

# INVESTOR PROTECTION IN AN AGE OF ENTREPRENEURSHIP

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*The creation of trillions of dollars in shareholder wealth by emerging companies has complicated the investor protection policy of securities regulation. The Securities and Exchange Commission (SEC) has not offered a coherent response to the question of when public investors should be permitted to invest in such companies. This Article develops an investor protection framework based on the Knightian distinction between risk and uncertainty that better articulates the challenges of this entrepreneurial age. Securities regulation has traditionally permitted all investors to purchase public securities with measurable risks and restricted them from investing in private securities that are shrouded in immeasurable uncertainty. As private markets have become more sophisticated at valuing companies, it has become more difficult to maintain this traditional divide. Investors believe that the valuations of private companies have become more certain. As a result, emerging companies are going public through Special Purpose Acquisition Companies and direct listings without the use of an underwriter that typically assures investors that a company has a reasonable basis for its valuation. This Article argues that protecting investors from uncertainty is essential to distinguishing between investment and speculation. The SEC should be more cautious in permitting companies to access public markets without measures that protect investors from Knightian uncertainty.*

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## INTRODUCTION

In this age of entrepreneurship, emerging companies have created trillions of dollars in new market value. Remarkably, many of the most promising ventures have gone public without an extensive history of profitability. Indeed, many are losing significant amounts as they command valuations once reserved for blue chip corporate giants with decades of substantial profits. The undeniable success of companies like Amazon, Google, and Facebook has created a template for new ventures that are able to sell shares at prices that anticipate the possibility of future wealth. Investors, mostly institutions, have reaped billions of dollars in gains as new entrepreneurial companies have gone public.

The investor protection policy of federal securities regulation faces new challenges in this climate.<sup>1</sup> The longstanding model where companies are only permitted to sell stock to the public after surviving scrutiny from an independent underwriter is under pressure. Rather than protecting investors, securities law seems like a barrier that delays access to promising investments.<sup>2</sup> The SEC has defined investor protection so vaguely that its goals are unclear.<sup>3</sup> It has no theory that explains why investors are permitted to take on some risks but not others.

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<sup>1</sup> The investor protection foundation of securities regulation is well established. *See, e.g.*, Securities Exchange Act of 1934 § 10(b), 15 U.S.C. § 78j(b) (2012) (authorizing SEC to pass anti-fraud and manipulation rules “necessary or appropriate . . . for the protection of investors.”); *see also* William O. Douglas, *Protecting the Investor*, 23 YALE L.J. 522 (1934) (arguing for a broad conception of investor protection).

<sup>2</sup> A common refrain has been that securities regulation prevents retail investors from investing in promising private companies. *See, e.g.*, Dave Michaels, *SEC Chairman Wants to Let More Main Street Investors In on Private Deals*, WALL ST. J., Aug. 31, 2018, at A1 (“SEC Chairman Jay Clayton, a Trump appointee wrestling with how to boost flagging interest in public markets, said the commission also wants to take steps to give more individual investors a shot at companies that have been out of their reach because they haven’t gone public”); *see also* Editorial, *Sharing the Wealth of Markets*, WALL ST. J., Sept. 21, 2018, at A14 (“Companies are generally waiting longer to go public, which is causing mom-and-pop investors to miss out on the early growth of start-ups.”).

<sup>3</sup> *See, e.g.*, Michael D. Guttentag, *Protection from What? Investor Protection and the JOBS Act*, 13 UC DAVIS BUS. L.J. 207 (2013) (noting that investors need protection from fraud, asymmetric information, self-dealing, and poor decision-making); *see also* James J.

This Article sets forth a conception of investor protection that better articulates the role of federal securities law in this new period of entrepreneurship. It argues that an important function of securities regulation is to distinguish between risk and uncertainty in capital markets. As famously defined by the University of Chicago economist Frank Knight,<sup>4</sup> reasonable probabilities relating to a risk can be estimated and quantified while an uncertainty is not subject to meaningful estimation.<sup>5</sup> Put another way, a “risk” is a “measurable uncertainty” that should be distinguished from “uncertainty” that is “immeasurable.”<sup>6</sup> Knight’s work highlighted the importance of mechanisms by which companies deal with the problem of uncertainty through management techniques. Large organizations emerged in part to reduce uncertainty. Entrepreneurs play an essential role in their willingness to take on uncertainty and are compensated for that willingness.

The Knightian difference between established corporations and entrepreneurial ventures maps onto the traditional securities regulation framework. By mandating that companies issue disclosures before selling securities to the public and while they remain public, the securities laws essentially limit public investment to those companies that are able to publish meaningful risk profiles that investors can adequately assess in valuing their stock. In contrast, for the most part, only sophisticated investors are permitted to evaluate and invest in the securities of private companies that are shrouded in Knightian Uncertainty.

The underwriter plays an essential role in the transition from the uncertainty of the entrepreneurial stage to public company status. Its most important function is to verify that a company’s prospects, which are essential to

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Park, *Reassessing the Distinction Between Corporate and Securities Law*, 64 UCLA L. REV. 116 (2017) (arguing that the SEC has failed to distinguish between various forms of investor protection).

This Article focuses on investor protection in public rather than private markets. Scholars have recently examined the issue of securities fraud in private markets. *See, e.g.*, Elizabeth Pollman, *Private Company Lies*, 109 GEO. L.J. 353 (2020); Verity Winship, *Private Company Fraud*, 54 U.C. DAVIS L. REV. 663 (2020).

<sup>4</sup> FRANK H. KNIGHT, RISK, UNCERTAINTY, AND PROFIT (Houghton Mifflin Company ed. 1921).

<sup>5</sup> *Id.* at 19-20.

<sup>6</sup> *Id.* at 233; *see also* Richard Posner, *Behavioral Finance before Kahneman*, 44 LOY. U. CHI. L.J. 1341, 1343 (2013) (noting distinction “between an uncertain future event to which a quantitative probability of occurring can be attached . . . and an uncertain future event to which no such probability can be attached”); Herbert Hovenkamp, *Neoclassicism and the Separation of Ownership and Control*, 4 VA. L. & BUS. REV. 373, 397 (2009) (noting that Knightian Risk “referred to future variations whose probabilities were knowable” while Knightian Uncertainty “referred to future events whose probabilities could not be known.”); Eric L. Talley, *On Uncertainty, Ambiguity, and Contractual Conditions*, 34 DEL. J. CORP. L. 755, 759 (2009) (“‘Risk’ refers to randomness whose probabilistic nature is extremely familiar and can be characterized with objective probabilities”); Richard N. Langlois & Metin M. Cosgel, *Frank Knight on Risk, Uncertainty, and the Firm: A New Interpretation*, 31 ECON. INQ. 456, 457 (1993) (“by risk Knight meant situations in which one could assign probabilities to outcomes and by uncertainty situations in which one could not”).

estimating its market value, can be evaluated with some certainty.<sup>7</sup> The underwriter evaluates the company's projections of future profitability and assesses their reasonableness based on its own knowledge, due diligence, and discussion with investors. Based on this information, it generates the initial public offering (IPO) price for the stock, which reflects the present value of the company's projected financial performance. The underwriter's clients will purchase stock at that price, creating an incentive for the underwriter to calculate a more conservative valuation than would the issuer. Investors can recover their losses from the underwriter and other parties pursuant to Section 11 of the Securities Act of 1933 if the price of the stock falls below the IPO price.<sup>8</sup> Securities regulation thus encourages a system where the IPO price reflects the Knightian Risk of investing in the IPO. While investors may be willing to take on uncertainty by paying more than that price, the IPO price serves as an important reference point that distinguishes investing from speculating.

Traditionally, emerging companies have been viewed as difficult to value because by definition they have only been recently formed and the prospects of their entrepreneurial plans are uncertain. Because most new companies have little or no record of profitability, their valuations are based largely on speculation about their future performance. As a leading authority on valuation describes the challenge of valuing emerging companies: "First, these firms usually have not been in existence for more than a year or two, leading to a very limited history. Second, their current financial statements reveal very little about the component of their assets – expected growth – that contributes the most to their value. Third, these firms often represent the first of their kind of business. In many cases, there are no competitors or a peer group against which they can be measured."<sup>9</sup> Securities regulation has thus made it difficult for emerging private companies to access a wide range of investors.

But the success of emerging companies over the last two decades, particularly in the technology sector, has provided a basis for investors to view their investments in private companies as involving Knightian Risk.<sup>10</sup> The past precedent of successful companies serves as a basis for projecting the future performance of similar companies. Valuations in private markets, which have become increasingly sophisticated, can serve as a starting point for generating credible valuations in public markets.

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<sup>7</sup> Knight observed that "[a]t the bottom of the uncertainty problem in economics is the forward-looking character of the economic process itself." Knight, *supra* note 4, at 237.

<sup>8</sup> Investors must also establish that there was a material misrepresentation in the registration statement. See Securities Act of 1933 § 11(a), 15 U.S.C. § 77k(a) (2018).

<sup>9</sup> ASWATH DAMODARAN, INVESTMENT VALUATION: TOOLS AND TECHNIQUES FOR DETERMINING THE VALUE OF ANY ASSET 643-44 (Wiley, 3d ed. 2012).

<sup>10</sup> The valuation of the most valuable private companies, often referred to as unicorns, increased from \$522 billion in August 2015 to \$1.37 trillion in March 2020. See Keith C. Brown & Kenneth W. Wiles, *The Growing Blessing of Unicorns: The Changing Nature of the Market for Privately Funded Companies*, 32 J. APP. CORP. FIN. 52, 58 (2020).

There has thus been a persistent push to alternatives to the highly regulated initial public offering. Emerging companies now routinely go public with an abbreviated financial history and receive initial leniency from some of the federal obligations expected of public companies.<sup>11</sup> As private company valuations have been validated over time, the SEC has made it easier for such companies to raise funds from investors without registration.<sup>12</sup> Regulators have also permitted companies to go public through vehicles such as Special Purpose Acquisition Companies (SPACs) and direct listings, which do not use a traditional underwriter that stands behind its assessment of a company's future performance. Initial Coin Offerings for a time raised billions of dollars in funds through the sale of digital tokens to fund new ventures without complying with federal securities regulation.

The success of new entrepreneurial companies has complicated the distinction between risk and uncertainty. This age of entrepreneurship is particularly challenging because it has spurred high valuations that are speculative but not entirely irrational. Past successes may convince investors they are taking on risk when investing in companies that have not yet generated profits. If a significant percentage of emerging companies have succeeded, investors may believe that they can assess the probability that new companies will create value. There is thus a stronger case that a wider range of investors should take on the risk of buying stock in emerging companies.

The SEC has been left flat-footed in addressing the modern blurring of risk and uncertainty. It stood by while market participants innovated around the protections of federal securities law. For example, in permitting the wider use of SPACs and direct listings, it failed to appreciate the essential role of the underwriter in establishing a valuation based on risk rather than uncertainty. As a result, it has permitted wide public investment in ventures without sufficient investor protection.

Protecting investors from Knightian Uncertainty is essential to maintaining the distinction between investment and speculation. The purchase of a public company stock is an investment because a company can only achieve public status if it can generate reasonably certain projections of its performance. In contrast, private markets fund speculation on companies with uncertain prospects. Limiting investor access to investments that are more likely to reflect Knightian Risk provides assurance that an identifiable subset of securities can be viewed as investments. In doing so, securities

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<sup>11</sup> Jumpstart Our Business Startups Act (JOBS Act), Pub. L. No. 112-106, 126 Stat. 306, 306 (2012) (codified as amended in scattered sections of 15 U.S.C.).

