM-like Nomad to sponsor startups as a gatekeeping measure.

Another resemblance to the NM is crowdfunding's unsophisticated investor base.[232] Literally anyone with an Internet connection can buy startup securities through a funding portal.[233] By hanging its hat on disclosure as a solution to mitigating unsophisticated investor informational disadvantage,[234] Title III situated U.S. crowdfunding squarely in the mold of a NM-like junior stock exchange and public venture capital. But as we saw from the NM experience, disclosure is a crude tool for reducing the information asymmetry in this context.

B. U.S. Crowdfunding Morphing into the Private Model

Despite the inclusion of Title III in the 2012 JOBS Act, crowdfunding was not implemented until 2015, after an extensive rulemaking exercise by the SEC. The result—Regulation CF—made important changes to the conception of funding portals. Most significantly, Regulation CF allows funding portals to curate, or screen startups, based on their potential for

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230. Christopher Mims, *Crowdfunding Can Be a Gamble For Tech Startups*, WALL ST. J., Dec. 8, 2015, at B3 ("It is all the pain of an IPO without the benefits of the IPO."); Jack Wroldsen, *Crowdfunding Investment Contracts*, 11 VA. L. & BUS. REV. 543, 551–52 (2017) (noting the "extensive disclosures" Regulation CF requires).

231. Robert B. Thompson & Donald C. Langevoort, *Redrawing the Public-Private Boundaries in Entrepreneurial Capital Raising*, 98 CORNELL L. REV. 1573, 1605 (2013) (Title III imposes "a quite heavy and costly set of responsibilities on . . . issuers . . . ."); Eric C. Chaffee, *Securities Regulation in Virtual Space*, 74 WASH. & LEE L. REV. 1387, 1432 (2017) ("[T]he exemption created by the CROWDFUND Act is so onerous to comply with that no software developer, platform owner, or user is likely going to take the time and expense to company with it, especially considering the required disclosures and prohibitions on resale."); Stuart R. Cohn, *The New Crowdfunding Registration Exemption: Good Idea, Bad Execution*, 64 FLA. L. REV. 1433, 1444 (2012) ("Can this new regulatory-laden exemption be useful to small entrepreneurs? It is difficult to imagine that for offerings under $250,000 either issuers or intermediaries would be willing to undertake the time, cost and risk of potential liabilities.").

232. *See generally* Heminway, *supra* note 225, at 829–30 (noting that the "precise nature of investor crowds . . . is not often expressly considered in engaging mandatory disclosure as a regulatory tool or modifying it over time as investor profiles change").

233. *See supra* notes 222–23 and accompanying text.

234. *See* Heminway, *supra* note 225, at 830, 833 ("Members of this Internet-based crowd may have had no physical contact with the issuer or each other apart from Internet solicitations and communications.").

success (in the funding portal's discretion).[235] Thus, funding portals now serve a Nomad-like gatekeeping function. That is, if a reputable funding portal lists a startup, investors may have some inkling that it is not a terrible investment—that it has passed some sort of screening process.[236] As I have previously argued, "[f]unding portals should also have the *incentive* to curate, as a competitive reputation market among funding portals should quickly form."[237]

Funding portal curation is not enough to reduce information asymmetry in this dangerous environment. Funding portals can—and have the economic incentive to—only do so much.[238] They are not like Nomads in that they are not explicitly vouching for startups who list with them.[239] Further, the AIM's use of Nomads has not vaulted small companies to exits on the LSE,[240] so just because a startup lists on a top funding portal does not imply it will then go on to receive angel and VC funding—the logical next step for the very early stage companies that will likely use Regulation CF.[241] Thankfully, Regulation CF went further and allowed funding portals to permit further curation by *experts* once a startup listed on the portal.[242] Experts participating in crowdfunding offerings can weigh in on a startup's prospects on a funding portal's message board, or join any number of a funding portal's "investment clubs."[243]

For example, one can visit WeFunder (a top funding portal) and follow the investment club "Orange Hand."[244] Orange Hand is a group

235. Crowdfunding, 80 Fed. Reg. at 71,462–63; Schwartz, *The Gatekeepers of Crowdfunding*, *supra* note 68, at 910 ("The SEC concurred that the system [of crowdfunding] would only work, or would at least work much better, if funding portals had the power to select which companies to include, and which to exclude, from its site.").

236. Schwartz, *The Gatekeepers of Crowdfunding*, supra note 68, at 911–12 (Regulation CF "authorizes and empowers funding portals to exclude what they perceived to be low-quality companies with poor prospects or too much risk"); Darian M. Ibrahim, *Crowdfunding Without the Crowd*, 95 N.C. L. REV. 1481, 1498 (2017).

237. Ibrahim, *Crowdfunding Without the Crowd*, *supra* note 236, at 1498–99 (emphasis in original).

238. *Id.* at 1499–1500.

239. *Id.*

240. *See supra* note 111 and accompanying text.

241. Because secondary markets do not exist for crowdfunded securities (at least not yet), this is currently investors' only means of liquidity. *See* Austin, *supra* note 92, at 22; Rahn, *supra* note 9, at 275.