<sup>12</sup> The SEC recently looked at the rules governing private markets and made a number of changes to facilitate private capital raising. 17 C.F.R. §§ 227, 229, 230, 239, 240, 249, 270, 274 (2021). However, it is notable that it concluded that "a consistent theme in many comments was that many elements of the current structure work effectively and a major restructuring is not needed." *Facilitating Capital Formation and Expanding Investment Opportunities by Improving Access to Capital in Private Markets*, 86 Fed. Reg. 3497 (Jan. 14, 2021).

regulation helps ensure that public capital markets efficiently allocate capital and are suitable for a wide range of public investors.

This Article concludes by suggesting ways in which the SEC can address the blurring of the distinction between Knightian Risk and Uncertainty. New ways of accessing public capital markets must find adequate substitutes for the underwriter that help ensure that a company's valuation is based on reasonable projections. The SEC should encourage independent scrutiny of emerging company valuations by clarifying that Section 11 applies to various parties responsible for valuing such transactions. Companies should be required to disclose financial projections along with the basis for such projections when they access public capital without an underwriter. By providing investors with additional disclosures about the projections of companies that raise funds from a wide range of investors, securities regulation can better protect investors from Knightian Uncertainty.

Part I of this Article begins by describing the Knightian distinction between risk and uncertainty and how this distinction is reflected by federal securities regulation. Part II discusses how the success of emerging companies has complicated the assumption that private companies are too uncertain to value. Part III describes the growing trend towards permitting investors to take on uncertainty through new ways of going public such as SPACs and direct listings. Part IV uses the SEC's efforts to regulate unregistered offerings of digital tokens to illustrate the role of securities regulation in limiting the ability of public investors to take on Knightian Uncertainty. Part V argues that protecting investors from uncertainty is essential to maintaining the distinction between investment and speculation. It discusses ways in which the SEC can respond to the recent blurring between Knightian Risk and Uncertainty.

## I. RISK, UNCERTAINTY, AND THE SECURITIES LAWS

Securities regulation distinguishes between public and private companies.<sup>13</sup> Public companies are permitted to offer and distribute their stock widely to any investor. Private companies may only sell their stock on a limited basis to investors that meet certain criteria. This distinction reflects a judgment that there is more confidence in the value of public companies than in the value of private companies. Public companies tend to be more established, and investors can rely on a history of profits in evaluating their

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<sup>13</sup> Some commentators have noted that securities regulation is beginning to recognize the greater societal impact of public companies. *See, e.g.*, Donald C. Langevoort & Robert B. Thompson, "Publicness" in *Contemporary Securities Regulation After the JOBS Act*, 101 *GEO. L.J.* 337, 372-74 (2013); Hillary Sale, *Public Governance*, 81 *GEO. WASH. L. REV.* 1012, 1032 (2013). Another way to identify a public company is based on the number of its shareholders, though the current regulatory threshold does not meaningfully distinguish between public and private company status. *See, e.g.*, Usha Rodrigues, *The Once and Future Irrelevancy of Section 12(g)*, 2015 *U. ILL. L. REV.* 1529 (2015).

performance and prospects. It is more difficult to value emerging companies that do not have established operations and often operate at a loss.

The Knightian distinction between risk, where meaningful probability distributions about potential outcomes can be generated,<sup>14</sup> and uncertainty, where there is insufficient information to calculate such probabilities,<sup>15</sup> provides a useful framework for understanding the regulation of securities. The federal securities laws can be understood as protecting public investors from Knightian Uncertainty. Public companies are distinguished by the ability of investors to generate reasonable projections about their performance. While there are risks associated with public company securities, many private companies are too uncertain to value.

### A. *The Distinction Between Risk and Uncertainty*

Frank Knight developed the distinction between risk and uncertainty in his 1921 book *Risk, Uncertainty, and Profit*, which was based on his doctoral thesis.<sup>16</sup> This work took on the ambitious project of explaining how profits were possible in a world in which classical economics models predicted that in a competitive equilibrium, such profits would not exist.<sup>17</sup> Economists had varying explanations for profits but had not systematically considered how profits could be a reward for taking on uncertainty.<sup>18</sup>

Knight made the point that these early economic models were constructed in a world without a significant number of large corporations.<sup>19</sup> They thus did not take into account differences between firms in navigating the inherent uncertainties of the world. Some businesses are better than others at managing the variability of the future. Firms that can control the problem of uncertainty are more likely to earn profits than firms that are

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<sup>14</sup> See, e.g., Itzhak Gilboa, Andrew W. Postlewaite, and David Schmeidler, *Probability and Uncertainty in Economic Modeling*, 22 J. ECON. PERSP. 173, 173 (2008) (noting that risk “designates situations in which probabilities are known, or knowable in the sense that they can be estimated from past data and calculated using the laws of probability”).

<sup>15</sup> See, e.g., *id.* (noting that uncertainty “refers to situations in which probabilities are neither known, nor can they be deduced, calculated, or estimated in an objective way”).

<sup>16</sup> A number of corporate law scholars have discussed the distinction between risk and uncertainty in various contexts. See, e.g., D. Gordon Smith, *Insider Trading and Entrepreneurial Action*, 95 N.C. L. REV. 1507, 1511-13 (2017) (discussing the distinction in context of Henry Manne’s defense of insider trading); Lynn A. Stout, *Uncertainty, Dangerous Optimism, and Speculation: An Inquiry Into Some Limits on Democratic Governance*, 97 CORNELL L. REV. 1177, 1179-80 (2012) (applying the distinction to speculative trading).

<sup>17</sup> See, e.g., Stephen F. LeRoy & Larry D. Singell, Jr., *Knight on Risk and Uncertainty*, 95 J. POL. ECON. 394, 396 (1987) (“Knight’s purpose . . . was to explain profit as the reward for bearing uncertainty.”); J. R. Hicks, *The Theory of Uncertainty and Profit*, 32 ECONOMICA 170, 170 (1931) (noting that Knight’s “work has laid securely the first foundation on which any future theory of profits must rest – the dependence of profits on uncertainty”).

<sup>18</sup> As Knight concludes, “[p]rofit arises out of the inherent, absolute unpredictability of things, out of the sheer brute fact that the results of human activity cannot be anticipated and then only in so far as even a probability calculation in regard to them is impossible and meaningless.” KNIGHT, *supra* note 4, at 311.

<sup>19</sup> *Id.* at 23.

unable to do so. New entrants into a market may not be able to match the advantage of a company that understands the uncertainties of that market and has developed ways to manage them.

Knight's theory depends on distinguishing between different degrees of uncertainty. If there are uncertainties that can be converted into measurable risks, companies that understand how to construct risk distributions to guide their business decisions will, on average, perform better than companies that are unable to do so. In contrast, when a meaningful risk assessment cannot be constructed for a business and there is simply uncertainty, it will be impossible to predict whether it might generate a profit.

Knight used insurance as an example of an industry where a business can meaningfully assess risk.<sup>20</sup> Insurance companies are able to accurately price their policies because of their past experience with an insured population. They can assign probabilities to the various levels of claims that can be expected based on past claims and other considerations. A successful insurance company can thus manage its risks and charge prices for policies that have a high probability of generating profits over time.<sup>21</sup>

Large corporations have an advantage in markets because they are better able to assess risk than small proprietorships. For Knight, "one of the important causes of the phenomenal growth in the average size of industrial establishments" was the need to reduce uncertainty.<sup>22</sup> A sizeable company can allocate resources to hire expert managers who can study its large volume of transactions to make predictions about sales.<sup>23</sup> Such managers can study customer behavior to forecast whether a new product will be successful. They know from experience the costs associated with accidents and problems in the manufacturing process. They can invest in a variety of products and offset the losses from their failures with the gains from their successes.<sup>24</sup> As Knight explained, "[t]he problem of meeting uncertainty thus

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<sup>20</sup> *Id.* at 213, 247-51.

<sup>21</sup> One view is that Knightian Risk "refers to outcomes that can be insured against" and Knightian Uncertainty as "outcomes that cannot be insured against". Geoffrey T. F. Brooke, *Uncertainty, Profit and Entrepreneurial Action: Frank Knight's Contribution Reconsidered*, J. HIST. ECON. THOUGHT 221, 222 (2010); see also Yoram Barzel, *Knight's "Moral Hazard" Theory of Organization*, 25 ECON. INQ. 117, 118 (1987) (describing link between Knightian Uncertainty and moral hazard).

<sup>22</sup> KNIGHT, *supra* note 4, at 252; see also *id.* at 232.

<sup>23</sup> *Id.* at 261; see also JAMES BURNHAM, *THE MANAGERIAL REVOLUTION: WHAT IS HAPPENING IN THE WORLD* 83 (1941) (describing managers as having "the functions of guiding the company towards a profit"); Donald J. Boudreaux & Randall G. Holcombe, *The Coasian and Knightian Theories of the Firm*, 10 MANAGERIAL DEC. ECON. 147, 152 (contrasting Coasian firm run by managers with Knightian firm run by entrepreneurs); William J. Baumol, *Entrepreneurship in Economic Theory*, 58 AM. ECON. REV. 64, 64-65 (1968) (distinguishing between managers, who "oversee[] the ongoing efficiency of ongoing processes" and entrepreneurs).

<sup>24</sup> See, e.g., KNIGHT, *supra* note 4, at 252 ("In so far as a single business man, by borrowing capital or otherwise, can extend the scope of his exercise of judgment over a greater number of decisions or estimates, there is a greater probability that bad guesses will be offset by good ones and that a degree of constancy and dependability in the total results will be achieved.").



passes inevitably into the general problem of management, of economic control."<sup>25</sup> Knight's theory would thus predict that large companies have an edge over smaller ventures in generating profits because they can turn immeasurable uncertainty into measurable risk.<sup>26</sup>

In contrast, entrepreneurs who start new companies must deal with significant uncertainty. As Knight described the typical emerging company, "the venture itself may be a gamble" and requires decisions based on "factors not subject to estimate and which no one makes any pretense of estimating."<sup>27</sup> Such entrepreneurs often take up opportunities that larger companies have missed or in which they are not willing to invest.<sup>28</sup> As Knight argued in a later article, "the entrepreneur is simply a specialist in risk-taking or uncertainty bearing, apart from any constructive action."<sup>29</sup> Because of the uncertainty associated with entrepreneurial investors, Knight observed that it makes sense for part of the entrepreneur's compensation to depend on the profitability of the project rather than a fixed salary.<sup>30</sup> The potential for high payoffs will compensate the entrepreneur for taking on Knightian Uncertainty.<sup>31</sup>

Knight's theory is insightful but can be difficult to apply to particular cases. He leaves unclear just how we can meaningfully distinguish between risk and uncertainty. At what point does an uncertainty become meaningfully measurable so that it becomes a risk? Is it possible to construct reliable probability distributions for most businesses? Probabilities are difficult to accurately calculate and can change over time as the underlying circumstances change.<sup>32</sup> The repeated occurrence of "black swan" events highlights

<sup>25</sup> *Id.* at 259.

<sup>26</sup> As Knight explained:

Uncertainty is one of the fundamental facts of life. It is as ineradicable from business decisions as from those in any other field. The amount of uncertainty may, however, be reduced in several ways, as we have seen. In the first place, we can increase our knowledge of the future through scientific research and the accumulation and study of the necessary data . . . . Another way is by clubbing of uncertainties through large-scale organization of various forms.

*Id.* at 347.

<sup>27</sup> *Id.* at 282.

<sup>28</sup> Entrepreneurs may take on uncertainty because they have a high degree of confidence. *Id.* at 269-70. Another view is that entrepreneurs take on uncertainty because they are "irrationally optimistic." Edward D. Kleinbard, *Capital Taxation in an Age of Inequality*, 90 S. CAL. L. REV. 593, 680 (2017).

<sup>29</sup> Frank H. Knight, *Profit and Entrepreneurial Functions*, 2 J. ECON. HIST. 126, 129 (1942).

<sup>30</sup> KNIGHT, *supra* note 4, at 290. In contrast, the manager of a large organization "receives a fixed salary, taking no 'risk.'" *Id.* at 293.

<sup>31</sup> See, e.g., Amir N. Licht, *Culture, Society & Entrepreneurship: The Entrepreneurial Spirit and What the Law Can Do About It*, 28 COMP. LAB. L. & POL'Y J. 817, 823 (2007). ("The reward for bearing entrepreneurial uncertainties is, according to Knight, the source of entrepreneurial profits.")

<sup>32</sup> For an account that is skeptical about whether Knightian probabilities can be computed, see NASSIM NICHOLAS TALEB, *THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE* 128 (2007).

how even sophisticated risk management often fails to anticipate disaster.<sup>33</sup> Risk and uncertainty occupy a vague continuum rather than two distinct categories.<sup>34</sup>

Moreover, the distinction between risk and uncertainty does not map neatly onto the distinction between established and emerging companies. Many established public companies take on projects that are uncertain bets.<sup>35</sup> At times, emerging companies have compelling business plans that reflect sophisticated knowledge of a market.

Despite its flaws, the distinction between Knightian Risk and Uncertainty provides a way of roughly differentiating between types of companies and understanding how the valuation process differs for established and emerging companies. To the extent that it is possible to turn uncertainties into risk, it is possible to support a conception of rational valuation.

### B. Valuation and Securities Regulation

The value of a company's stock is typically calculated using the present value model, which takes the stream of earnings a company is expected to make in future years and makes an adjustment to determine what those earnings are worth today.<sup>36</sup> This model explains why a company without profits can have a substantial valuation if investors believe it is likely to be profitable in the future. Investors are willing to pay significant amounts in the present for an investment they expect will generate substantial earnings over time.

A company can only be meaningfully valued if it is possible to generate Knightian probability distributions concerning its performance. It is easier to value established companies because they have access to better information than emerging companies that permits them to calculate Knightian Risk. If a company's prospects are completely shrouded in Knightian Uncertainty, investors cannot make an informed assessment of its future profitability. Purchasing stock in such a company is essentially a gamble. An emerging

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<sup>33</sup> See generally *id.*; see also Daniel A. Farber, *Uncertainty*, 99 GEO. L.J. 901, 903 (2011) (observing that "[u]ncertainty is particularly pernicious in situations in which catastrophic outcomes are possible, but conventional statistical tools do not always do well in such situations").

<sup>34</sup> See, e.g., Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1724 (2004) ("In the real world, there is a spectrum running from uncertainty to risk depending on the degree of ignorance of probabilities and states").

<sup>35</sup> Joseph Schumpeter believed that only large companies could adequately manage uncertainty and thus would eventually supplant the entrepreneur. See JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 134 (3d ed. 1950) (Harper ed. 1975).

<sup>36</sup> The present value model discounts future earnings because a dollar received in a later period is worth less than a dollar that is received today. Thus, if a company is expected to earn \$5 in year 1, \$5 in year 2, \$5 in year 3, \$5 in year 4, and \$5 in year 5, the \$5 earned in later periods will be discounted more than the \$5 earned in an earlier period. If a company's earnings are expected to grow substantially, earnings in later periods can be valued highly even though they are discounted more than earnings in earlier periods.

company that wishes to sell stock to the public thus typically utilizes an underwriter who vouches that its projections of financial performance are sufficiently sound to support a public valuation.

Securities regulation can be understood as encouraging the disclosure of information that permits investors to calculate Knightian Risk. Complying with mandatory disclosure rules requires an organization that has become sufficiently developed to compile information that can be used to generate reliable risk assessments. Liability for misstatements in such disclosure provides incentives for companies to truthfully represent their valuations.

### 1. Established Companies

For established companies, the past can help predict the future.<sup>37</sup> A history of solid financial results can be used to generate Knightian probability distributions about a company's future profitability. An investor can view the company's financial statements to assess its past results and evaluate the plans of experienced management to predict what the company might earn over the future. While there is always a risk that future estimates are incorrect, if there is enough confidence in such estimates, it is possible to generate reasonable valuations.

Just as insurance companies developed ways to predict claims, established companies developed managerial techniques to formulate predictions of their performance. As corporations grew larger towards the beginning of the twentieth century, they became increasingly managed by professional managers. Such managers supervised the allocation of resources and monitored corporate performance. As financial reporting became more sophisticated, managers could track the company's income and expenses and generate a record of past performance. In addition, they made predictions of such income and expenses so that they could prepare budgets for planning purposes.<sup>38</sup>

As the process of making internal forecasts of corporate performance improved, it became possible to reduce the Knightian Uncertainty about corporate profitability. Knight himself referred to estimates as a way of reducing uncertainty. He noted that “[t]he business man himself not merely forms the best estimate he can of the outcome of his actions, but he is likely to be able to estimate the probability that his estimate is correct.”<sup>39</sup> Competent managers can provide forecasts of future performance based on their

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<sup>37</sup> See, e.g., TIM KOLLER, MARC GOEDHART & DAVID WESSELS, *VALUATION: MEASURING AND MANAGING THE VALUE OF COMPANIES* 732 (McKinsey and Company, 7th ed. 2020) (“When valuing an established company, the first step is to analyze historical performance.”).

<sup>38</sup> For an overview of this shift, see James J. Park, *From Markets to Managers: Valuation and Shareholder Wealth Maximization*, J. CORP. L. (forthcoming 2022).

<sup>39</sup> KNIGHT, *supra* note 4, at 226.

judgment and past experience.<sup>40</sup> These projections of financial results can be conveyed to investors who can use them to accurately value a company.

While some established companies of significant size remain private, most are public companies. The securities laws mandate periodic disclosure so long as a company's securities are widely owned by the public,<sup>41</sup> enabling investors to make meaningful assessments of Knightian Risk for public established companies. These basic disclosure mandates have been supplemented over the years to require reliable internal controls that help ensure the accuracy of corporate information.<sup>42</sup> Established public companies that comply with these periodic disclosure requirements are able to sell securities to the public through a streamlined process.<sup>43</sup>

## 2. Emerging Companies

In contrast to established companies, emerging companies are by definition "designed to create a new product or service under conditions of extreme uncertainty."<sup>44</sup> They have little or no history of profitability that can be used to develop sound forecasts.<sup>45</sup> The promoters of a company may have a business plan that projects earnings into the future,<sup>46</sup> but without the anchor of past results and experience, such numbers must be substantially discounted and may even be completely meaningless.<sup>47</sup>

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<sup>40</sup> For the economist John Kenneth Galbraith, the size of established corporations enabled them to develop "careful projections of output; careful control of prices; careful steps to see that the projections of output are validated in the greatest possible measure by consumer response; and careful steps to see that the things needed for production – labor, components, machinery – are available in the requisite amounts at the anticipated prices at the right time." JOHN KENNETH GALBRAITH, *THE NEW INDUSTRIAL STATE* 354 (1967).

<sup>41</sup> Securities Exchange Act of 1934 § 13(b)(2)(A), 15 U.S.C. § 78j(b) (2012).

<sup>42</sup> Sarbanes-Oxley Act § 404, Pub. L. No. 107-204, 116 Stat. 745 (2002).

<sup>43</sup> Companies that have been public for a time need not file an extensive registration statement but can refer to earlier SEC disclosures. *See* SEC Form S-3, Registration Statement Under the Securities Act of 1933, 17 C.F.R. § 239.13 (2018). Larger public companies can sell securities without SEC approval. *See* Securities Offering Reform, Securities Act Release No. 8591, Exchange Act Release No. 52,056, Investment Company Release No. 26,993, 70 Fed. Reg. 44,722, 44,726–30 (Aug. 3, 2005).

<sup>44</sup> ERIC RIES, *THE LEAN STARTUP* 27 (2011).

<sup>45</sup> *See, e.g., id.* at 9 ("Planning and forecasting are only accurate when based on a long, stable operating history and a relatively static environment. Startups have neither.").

<sup>46</sup> *See, e.g.,* J. William Gurley, *Internet Investors Beware*, FORTUNE, Nov. 8, 1999, at 300 (noting role of persuasive story of growth in start-up valuation); *see also* Robert McGough, *If Concept Stocks Are Stuff Dreams Are Made On, Does a Rude Awakening Loom?*, WALL ST. J., Feb. 17, 2000, at C1, C4 (observing that internet company valuations were based on business plans rather than past earnings record).

<sup>47</sup> *See, e.g.,* RIES, *supra* note 44, at 115 ("Startups are too unpredictable for forecasts and milestones to be accurate."). Investors may attempt to assess the prospects of companies that are not yet profitable based on alternative metrics that assess their future performance. *See, e.g.,* Brett Trueman, M. H. Franco Wong & Xiao-Jun Zhang, *The Eyeballs Have It: Searching for the Value in Internet Stocks*, 38 J. ACCT. RES. 137 (2000) (describing use of page views and unique visitors for valuation of internet companies).

The value of a start-up lies in intangible assets such as an idea for a new technology or business.<sup>48</sup> As noted by a historian of entrepreneurship, venture capital investors emphasize “investing in three areas: people, technology, and markets.”<sup>49</sup> Intangible assets, such as talent and ideas, are more difficult to value than land or factories.

A new company may create a significant amount of economic value or it can be worthless. Rather than a range of outcomes that can be assigned meaningful probability weights, there is a high probability of failure that must be weighed against an indeterminate possibility of success. While investors can develop models that predict the frequency of different outcomes,<sup>50</sup> it is challenging to develop meaningful Knightian probabilities when there is a high variance in potential results.<sup>51</sup>

Because of the uncertainties in valuing emerging companies, securities regulation was initially directed at the sale of securities to the public by new companies. Federal statutes were passed in the 1930s in part because of the belief that billions of dollars of worthless securities by new ventures had been issued in the years leading up to the stock market crash of 1929.<sup>52</sup> Speculators who borrowed money to buy stocks on margin drove up the price of securities, either out of ignorance or to manipulate prices, were widely blamed for the collapse.<sup>53</sup> The sentiment at the time was reflected in the first edition of Benjamin Graham and David Dodd’s classic treatise on securities valuation, which warned against the danger of speculating on a company’s future earnings.<sup>54</sup>

The Securities Act of 1933 thus requires companies selling shares to the public to file an extensive disclosure document—the registration statement.<sup>55</sup> To complete this filing, a company must have a history of audited financial statements with at least three years of income statements.<sup>56</sup> This basic re-

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<sup>48</sup> See, e.g., DAMODARAN, *supra* note 9, at 644 (noting that a start-up firm will often “derive the bulk of its value from intangible assets.”).

<sup>49</sup> TOM NICHOLAS: VC: AN AMERICAN HISTORY 184 (2019).

<sup>50</sup> KOLLER et. al., *supra* note 37, at 719 (“A simple and straightforward way to deal with uncertainty associated with high-growth companies is to use probability-weighted scenarios.”).

<sup>51</sup> See, e.g., DAMODARAN, *supra* note 9, at 661 (“The valuation of a firm with negative earnings, high growth, and limited information will always have estimation error.”).

<sup>52</sup> See, e.g., RALPH F. DE BEDTS, *THE NEW DEAL’S SEC: THE FORMATIVE YEARS* 47 (1964) (“During the post-war decade some fifty billion dollars of new securities were floated in the United States. Fully half or twenty-five billion dollars worth of securities floated during this period have been proved to be worthless.”).