242. Jumpstart Our Business Startups Act, Pub. L. No. 112-106, §§ 301–05, 126 Stat. 306, 315–23 (2012) (codified in scattered sections of 15 U.S.C.).

243. Ibrahim, *Crowdfunding Without the Crowd*, *supra* note 236, at 1500–03 (describing message boards and investment clubs).

244. *Orange Fund V*, WEFUNDER https://wefunder.com/y-combinator-alumni [https://perma.cc/XDD7-XT94].

of alumni from Y Combinator, the leading Silicon Valley accelerator.[245] By investing alongside these successful individuals, unsophisticated investors have dramatically reduced their information asymmetry.[246] In short, unsophisticated investors are deferring to Orange Hand's evaluation of a startup's prospects. It is essentially the same as an angel investor who invests because the deal came from a trusted referrer.

The problem of potentially high agency costs after investment still remains in U.S. crowdfunding. Fiduciary duty law seems to be a poor tool for the small amounts involved. An investor who puts $200 into a crowdfunding campaign is extremely unlikely to sue the entrepreneur for breach of fiduciary duty. Discovery and litigation costs would overwhelm the amount lost. Regulation CF also authorizes securities fraud suits, but it is again unclear how useful that mechanism will be due to the small amounts involved.[247] Most troublesome of all, private, hands-on monitoring aimed at preventing mismanagement is unlikely to be implemented due to the widely dispersed nature of crowdfunding investors.

Perhaps the crowd can free ride on expert investors with the incentive and expertise to monitor a crowdfunding investment. It is more likely that those investors can be the ones who monitor on behalf of all investors, thus reducing agency costs for the first-in crowd. This will be particularly true should crowdfunding prove a gateway to angel/VC money.[248] Even without solving the agency cost problem, however, curation by funding portals and experts is an important step toward reducing information asymmetry in the private venture capital mold.[249]

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245. Accelerators are intensive boot camps for startups, unlike incubators which merely collect startups in the same office space. *See generally* RANDALL STROSS, THE LAUNCH PAD: INSIDE Y COMBINATOR, SILICON VALLEY'S MOST EXCLUSIVE SCHOOL FOR STARTUPS 41 (2013).

246. Ibrahim, *Crowdfunding Without the Crowd*, *supra* note 236, at 1502 ("As WeFunder advertises, investment clubs allow investors to follow 'the wisdom of the *experts*.'") (emphasis in original); *see also* Dale A. Oesterle, *Intermediaries in Internet Offerings: The Future is Here*, 50 WAKE FOREST L. REV. 533, 542 (2015) ("AngelList's current model utilizes two investment strategies: 'Angel Followed Deals' and 'Angel Advised Deals.' In Angel Followed Deals, investors are given the option to see which angels invest in ventures, allowing the independent investors to follow the angels' lead.").

247. Schwartz, *The Gatekeepers of Crowdfunding*, *supra* note 68, at 902 ("[T]he JOBS Act specifically authorizes civil actions for fraud against issuers, directors, and officers of companies that mislead crowdfunding investors.").

248. Ibrahim, *Crowdfunding Signals*, *supra* note 62 (arguing that crowdfunding can have a positive effect on a startup's chance at attracting follow-on investment).

249. Schwartz, *The Gatekeepers of Crowdfunding*, *supra* note 68, at 912 ("[T]his 'revolutionary' idea of a totally inclusive marketplace for entrepreneurial finance was snuffed out without even being given a chance."); Ibrahim, *Crowdfunding Without the Crowd*, *supra* note 236, at 1485

CONCLUSION

Entrepreneurial ecosystems are complicated. Even a look at different regions within the United States, such as Silicon Valley and Route 128, reveal important differences in labor mobility and historical circumstances.[250] International comparisons of entrepreneurial ecosystems are further complicated by differences in culture, institutional design, and macroeconomic factors. This Article has focused on one piece of the puzzle—how investors mitigate information asymmetry and agency costs when selecting and monitoring high-risk startups.

This Article has argued that, after comparing public and private venture capital approaches, the U.S. system of private venture capital clearly has the better track record in vaulting growth startups to successful outcomes. U.S. startups, including Google, Facebook, and Tesla Motors, are some of the world's largest and most successful companies. Conversely, no junior stock exchange abroad has produced anything close to the U.S. success. Therefore, it is a fortuitous turn that U.S. crowdfunding, the new kid of entrepreneurial finance, is now relying more on reputational intermediation and expert signaling and less on public law solutions as it continues to develop.

("[C]rowdfunding as implemented will more closely resemble angel and venture capital ('VC') investing models rather than something revolutionary.").

250. *See* ALAN HYDE, WORKING IN SILICON VALLEY: ECONOMIC AND LEGAL ANALYSIS OF A HIGH-VELOCITY LABOR MARKET (2003); ANNALEE SAXENIAN, REGIONAL ADVANTAGE: CULTURE AND COMPETITION IN SILICON VALLEY AND ROUTE 128 (1994); Gilson, *Legal Infrastructure*, *supra* note 4, at 586–94.