<sup>53</sup> STUART BANNER, *SPECULATION: A HISTORY OF THE FINE LINE BETWEEN GAMBLING AND INVESTING* 171, 174, 178 (2017).

<sup>54</sup> BENJAMIN GRAHAM & DAVID L. DODD, *SECURITY ANALYSIS: PRINCIPLES AND TECHNIQUES* 307 (1st ed. 1934). Graham and Dodd were the founders of the philosophy of value investing, which has been highly influential.

<sup>55</sup> See Securities Act of 1933 § 5, 15 U.S.C. § 77e (2018).

<sup>56</sup> See Securities Act of 1933, Schedule A, 15 U.S.C. § 77aa(26) (2018).

quirement is meant to protect investors by requiring some history of operations that they can evaluate.<sup>57</sup>

Because it is difficult to value an emerging company, investors rely on underwriters, who assist in distributing the securities to the public, to conduct due diligence and survey investors to reach a reasonable valuation at which its stock will be offered to investors. The typical IPO, where a company sells stock to the public for the first time, involves a “firm commitment” by the underwriter to purchase the shares before distributing them to investors, who often have a relationship with the underwriter. Because an underwriter will initially purchase the stock from the company and then distribute the stock to its clients, it has an incentive to not underwrite a company where there is only Knightian Uncertainty about its prospects.<sup>58</sup>

Scholars have long recognized that underwriters generally verify information about the issuer.<sup>59</sup> In doing so, the underwriter’s most important task is to determine the IPO price, the price at which the shares are initially distributed to investors. Such a price is based on the present value of the company’s projected earnings,<sup>60</sup> and thus reflects the underwriter’s assessment of such earnings.<sup>61</sup> In projecting the issuer’s earnings, the underwriter relies on its own expertise as well as information it gathers while placing the shares with investors.<sup>62</sup> When an underwriter prices an IPO, it is making a statement that it has a sufficient understanding of the risks of the company’s business to come to a reasonable determination of the company’s projected

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<sup>57</sup> There is still great uncertainty about the extent to which disclosure affects investor decision-making, especially given the reality that many investors do not have the knowledge to evaluate financial statements. See, e.g., Lisa Fairfax, *The Securities Law Implications of Financial Illiteracy*, 104 VA. L. REV. 1065 (2018).

<sup>58</sup> See, e.g., Michael P. Dooley, *The Effects of Civil Liability on Investment Banking and the New Issues Market*, 58 VA. L. REV. 776, 786 (1972) (“The managing underwriter occupies a position with respect to the issuer which is both semi-adverse and not without clout, because withdrawal of the manager may effectively eliminate the chances of a successful offering.”).

<sup>59</sup> See, e.g., Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 619 (1984).

<sup>60</sup> See, e.g., Marc Deloof, Wouter De Maeseneire & Koen Inghelbrecht, *How Do Investment Banks Value Initial Public Offerings (IPOs)?*, 36 J. BUS. FIN. & ACCOUNT. 130, 140-41 (2009) (finding that all IPOs in sample used discounted cash flow method for pricing IPO).

<sup>61</sup> *Id.* at 787 (“Pricing an issue to reflect the long run prospects of the issuing corporation is essential to the allocational efficiency of the new issues markets.”); see also James C. Spindler, *IPO Liability and Entrepreneurial Response*, 155 U. PA. L. REV. 1187, 1197 (2007) (noting that “[f]orward-looking information, such as earnings forecasts, is particularly important” to investors in pricing an IPO).

<sup>62</sup> See, e.g., Sean J. Griffith, *Spinning and Underpricing: A Legal and Economic Analysis of the Preferential Allocation of Shares in Initial Public Offerings*, 69 BROOK. L. REV. 583, 619 (2004) (“Underwriters recommend an offering price on the basis of the information they gather during the book-building process.”); Peter B. Oh, *A View of the Dutch IPO Cathedral*, 2 ENTREP. BUS. L.J. 615, 626 (2008) (observing that “through meetings, an underwriter disseminates information about an issuer to prominent prospective investors while collecting their reputationally-bonded valuations and building a book of orders.”). The process has been described as “part art and part science.” Shane A. Corwin & Paul Schultz, *The Role of the IPO Underwriting Syndicates: Pricing, Information Production, and Underwriter Competition*, 60 J. FIN. 443, 448 (2005).

earnings over time. This process does not necessarily eliminate Knightian Uncertainty concerning the prospects of an emerging company, but it provides additional assurance that a company is ready to be valued by markets. While underwriters have been known to underwrite questionable companies, an underwriter that consistently backs companies that fail will suffer reputational consequences. The IPO price thus serves as an important reference point when the company's stock begins trading in secondary markets. Regardless of what investors are willing to pay for the stock, the IPO price reflects a valuation based on an assessment of the company's Knightian Risk.

The Securities Act of 1933 bolstered the existing industry practice of using an underwriter by creating a powerful liability provision that gave underwriters an incentive to ensure that the registration statement contains information that serves as an adequate justification for the IPO price. Section 11 of the Securities Act imposes liability on underwriters (as well as other parties) for investor losses if the price of the stock declines below its IPO price and there are material misstatements in the company's registration statement.<sup>63</sup> Underwriters have a defense to such liability if they can show that they performed sufficient due diligence on the company before it sold its shares.<sup>64</sup> This provision thus provides underwriters with an incentive to verify that the IPO price adequately reflects risk and is not completely based on uncertainty.<sup>65</sup> Section 11 essentially provides assurance to investors that a portion of a new public company's stock price is based on reasonable projections of its future performance and that they are not speculating on an uncertain gamble.

The underwriting process at times has helped check irrational exuberance about a company's valuation. For example, in 2019, the company WeWork, which was valued in private markets at close to \$50 billion, was planning an IPO at a significantly higher market value.<sup>66</sup> Various investment banks that were seeking lead underwriter status for the offering argued that the company's IPO valuation could approach \$100 billion.<sup>67</sup> But after due

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<sup>63</sup> See Securities Act of 1933 § 11(a), 15 U.S.C. § 77k(a) (2018).

<sup>64</sup> See *id.* at § 11(b)(3), 15 U.S.C. § 77k(b)(3).

<sup>65</sup> The selling process for shares of new public companies is also regulated to encourage investors to assess the risks of the investment rather than basing their decisions on incomplete information. Companies must not sell shares to investors until the SEC approves the registration statement. Communications by the company relating to the securities sale are restricted before the registration statement is filed and approved. The SEC has interpreted these rules broadly so that they include not only explicit offers to sell securities but also efforts to indirectly increase interest in the securities sale. See Securities Act Release No. 33-3844, 22 Fed. Reg. 8359 (Oct. 8, 1957). By restricting the selling process, the securities laws encourage investors to base their decision on the risks described in the registration statement.

<sup>66</sup> See, e.g., Peter Eavis & Michael J. de la Merced, *WeWork I.P.O. is Withdrawn as Investors Grow Wary*, N.Y. TIMES (Sept. 30, 2019), <https://www.nytimes.com/2019/09/30/business/wework-upo.html>.

<sup>67</sup> See, e.g., Donald C. Langevoort & Hillary A. Sale, *Corporate Adolescence: Why Did "We" Not Work?*, 99 TEX. L. REV. 1347, 1372 (2021).

diligence and consulting with institutional investors, the selected underwriters realized that there was not a reasonable basis for such a high valuation.<sup>68</sup> The company's business model was unsustainable and there were questions about self-dealing by its founder. WeWork's private market valuation was based on uncertain projections of the company's future growth. The WeWork IPO was thus withdrawn, and the company reached the brink of bankruptcy before receiving private funding at a much lower valuation.<sup>69</sup>

When a company is shrouded in Knightian Uncertainty, it should not pass muster with underwriters. Until an investment in a company reaches the point where it is viewed through the lens of Knightian Risk, the company is limited in its ability to sell securities to the public.

## II. ENTREPRENEURSHIP AND THE DISRUPTION OF SECURITIES REGULATION

Over the last fifteen years, an unprecedented amount of wealth has been created by new entrepreneurial companies. While there have been other periods where investors have been willing to speculate on the value of new companies, particularly those developing promising technologies, no other era has resulted in the growth of so many emerging companies into market giants. Unlike other entrepreneurial booms, the market value that has been generated has been sustained over a substantial period. Many successful public and private companies achieved high valuations even before they had demonstrated that they were profitable.

While some of the exuberance of the times reflects an extended period of low interest rates that encourage risk-taking, valuations in this market are also based on past experience. The most successful emerging companies have demonstrated that they can generate significant earnings over time. As a result, investors valuing new companies are more comfortable that they are taking on Knightian Risk as opposed to Knightian Uncertainty.

The greater confidence in the prospects of emerging companies has helped create pressure to change securities regulation. The most notable modern effort to do so is the Jumpstart Our Business Startups Act of 2012 (JOBS Act), which reflects two policies that challenged the traditional focus on protecting investors from Knightian Uncertainty.<sup>70</sup> The first is to make it easier for emerging companies to go public. The second is to increase the ability of investors to purchase securities of emerging companies that are still private.

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<sup>68</sup> See Eavis & de la Merced, *supra* note 66.

<sup>69</sup> The company was later acquired by a SPAC at a valuation of \$9 billion. See Maureen Farrell & Eliot Brown, *WeWork Agrees to SPAC Deal That Would Take Startup Public*, WALL ST. J. (Mar. 26, 2021), [www.wsj.com/articles/wework-agrees-to-spac-deal-that-would-take-startup-public-11616752804](http://www.wsj.com/articles/wework-agrees-to-spac-deal-that-would-take-startup-public-11616752804).

<sup>70</sup> Jumpstart Our Business Startups Act, Pub. L. No. 112-106, 126 Stat. 306 (2012).



### A. Valuation Precedents

One explanation for the surge in emerging company valuations is irrational exuberance by investors.<sup>71</sup> Spurred on by the excitement of a new paradigm, unsophisticated investors are willing to invest uncritically in companies with uncertain prospects. While this view likely explains part of the current success of entrepreneurial companies, it tells an incomplete story. Without the support of sophisticated investors, the valuations of these ventures would not have persisted.

The Knightian framework provides a different explanation for why investors are more confident in assigning high valuations to emerging companies. Past experience has provided a basis for believing that investors can assess the risk of such investments. Just as an insurance company learns about the risk of failure by observing claims over time, investors have learned that a significant percentage of promising emerging companies can generate significant profits over time.

The uncertainty of predicting the future earnings of a company can seem more manageable when there are comparable companies that have achieved spectacular success. Valuation in any context is facilitated when there is a baseline that can be used as a starting point.<sup>72</sup> When prior companies have succeeded in creating value, they create precedents that can be used to assign values to new companies. The experience of similar companies can be used to generate Knightian probabilities that anchor the valuations of new companies.<sup>73</sup>

This is not the first period where investors have been willing to pay high prices for the securities of new entrepreneurial companies. During the 1980s, the boom in IPOs by companies in the computer industry was supported by companies like Apple, which went from a start-up operated in a garage worth less than \$10,000 to a public company with a \$1.7 billion mar-

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<sup>71</sup> See, e.g., ROBERT SHILLER, *IRRATIONAL EXUBERANCE* xii-xiii (2000) (arguing that “the present stock market displays the classic features of a speculative bubble: a situation in which temporarily high prices are sustained largely by investors’ enthusiasm rather than by consistent estimation of real value.”); Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U. L. REV. 135, 145-47, 156-63 (2002) (discussing overconfidence bias of investors). We are currently in such a period where there is broad investor participation that is having a significant impact on the valuations of some stocks. See Sec. & Exch. Comm’n, Staff Report on Equity and Options Market Structure Conditions in Early 2021 43 (Oct. 14, 2021).

<sup>72</sup> See, e.g., ANDREW METRICK & AYAKO YASUDA, *VENTURE CAPITAL & THE FINANCE OF INNOVATION* 183 (3d ed. 2021) (noting that “among VCs, comparables analysis is by far the most popular method of exit valuation.”); see also JOSHUA ROSENBAUM & JOSHUA PEARL, *INVESTMENT BANKING: VALUATION, LEVERAGED BUYOUTS, AND MERGERS & ACQUISITIONS* 11 (2009) (“The foundation for trading comps is built upon the premise that similar companies provide a highly relevant reference point for valuing a given target due to the fact that they share key business and financial characteristics, performance drivers, and risks. Therefore, the banker can establish valuation parameters for the target by determining its relative positioning among peer companies.”).

<sup>73</sup> See, e.g., SHILLER, *supra* note 71, at 138.

ket capitalization within three years.<sup>74</sup> The first internet boom was kicked off in the 1990s by the successful IPO of the early internet browser Netscape, which soared to a valuation of \$2.2 billion in its first day of trading.<sup>75</sup> As other internet companies such as Amazon, eBay, and Priceline achieved high valuations, they provided a basis for valuing other internet companies.<sup>76</sup>

The second internet boom, which continues today, was founded on the successes of Google and Facebook, which not only went public at high valuations (Google at \$23 billion and Facebook at \$100 billion) but have seen substantial growth in their market capitalizations over the years, as they began generating billions of dollars in profits. Importantly, these values have persisted. When going public, both companies had modest profits that would not have supported their IPO valuations without an expectation of future success. The year before its IPO, Google generated a net income of about \$100 million on revenue of about \$1 billion. At the end of 2019, Google had net income of \$31 billion on revenue of about \$182 billion. The year before its IPO, Facebook had net income of \$1 billion on revenue of \$3.7 billion. At the end of 2019, Facebook had net income of \$29 billion on revenue of about \$86 billion. Both companies saw their valuations grow as their performance not only validated prior expectations of profitability but increased them. By the end of 2021, Facebook had a market capitalization in the neighborhood of \$1 trillion and Google had a market capitalization of about \$2 trillion.

Rather than precisely predicting a new company's stream of earnings, an investor can construct a valuation model that assesses the potential of the business model relative to past precedents.<sup>77</sup> An emerging company like Snap or Twitter may not be profitable today, but if it is only 10% as successful as Facebook, it could justify a valuation in the tens of billions of dollars. Even companies that are not yet public can see their valuations bolstered by high valuations of comparable companies in public markets.<sup>78</sup> New entrepreneurial companies can thus build on the foundation of prior successes in convincing investors to pay for the prospect of earnings today.

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<sup>74</sup> See MICHAEL MORITZ, RETURN TO THE LITTLE KINGDOM: HOW APPLE AND STEVE JOBS CHANGED THE WORLD 276 (1984).

<sup>75</sup> See Molly Baker, *Technology Investors Fall Head Over Heels for Their New Love: Little Stock Called Netscape is Lofted to the Heavens in a Frenzy of Trading*, WALL ST. J. (Aug. 10, 1995), <https://www.wsj.com/articles/SB108203965398683708>.

<sup>76</sup> See, e.g., Joseph Nocera, *Do You Believe? How Yahoo! Became A Blue Chip*, FORTUNE, (June 7, 1999), [https://money.cnn.com/magazines/fortune/fortune\\_archive/1999/06/07/261087/index.html](https://money.cnn.com/magazines/fortune/fortune_archive/1999/06/07/261087/index.html) (noting focus of internet stocks on relative valuations).

<sup>77</sup> In justifying the \$4 billion valuation of a private company, an investor explained: "Facebook's market capitalization is more than \$850 billion 'If you think that audio is some fraction of that, then the opportunity to be a live audio platform is a many tens of billions of opportunity by itself.'" Heather Somerville, *Silicon Valley's Deal Machine is Cranking: 'I've Never Seen It This Frenzied'*, WALL ST. J., (Apr. 21, 2021), [www.wsj.com/articles/startups-crack-records-as-more-money-flows-to-silicon-valley-11619004801](http://www.wsj.com/articles/startups-crack-records-as-more-money-flows-to-silicon-valley-11619004801).

<sup>78</sup> See, e.g., Elisabeth de Fontenay, *The Deregulation of Private Capital and the Decline of the Public Company*, 68 HAST. L.J. 445, 490-94 (2017) (describing how public company valuations can subsidize private company valuations).

When markets are convinced of the possibility of transformative change, they can value promising companies based upon the potential that they will capture a significant percentage of an established market.<sup>79</sup> Some companies are able to grow through network effects as they reach a critical mass of consumers.<sup>80</sup> An analyst can first estimate the size of that market and then project the percentage of the market that may be captured by the company. Based upon that calculation, the analyst can develop a forecast of future earnings.

For example, Amazon for many years commanded a high valuation despite delivering relatively modest profits. For some time, its earnings were lower than companies with much lower market values (as late as 2017, its annual net income was about \$3 billion, which supported a market value of about \$400 billion). The bulk of the company's market capitalization reflected a belief that the market power developed by the company would result in strong profits in the future.<sup>81</sup> As the company first dominated the market for book sales and then expanded its ambition to sales of other products and cloud computing, investors became more certain about its future profits. Eventually, the company fulfilled expectations for market dominance and justified its earlier valuation.

The initial success of a group of companies can result in a dynamic where investors are more willing to commit capital to new companies. The creation of entire new industries has often been financed through the sale of securities. The railroads were partly funded by foreign capital willing to place bets on the completion of new lines.<sup>82</sup> The invention of the light bulb and resulting efforts to provide electricity to households was said to help spur the speculative boom that eventually led to the stock market crash of 1929.<sup>83</sup> Computer companies have been the subject of entrepreneurial investment several times.<sup>84</sup> For example, the development of the personal com-

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<sup>79</sup> For example, in its early days, Amazon was valued based on its potential to disrupt the book business. See, e.g., Andrew Bary, 'Net Queen: How Mary Meeker Came to Rule the Internet', *BARRON'S*, Dec. 21, 1998, at 23, 25 (describing valuation based on size of online book sales); Jeanne Lee, *Net Stock Frenzy*, *FORTUNE*, Feb. 1, 1999, at 148, 149 (basing valuation on percentage of market and profit margin).

<sup>80</sup> See, e.g., RIES, *supra* note 44, at 117.

<sup>81</sup> The value of Amazon has also facilitated its ability to buy competitors and further increase its market power. See Lina Khan, *Amazon's Antitrust Paradox*, 726 *YALE L.J.* 710, 747-54, 787-88 (2017).

<sup>82</sup> See, e.g., CARTER F. HENDERSON & ALBERT C. LASHER, 20 MILLION CARELESS CAPITALISTS 39 (1967); ROBERT SOBEL, *THE FALLEN COLOSSUS: THE GREAT CRASH OF THE PENN CENTRAL* (1977).

<sup>83</sup> See, e.g., BANNER, *supra* note 53, at 166 (noting that the speculative boom in the 1920s was driven by companies developing electricity and related products); NICHOLAS, *supra* note 49, at 59.

<sup>84</sup> See, e.g., MAGGIE MAHAR, *BULL: A HISTORY OF THE BOOM AND BUST, 1982-2004* 41 (2004) (describing Nifty Fifty stocks such as Xerox, Polaroid, and Digital Equipment that were seen as having strong growth potential); see also BARUCH LEV, *INTANGIBLES: MANAGEMENT, MEASUREMENT, AND REPORTING* 9 (2001) (describing shift to industries that rely on intangible assets).

puter in the 1980s created new opportunities for both hardware and software companies.<sup>85</sup> The widespread use of the internet in the 1990s prompted perhaps the most famous boom in entrepreneurial investing.<sup>86</sup>

Rather than insist upon a history of profits, investors have become increasingly willing to assign valuations based largely on future profitability. While a substantial number of IPOs of non-profitable companies have been in the technology industry, the percentage of IPOs involving non-profitable companies in other industries has also increased. As Table 1 shows, the percentage of IPOs of companies with profits has declined over the last decade, indicating that investors are more willing to purchase stock in emerging companies.<sup>87</sup>

TABLE 1: PERCENTAGE OF IPOs INVOLVING PROFITABLE COMPANIES

Year	Tech Company IPOs	Percentage of IPOs of Tech Companies with Profits	Non-Tech Company IPOs	Percentage of IPOs of Non-Tech Companies with Profits
2009	14	71%	24	71%
2010	33	64%	47	70%
2011	36	36%	37	59%
2012	40	43%	43	77%
2013	45	27%	72	58%
2014	51	16%	81	57%
2015	38	26%	38	66%
2016	21	29%	29	59%
2017	30	17%	44	42%
2018	39	15%	37	51%
2019	37	30%	27	50%
2020	44	19%	44	47%

This Table was compiled from Jay Ritter, Initial Public Offerings: Updated Statistics, Table 4b (June 21, 2021), [site.warrington.ufl.edu/ritter/files/IPO-Statistics.pdf](http://site.warrington.ufl.edu/ritter/files/IPO-Statistics.pdf).

<sup>85</sup> See, e.g., NICHOLAS, *supra* note 49, at 234-39 (describing boom in venture capital investments in computer industry during early 1980s).

<sup>86</sup> See, e.g., Erick Schonfeld, *How Much Are Your Eyeballs Worth*, FORTUNE, Mar. 1, 1999, at 217 (noting reliance on alternative metrics of valuation for internet companies without earnings); Leslie Scism & Rebecca Buckman, *High Price of Amazon.com is Raising Some Eyebrows*, WALL ST. J., Jul. 8, 1998, at C1, C2 (describing models that predicted earnings based on number of users).

<sup>87</sup> Until the mid-1990s, the New York Stock Exchange required that firms be profitable in order to list on the exchange. Patricia A. Dechow, Scott A. Richardson & Irem Tuna, *Why Are Earnings Kinky? An Examination of the Earnings Management Explanation*, 8 REV. ACCOUNT. STUD. 355, 379 (2003). Now, it is routine for companies without profits to go public.

The wealth generated by successful companies can support additional entrepreneurial efforts. As early investors and employees with stock options see their investments pay off, they have additional resources that they can redeploy to invest in new companies.<sup>88</sup> Moreover, corporate giants like Google and Facebook have used their highly valued stock to purchase technology companies for significant amounts (YouTube for \$1.65 billion in the case of Google and Instagram for \$1 billion in the case of Facebook). With the creation of a market for private transactions, there is additional support for high investor valuations of entrepreneurial companies.

Finally, as high valuations attract more private capital, emerging companies can wait longer before going public. The median age of IPO companies has increased from 8 years during the 1980s and 1990s to 11 years from 2000 to 2020.<sup>89</sup> With more time to mature and develop a strong managerial infrastructure, investors have more assurance that such companies have a viable business model when they sell securities to the public. Indeed, some companies that have gone public in this entrepreneurial boom can be described as established rather than emerging.

### *B. Securities Regulation and the Entrepreneurs*

The success of emerging companies has resulted in pressure on the securities laws to the extent that they restrict investment in entrepreneurial companies that have not yet gone public. As private companies are increasingly valued based on past successes in the public markets, the traditional assumption that private companies are shrouded in uncertainty while the risks of public companies can be determined has become more questionable. Earlier protections that attempted to reduce uncertainty seem less necessary and are viewed as deterring companies from going public. The SEC's vague invocation of investor protection has been essentially ineffective in responding to arguments for deregulation.

#### 1. IPOs and Uncertainty

As venture capitalists realized billions of dollars in investment gains,<sup>90</sup> their political clout grew.<sup>91</sup> Their lobbying helped result in the passage of the

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<sup>88</sup> Some secondary markets have emerged that permit employees to resell securities in private companies. See Elizabeth Pollman, *Information Issues of Wall Street 2.0*, 161 U. PA. L. REV. 179 (2012).

<sup>89</sup> See Jay R. Ritter, *Initial Public Offerings: Median Age of IPOs Through 2020* (Jan. 11, 2021), <https://site.warrington.ufl.edu/ritter/files/IPOs-Age.pdf>.

<sup>90</sup> IPOs backed by venture capital from 1995 to 2019 created around \$5 trillion in market value. See Josh Lerner & Ramana Nanda, *Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn*, 34 J. ECON. PERSP. 237, 240 (2020).

<sup>91</sup> See Adi Robertson, *In Obama Campaign, Tech Industry Donors Could be Outspending Their Hollywood Counterparts*, THE VERGE (Sept. 16, 2012), <https://www.theverge.com/2012/9/16/3341412/obama-tech-industry-fundraisers>.

JOBS Act, a statute that was extraordinary not only because it was devoted to relaxing securities regulation to facilitate fundraising by emerging companies,<sup>92</sup> but because many of its provisions were modeled on ideas developed by interests representing entrepreneurs.

The JOBS Act is best understood as a reaction to two federal statutes, Sarbanes-Oxley and Dodd-Frank, which were designed to require public companies to produce information that would reduce uncertainty with respect to public company valuations. Sarbanes-Oxley was passed after accounting frauds at major public corporations such as Enron and WorldCom, which created uncertainty about the validity of all public company market valuations. Sarbanes-Oxley requires significant investment by public corporations in internal controls that are meant to provide a reasonable assurance that there are no material misstatements in a company's financial statements.<sup>93</sup> These controls are meant to ensure that the information used by investors to value companies is accurate. The financial crisis of 2008, which originated in the housing market and threatened the solvency of the nation's financial institutions, prompted the passage of the Dodd-Frank Act in 2009.<sup>94</sup> The crisis revealed that the largest financial institutions did not have a sufficient understanding of the risks on their balance sheets and that their executives had an incentive to take on opaque risk in order to boost profits. Dodd-Frank thus increased federal corporate governance requirements such as mandatory advisory votes by shareholders judging executive pay packages.

The costs of turning uncertainty into risk can be significant. While the expense of statutes like Sarbanes-Oxley is manageable for large companies and falls over time, measures to reduce uncertainty can be burdensome for emerging companies that have not had the time to develop a bureaucratic infrastructure.<sup>95</sup> The combined impact of Sarbanes-Oxley and Dodd-Frank thus limited IPOs to companies that had invested heavily in measures to

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<sup>92</sup> See, e.g., Robert B. Thompson & Donald C. Langevoort, *Redrawing the Public-Private Boundaries in Entrepreneurial Capital Raising*, 98 CORNELL L. REV. 1573, 1574 (2013) ("The JOBS Act plainly creates more space on the less (or un-) regulated private side of the line, where we think – for better or worse – its biggest long-term impact will be.").

<sup>93</sup> Sarbanes-Oxley Act § 404, Pub. L. No. 107-204, 116 Stat. 745 (2002).

<sup>94</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

<sup>95</sup> See, e.g., John C. Coates IV, *The Goals and Promise of the Sarbanes-Oxley Act*, 21 J. ECON. PERSP. 91, 107 (2007). The SEC was aware of this issue and made efforts to exempt small companies from Sarbanes-Oxley's requirements. It commissioned an Advisory Company on Smaller Public Companies to consider various options for reducing the burdens of the regulation. See ADVISORY COMMITTEE ON SMALLER PUBLIC COMPANIES, FINAL REPORT 59 (2006). It provided temporary exemptions from Sarbanes-Oxley's internal controls requirements for companies with under \$75 million in publicly traded securities. See, e.g., Management's Report on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, Exchange Act Release No. 49, 313, 69 Fed. Reg. 9722, 9722 (Mar. 1, 2004). This exemption was not made final until 2010, see Dodd-Frank Wall Street Reform and Protection Act, § 989G, Pub. L. No. 111-213, 124 Stat. 1376, 1948 (2010), creating uncertainty about the costs of public company status.

reduce Knightian Uncertainty.<sup>96</sup> As a result, it became more difficult for emerging companies to access funds from public investors.<sup>97</sup>

As the number of companies filing for IPOs declined, entrepreneurs and their investors mobilized to argue that the investor protection measures required by these laws had gone too far. The JOBS Act was modeled on a report authored by an IPO Task Force that was headed by a former head of the National Venture Capital Association. The report proposed the creation of an on-ramp for IPOs by “emerging growth companies.”<sup>98</sup> The regulatory requirements of Sarbanes-Oxley and Dodd-Frank would be temporarily relaxed to facilitate the public offerings of such companies.<sup>99</sup> It also proposed that companies be permitted to file registration statements with the SEC confidentially so that mistakes in these documents could be resolved privately.<sup>100</sup>

The JOBS Act was passed fewer than six months after the publication of the IPO Task Force’s report and essentially adopted the proposal for an on-ramp. It defined companies with under \$1 billion in revenue as “emerging growth companies” that are exempt for five years from Sarbanes-Oxley’s requirement to assess and verify a company’s internal controls,<sup>101</sup> are not subject to mandatory audit firm rotation for five years,<sup>102</sup> are not subject to certain executive compensation disclosures imposed by Dodd-Frank for five years,<sup>103</sup> and are permitted to submit draft registration statements to the SEC for review prior to an offering.<sup>104</sup>

The JOBS Act provision that most reflected an increasing comfort with Knightian Uncertainty reduced the number of years of financial statements that must be provided to investors. Emerging growth companies have the

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<sup>96</sup> While the number of IPOs declined after the passage of these laws, it is notable that the contribution of the largest public companies to U.S. economic activity has not declined significantly and has even risen. See Margaret M. Blair, *Are Publicly Traded Corporations Disappearing?*, 105 CORNELL L. REV. 641, 643 (2020); but see Stephen M. Bainbridge, *How American Corporate and Securities Law Drives Business Offshore*, in THE AMERICAN ILLNESS 381, 382-83 (F.H. Buckley ed., 2013) (arguing that regulation has contributed to decline of competitiveness of U.S. capital markets).

<sup>97</sup> The SEC made some efforts to increase the attractiveness of public company status soon after the passage of Sarbanes-Oxley. See James J. Park, *Two Trends in the Regulation of the Public Corporation*, 7 OHIO ST. ENTREP. BUS. L. J. 429 (2012).

<sup>98</sup> See IPO TASK FORCE, REBUILDING THE IPO ON-RAMP 11, 19-24 (2011); see also Jump-start Our Business Startups Act, Pub. L. No. 112-106, 126 Stat. 306 (2012).

<sup>99</sup> It also proposed a variety of other measures such as rolling back restrictions on investment banks that participated in such offerings from writing research reports about the company. These rules were put into place after the collapse of the first internet bubble when it was discovered that investment banks used the prospect of a favorable research report to win underwriting business. See James J. Park, *The Competing Paradigms of Securities Regulation*, 57 DUKE L.J. 625, 651-56 (2007).

<sup>100</sup> Before the JOBS Act, foreign issuers could initially file with the SEC confidentially—a significant advantage, the report contended, that allowed them to avoid a “significant impediment” American firms had to overcome.

<sup>101</sup> JOBS Act §§ 101, 103.

<sup>102</sup> *Id.* § 104.

<sup>103</sup> *Id.* § 102.

<sup>104</sup> *Id.* § 106.

option of disclosing only two years of audited financial statements rather than three.<sup>105</sup> This rule recognizes that startups have a shorter history and that their valuations are tied to their future performance. One report found that about half of the emerging growth companies that went public in the year after the passage of the JOBS Act only provided two years of audited financial statements.<sup>106</sup>

## 2. Increasing Access to Private Investments

In addition to facilitating IPOs by emerging companies, the JOBS Act also sought to increase investor access to emerging companies while they are private.

As noted earlier, since the passage of the Securities Act of 1933, companies have been permitted to sell securities to sophisticated investors without filing a registration statement with the SEC.<sup>107</sup> The SEC later provided more clarity on such private placements when it promulgated Regulation D, which permits sales of unregistered securities to an unlimited number of accredited investors who satisfy either an income or net worth test.<sup>108</sup> However, for decades, such private placements did not permit the seller to contact a wide range of investors to solicit their interest in buying the securities. This prohibition of general solicitation narrowed the number of investors who could provide funds in a valid private placement.<sup>109</sup>

The rationale for limiting the private placement exemption in this way is to prevent private companies with uncertain prospects from widely offering their securities to unsophisticated investors. The exemption essentially balances access to capital with investor protection concerns. As wealth was generated in private markets, it became more possible to assign valuations to private companies. Moreover, the perception grew that rather than protecting investors, the restrictions on private placements prevented ordinary investors from sharing in the returns of the most promising companies.<sup>110</sup> As the in-

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<sup>105</sup> *Id.* § 102(b)(1).

<sup>106</sup> LATHAM & WATKINS, *THE JOBS ACT AFTER ONE YEAR: A REVIEW OF THE NEW IPO PLAYBOOK* (2013).

<sup>107</sup> *SEC v. Ralston Purina*, 346 U.S. 119, 125-27 (1953).

<sup>108</sup> Such an offering would be under Rule 506 of Regulation D. *See* 17 C.F.R. § 230.506. An accredited investor has either an income of at least \$200,000 for each of the past two years or a net worth of \$1 million. *See* 17 C.F.R. § 230.501. An offering under Rule 506(b) of Regulation D also permits 35 unaccredited investors to invest so long as those unaccredited investors are sophisticated. *See* 17 C.F.R. § 230.506(b).

<sup>109</sup> *See, e.g.,* Rutherford B. Campbell, Jr., *The Wreck of Regulation D: The Unintended (and Bad) Outcomes for the SEC's Crown Jewel Exemptions*, 66 *BUS. LAW.* 919 (2011) (criticizing narrow reach of private placement exemption); Stuart R. Cohn & Gregory C. Yadley, *Capital Offense: The SEC's Continuing Failure to Address Small Business Financing Concerns*, 4 *N.Y.U. J. L. & BUS.* 1 (2007).

<sup>110</sup> *See, e.g., supra* note 2.



vestor protection argument weakened, the argument that private companies should have broader access to capital became relatively stronger.<sup>111</sup>

The JOBS Act thus included a variety of provisions meant to facilitate the sale of securities by private companies. Most significantly, the statute permitted general solicitation for private placements so long as companies only sold securities to accredited investors and verified that all investors qualified.<sup>112</sup> It provided for crowdfunding, where companies can sell securities on the internet, though it put limits on the amount that could be raised and invested in such offerings.<sup>113</sup> Finally, the law expanded the amount that could be raised through the Regulation A exemption that permits offerings with an abbreviated registration statement.<sup>114</sup>

### 3. The Impotence of the Investor Protection Objection

The opponents of the JOBS Act deployed the standard objection that it undermined investor protection. The SEC Chairman wrote a letter criticizing the “emerging growth company” category as overly broad,<sup>115</sup> argued that the loosening of audit controls was unwarranted, and raised concerns about confidential initial IPO filings.<sup>116</sup> The press used investor protection rhetoric in reacting to the law.<sup>117</sup> The *New York Times* warned that it was “a terrible package of bills that would undo essential investor protections, reduce mar-

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<sup>111</sup> Much of the pressure to loosen the private placement exemption was motivated by the desire to provide private companies with easier access to capital. See, e.g., DAVID WEILD & EDWARD KIM, A WAKE-UP CALL FOR AMERICA 30 (2009) (proposing elimination of the restriction of general solicitation in connection with private placements to increase private access to capital).

<sup>112</sup> JOBS Act § 201; see also Thompson & Langevoort, *supra* note 92, at 1604 (predicting that removal of general solicitation prohibition “will be where the JOBS Act has its most substantial impact . . .”).

<sup>113</sup> It also required crowdfunded companies to file disclosure and pass muster with a portal that could monitor companies for compliance. JOBS Act §§ 301-305; see also Regulation CF, 17 C.F.R. Part 227.

<sup>114</sup> JOBS Act § 401.

<sup>115</sup> One senator pointed out that only a small percentage of businesses going public made more than \$1 billion in revenue annually, and thus: “by definition, they are characterizing 90 percent of American businesses and startups as small businesses that need a special break when it comes to regulation.” 158 Cong. Rec. 3,486 (2012) (Statement of Sen. Dick Durbin).

<sup>116</sup> 158 Cong. Rec. 3,484-86 (2012) (Letter of Mary Schapiro, Chairman, SEC).

<sup>117</sup> Professors Dharmapala and Khanna tested the market reaction to the JOBS Act. See Dharmika Dharmapala & Vikramaditya Khanna, *The Costs and Benefits of Mandatory Securities Regulation: Evidence from Market Reactions to the JOBS Act of 2012*, 1 J.L. FIN. & ACCT. 139 (2016). There was a group of Emerging Growth Companies that conducted IPOs between December 8, 2011 (when the Act was passed) and April 5, 2012 (when the Act was enacted) that were covered by the JOBS Act. Dharmapala and Khanna compared the returns of this group of firms to a control group of similar firms that conducted IPOs prior to December 8, 2011, which would not be covered by the Act. On the date when passage of the Act became certain, they found a statistically significant positive return for the firms covered by the Act of 3-4 percent relative to those firms that were not covered.

ket transparency and distort the efficient allocation of capital.”<sup>118</sup> *Bloomberg’s* editorial board argued that the law was problematic. It claimed that the law went “too far” and “would gut many of the investor protections established just a decade ago in the 2002 Sarbanes-Oxley law.”<sup>119</sup> An article in the *Wall Street Journal* pointed to the case of Groupon in the fall of 2011, which had to cut the revenue it reported in its registration statement by half after the SEC raised an accounting issue. The new provision permitting confidential submissions would allow “a company like Groupon, which had well-publicized disagreements with the SEC over its accounting last year, to resolve such issues under the radar, without investors learning of them until later although still before any IPO.”<sup>120</sup>

A significant reason why the general invocation of investor protection concerns ultimately did not prevent passage of the JOBS Act was that the staying power of public companies that had once been emerging companies supported the argument that entrepreneurship should be encouraged. It was difficult to argue that retail investors should be protected when institutional investors had made fortunes through their early investments in emerging companies. Moreover, the SEC did not offer compelling alternatives to the Act that would balance the ability to access entrepreneurial investments with the need to protect investors from uncertainty.

### III. THE RISING APPETITE FOR UNCERTAINTY

In addition to changes in the securities laws, the increasing willingness by investors to accept Knightian Uncertainty has resulted in the proliferation of innovative ways to sell securities of emerging companies to the public. Two of these new methods, Special Purpose Acquisition Companies (SPACs) and Direct Listings, have gained traction as investors perceive that valuations of private companies are now more reliable. The SEC has generally been passive in permitting these alternatives despite questions about whether investors are adequately protected from uncertainty in such transactions.<sup>121</sup>

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<sup>118</sup> Editorial, *They Have Very Short Memories*, N.Y. TIMES: OPINION (Mar. 10, 2012), <https://www.nytimes.com/2012/03/11/opinion/sunday/washington-has-a-very-short-memory.html>.

<sup>119</sup> Editorial Board, *Small Biz Jobs Act is a Bipartisan Bridge Too Far*, BLOOMBERG: OPINION (Mar. 18, 2012), <https://www.bloomberg.com/opinion/articles/2012-03-18/small-biz-jobs-act-is-a-bipartisan-bridge-too-far-view>.

<sup>120</sup> Michael Rapoport, *In Wake of Groupon Issues, Critics Wary of JOBS Act*, WALL STREET J. (Apr. 2, 2012), <https://www.wsj.com/articles/SB10001424052702304023504577317932455874856>.

<sup>121</sup> SPACs and Direct Listings fit a pattern identified by Robert Thompson and Donald Langevoort where “creative lawyers and their clients claim open spaces created by technological change and aggressive marketplace innovation by assuming favorable regulatory treatment, which the SEC only becomes fully aware of after the practice has already been established and when it is very hard to undo the occupation.” Thompson & Langevoort, *supra* note 92, at 1578.

## A. SPACs

Investors have become willing to not only buy shares in new public companies with uncertain businesses, but also buy shares in entities that have not yet acquired any business. SPACs “raise capital in an initial public offering (‘IPO’) to enter into future undetermined business combinations . . . .”<sup>122</sup> Because the SPAC is just a shell company, most of the funds that are raised are put into a trust. The founders of the SPAC then typically have a set time within which to merge with a company. They receive a stake of the ownership of the acquired company (often in the neighborhood of 20 percent of the acquired company’s equity) as compensation for their efforts in finding and completing a merger.<sup>123</sup> SPACs will usually merge with a private company, which is then effectively public because it is the only asset of the publicly traded SPAC. In 2020, SPACs raised more than \$70 billion from investors (in 2019, they raised about \$12 billion).<sup>124</sup>

SPACs have existed for some time but could only list shares on exchanges towards the end of the 2000s.<sup>125</sup> In 2008, the SEC approved a request by the New York Stock Exchange (NYSE) to permit the listing of SPACs.<sup>126</sup> The NYSE passed a rule that sets forth a number of conditions for a SPAC to list.<sup>127</sup> It currently requires that the SPAC provide for: (1) redemption rights for any shareholder who does not want to hold shares after the business combination;<sup>128</sup> (2) approval of the business combination by the SPAC board’s independent directors; (3) liquidation of the SPAC if it is not able to consummate a merger within a time frame not to exceed three years; and (4) a prohibition on the founders of the SPAC from participating in the liquidation distribution.<sup>129</sup>

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<sup>122</sup> Sec. & Exch. Comm’n, Order Approving Proposed Rule Change to Adopt New Initial and Continued Listing Standards to List Securities of Special Purpose Acquisition Companies, Release No. 34-57785; File No. SR-NYSE-2008-17, at 1 (May 6, 2008).

<sup>123</sup> *Id.* at 10-11. This percentage likely understates the value of the stake awarded to founders. See Michael Klausner, Michael Ohlrogge & Emily Ruan, *A Sober Look at SPACs* (Nov. 16, 2020), <https://ssrn.com/abstract=3720919>; see also PricewaterhouseCoopers, *How special purpose acquisition companies (SPACs) work* (2020), <https://www.pwc.com/us/en/services/audit-assurance/accounting-advisory/spac-merger.html>.

<sup>124</sup> Derryck Coleman, *SPAC Popularity Continues to Grow*, AUDIT ANALYTICS (Jan. 6, 2021), <https://blog.auditanalytics.com/spac-popularity-continues-to-grow/>. SPACs have existed for years but were primarily used in smaller transactions. See, e.g., Tim Castelli, *Not Guilty by Association: Why the Taint of their Blank Check Predecessors Should Not Stunt the Growth of Modern Special Purpose Acquisition Companies*, 50 B.C. L. REV. 237 (2009).

<sup>125</sup> For a history of SPACs, see Usha Rodrigues & Mike Stegemoller, *Exit, Voice, and Reputation: The Evolution of SPACs*, 37 DEL. J. CORP. L. 849, 875-79 (2012).

<sup>126</sup> The Nasdaq’s request was approved a month later. The American Stock Exchange had permitted the listing of SPACs since 2005. See *id.* at 878.

<sup>127</sup> New York Stock Exchange Rule 102.06.

<sup>128</sup> If there is a vote on the transaction, any shareholder that votes no must have redemption rights.

<sup>129</sup> Sec. & Exch. Comm’n, *supra* note 122, at 3-5.

SPACs can be understood as an alternative to the traditional process of going public where an underwriter sets the price at which the shares will initially be sold. Instead, investors are relying on the expertise and judgment of the SPAC's managers to identify a company with solid value. If the SPAC's managers pay too much for the company, the shares of the SPAC will go down as the market realizes that the only asset of the SPAC is overpriced. If the SPAC's managers find a private company that is underpriced, the value of the SPAC will increase as investors realize that the SPAC's only asset is worth more.

SPACs have become more influential as investors have come to view private valuations as reflecting Knightian Risk. Because emerging company valuations have been supported by the precedent of public valuations, there is greater confidence in the value of the companies acquired by SPACs. Rather than invest directly in a private company, a public investor can participate in the entrepreneurial boom through an intermediary.<sup>130</sup>

In approving the exchange rules permitting the listing of SPACs, the SEC concluded that the rules sufficiently protected investors mainly because they provided for redemption rights.<sup>131</sup> Investors who believe that the prospects of an acquired company are too uncertain can opt out of the investment. Prior to 2016, the NYSE rules also required that a majority of investors approve the transaction, and that the business combination could not go forward if a certain percentage of SPAC investors chose to redeem their shares.<sup>132</sup> Such conditions provided additional protection to investors because a collective determination must be made about the desirability of a combination. But partly because other stock markets amended their rules to do away with these protections, the NYSE successfully applied to amend its rules so that a vote is now optional, and a business combination can go forward even if a high percentage of SPAC investors redeem their shares.<sup>133</sup>

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<sup>130</sup> Public investors can also access private investments by investing in a mutual fund. See Jeff Schwartz, *Should Mutual Funds Invest in Startups? A Case Study of Fidelity Magellan Fund's Investments in Unicorns (and other Startups) and the Regulatory Implications*, 95 N.C. L. REV. 1341 (2017). Unlike a SPAC, regulation requires such investment funds to be diversified. For an argument that SPACs are investment funds that should be regulated, see Derivative Complaint at 6, *Assad v. Pershing Square Tontine*, Case No. 1:21-cv-06907 (S.D.N.Y. Aug. 17, 2021).

<sup>131</sup> Sec. & Exch. Comm'n, *supra* note 122, at 11-13.

<sup>132</sup> Sec. & Exch. Comm'n, *supra* note 122, at 12 ("The Commission believes that these protections, such as requiring a majority of public shareholders to approve a Business Combination . . . would help to ensure that public shareholders approve management's decision with respect to a Business Combination . . .").

<sup>133</sup> The decision to not hold a vote was conditioned on a tender offer that would permit shareholders to redeem their shares. Hedge funds were buying enough shares so they could block business combinations and demanding side compensation to approve a combination. Sec. & Exch. Comm'n, Notice of Filing of Proposed Rule Change Amending its Listing Standards for Special Purpose Acquisition Companies, Release No. 34-79676, File No. SR-NYSE-2016-72, at 3 (Dec. 22, 2016).

While a high percentage of SPACs still permit shareholders to vote on transactions, there is no requirement that a shareholder who votes yes on a transaction remain invested in the SPAC. Even shareholders who expect to redeem their shares have an incentive to approve the transac-

Regulation thus relies heavily on the right of investors to individually make the decision to redeem their shares to protect themselves. But these measures effectively compel investors to make a similar assessment as buying stock in a private placement. Deciding to remain invested in a SPAC after a business combination requires the basic ability to assess the uncertain prospects of a private company.

SPAC transactions are particularly difficult to assess. Because the SEC now permits SPACs to proceed with a business combination even if a majority of the investors redeem their shares, SPACs can complete mergers even when only a small percentage of the capital raised by the SPAC remains. Michael Klausner, Michael Ohlrogge, and Emily Ruan report that in half of the SPAC mergers they studied, more than 73% of the shares were redeemed.<sup>134</sup> Such redemptions increase the transaction costs for the remaining investors who must bear the cost of warrants that are kept by the redeeming investors.<sup>135</sup> Without a sense of the percentage of the other shareholders who will redeem their shares, it is difficult for any investor to assess the transaction costs of remaining invested in the SPAC. Because SPACs trade on the most prominent stock exchanges, many of the investors who will have to make these decisions may be retail investors.<sup>136</sup>

Moreover, as private valuations of companies have become higher, the risks associated with SPACs have increased. In their early years, SPACs acquired private companies with smaller valuations. Usha Rodrigues and Mike Stegemoller studied 86 SPACs that completed a business combination from 2003 to 2011 and found the median value of these combinations was \$128 million.<sup>137</sup> Klausner, Ohlrogge, and Ruan examined a more recent sample of 47 SPACs that completed business combinations from January 2019 to June 2020 and found the median value of SPAC combinations had increased to \$501.6 million.<sup>138</sup> As the size of SPAC transactions has increased, the incen-

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tion because they are entitled to warrants with higher value if the transaction is approved. See Usha Rodrigues & Michael Stegemoller, *SPACs: Insider IPOs* 34-35 (2021), <http://ssrn.com/abstract=3906196>.

<sup>134</sup> Klausner, et al., *supra* note at 123, fig. 1.

<sup>135</sup> Klausner, Ohlrogge, and Ruan estimate that for every \$10 invested in a typical SPAC's shares, about \$6 in cash remains after dilution costs are taken into account. About a third of the costs result from the dilution from warrants that are retained by redeeming shareholders. Investors who purchase SPAC shares typically receive a warrant to buy an additional share or fraction of a share to take into account the fact that their investment will be in a trust account earning a nominal return while the SPAC searches for an acquisition. Klausner, et al., *supra* note 123, at tbl. 5.

<sup>136</sup> On average, a high percentage of SPAC shares are owned by institutional investors. But there are a good number of SPACs where non-institutional investors may own in the neighborhood of half of the SPAC shares. See Klausner, et al., *supra* note 123, at fig. 3. Rodrigues and Stegemoller aptly describe SPACs as a type of "poor man's private equity." Rodrigues & Stegemoller, *supra* note 125, at 851. For an argument that retail investors are particularly vulnerable to bearing the costs of SPAC transactions, see Bobby Reddy, *The SPACtacular Rise of the Special Purpose Acquisition Company: A Retail Investor's Worst Nightmare* (Nov. 2021).

<sup>137</sup> Rodrigues & Stegemoller, *supra* note 125, at 901.

<sup>138</sup> Klausner, et al., *supra* note 123, at tbl. 1.

tive for promoters to form SPACs is greater because the value of their potential stake in a successful acquisition is much higher. Moreover, the potential impact of a misvaluation on investors is more substantial.

A danger of a SPAC is that the founders have a significant incentive to tout the prospects of the acquisition when seeking approval of the transaction from SPAC investors. The SPAC founders also have less of an incentive to scrutinize the claims of the private companies that they acquire. Unlike an underwriter, which does not directly profit if the IPO shares rise in the market, SPAC founders will have a significant stake in the company that could generate substantial wealth for them if they can successfully complete a transaction. The more SPAC investors they can persuade to not redeem their shares, the more likely it is the business combination will be successfully completed.<sup>139</sup> The founders thus have an incentive to describe the prospects of the acquisition in glowing terms to win approval of the transaction. Even if the SPAC overpays for the acquisition, SPAC founders will still have a substantial stake in a company that they would not have owned without the acquisition. While SPAC boards in theory could provide a check on unwise transactions, such boards often have close ties to the SPAC founders and it is unclear that they rigorously scrutinize the fairness of valuations.<sup>140</sup> For example, the board of the SPAC that acquired Nikola, a zero-emissions vehicle maker that was later sanctioned by the SEC for issuing misleading information,<sup>141</sup> disclosed that it “did not obtain a third-party valuation or fairness opinion” or obtain a “valuation from a financial advisor” in approving the acquisition.<sup>142</sup>

Because a SPAC has sold stock to the public and then complies with periodic reporting requirements before it proposes a combination, it may have greater protection from liability for issuing incorrect projections. The Private Securities Litigation Reform Act (PSLRA) contains a safe harbor from securities fraud lawsuits brought by private parties for projections that are accompanied by a meaningful cautionary statement or not knowingly false.<sup>143</sup> The safe harbor only applies to companies that are filing periodic reports with the SEC and thus does not protect companies when they are

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<sup>139</sup> SPACs routinely raise additional funds to complete a merger through additional founder investments and private placements.

<sup>140</sup> See Michael Klausner & Michael Ohlrogge, *SPAC Governance: In Need of Judicial Review* (Nov. 23, 2021), <https://ssrn.com/abstract=3967693>.

<sup>141</sup> The founder of Nikola Corporation, which sought to manufacture low emissions semi-trucks and was acquired by a SPAC, allegedly misrepresented the state of the company’s technology. Nikola agreed to pay a \$125 million SEC penalty to resolve the matter. See *In the Matter of Nikola Corp.*, Order Instituting Cease-and-Desist Proceedings, Securities Act Release No. 11018 (Dec. 21, 2021).

<sup>142</sup> Form S-4, VectoIQ Acquisition Corp. 10 (March 30, 2020), <http://www.sec.gov/Archives/edgar/data/0001731289/000104746920001479/a2240989zs-4.htm>.

<sup>143</sup> See 15 U.S.C. §§ 77z-2, 78u-5 (2012).

issuing disclosures relating to an initial public offering.<sup>144</sup> The perception for a time was that SPAC sponsors had an advantage over IPO promoters because the safe harbor would shield the SPAC from securities fraud liability if it issued incorrect projections relating to the value of a proposed acquisition.<sup>145</sup> A significant number of SPACs issue projections with respect to their transactions.<sup>146</sup> One study found that on average, such projections are three times greater than the revenue growth for a sample of similar firms.<sup>147</sup> As the number of SPAC transactions boomed in 2021, the Acting Director of the SEC's Division of Corporate Finance implied that the safe harbor may not apply to SPAC transactions because they are essentially IPOs, but the SEC has not yet confirmed this position.<sup>148</sup>

Regardless of whether inaccurate projections issued by SPACs are likely to be subject to private liability, without an objective underwriter who essentially develops its own projections that serve as a basis for an IPO price,<sup>149</sup> investors do not have a clear reference point for assessing the valuation of a SPAC combination. As a result, there is a need for SPAC founders to point to their own projections as an argument for voting to approve the

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<sup>144</sup> *Id.* Securities regulation is generally more lenient in permitting reporting companies to use projections during a securities offering. See Securities Act Rule 168, 17 C.F.R. § 230.168 (2018).

<sup>145</sup> One SPAC founder asserted that “the most important advantage of SPACs . . . was that they let executives tell the public about anticipated profits and expected breakthroughs.” In contrast, “[i]n a traditional I.P.O., you *can't* show a forecast, and you *can't* talk about the future of how you want to do things.” Charles Duhigg, *Cool Story, Bro*, THE NEW YORKER, June 7, 2021, at 45; see also Andrew Ross Sorkin, *How to Fix SPACs: Keep Their Backers Locked in Longer*, N.Y. TIMES (Mar. 31, 2021) (“because going public via a SPAC is technically a merger, companies are free to make financial prognostications.”).

<sup>146</sup> See, e.g., Elizabeth Blankespoor, Bradley E. Hendricks, Gregory S. Miller & Douglas R. Stockbridge, Jr., *A Hard Look at SPAC Projections* (Nov. 14, 2021), <https://ssrn.com/abstract=3961848>; (Michael Dambra, Omri Even-Tov & Kimberlyn George, *Should SPAC Forecasts be Sacked?* 12 (Sept. 2021), <https://ssrn.com/abstract=3933037> (finding that more than 80 percent of SPAC transactions from 2010 through 2020 provided revenue forecasts).

<sup>147</sup> Blankespoor, et al., *supra* note 146.

<sup>148</sup> John Coates, *SPACs, IPOs and Liability Risk under the Securities Laws* (Apr. 8, 2021), [www.sec.gov/news/public-statement/spacs-ipos-liability-risk-under-securities-laws](http://www.sec.gov/news/public-statement/spacs-ipos-liability-risk-under-securities-laws). For a perspective that is more skeptical on the issue of whether SPACs should be excluded from the safe harbor, see Amanda M. Rose, *SPAC Mergers, IPOs, and the PSLRA's Safe Harbor: Unpacking Claims of Regulatory Arbitrage* (Oct. 19, 2021) <https://ssrn.com/abstract=3945975>.

<sup>149</sup> Private investors that invest in the acquired company alongside the SPAC can validate the reasonableness of a SPAC business combination. The decision to commit significant amounts to invest in the combination by a sophisticated party who is given access to the acquired company's books is a signal that the merger is happening at a reasonable valuation. Klausner, et al., *supra* note 123. But the private investor does not face liability under Section 11 as would an underwriter. Moreover, some of these investments occur at a discount to the price paid by the SPAC, reducing the risk of the transaction for the private investor. See Rodrigues & Stegemoller, *supra* note 133, at 26.

transaction.<sup>150</sup> It is difficult for investors to assess whether such projections meaningfully reflect the risks associated with a private valuation.<sup>151</sup>

### B. Direct Listings

In another alternative to an IPO, direct listings permit the distribution of private company stock through public markets without the use of an underwriter. While in a traditional IPO, the initial sales price is set by an underwriter, which negotiates a price for the stock with the company based on a rigorous examination, in a direct listing the stock is simply listed on a stock exchange and the price is largely set by market demand.<sup>152</sup>

Direct listings have been permitted for some time for secondary market transactions, where early investors sell their shares to other investors. Late in 2020, the SEC approved a proposal by the New York Stock Exchange to allow companies to raise funds by selling shares through direct listings.<sup>153</sup> Permitting companies to raise funds through direct listings increases the potential for the direct listing to become a substitute for the traditional IPO.<sup>154</sup>

In approving the proposal, the SEC observed that under the rules, an issuer with the assistance of a financial advisor will establish a price range at which its shares will sell. A designated market maker is required to ensure that the shares are sold by the issuer within that range or the offering must fail.<sup>155</sup> The SEC downplayed the necessity of an underwriter to protect invest-

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<sup>150</sup> There are reports of SPAC founders pointing to projections in communications with investors. For example, the SPAC that acquired WeWork communicated to investors a projection that the company revenue would grow from \$3 billion in 2021 to \$7 billion in 2024. See Jean Eaglesham & Eliot Brown, *WeWork's New Stock-Listing Plan Has Echoes of Its Past*, WALL ST. J. (Apr. 18, 2021).

<sup>151</sup> At this point in time, SPAC mergers on average have not performed well for investors. See, e.g., Minmo Gahng, Jay R. Ritter & Donghang Zhang, *SPACs* (July 23, 2021), <https://ssrn.com/abstract=3775874> (finding average return of -7.83 percent for SPAC investors in first year after merger); Klausner, et al., *supra* note 123.

<sup>152</sup> See, e.g., Sec. & Exch. Comm'n, Order Setting Aside Action by Delegated Authority and Approving a Proposed Rule Change, as Modified by Amendment No. 2, to Amend Chapter One of the Listed Company Manual to Modify the Provisions Relating to Direct Listings, Release No. 34-90768, at 5 (Dec. 22, 2020) (explaining that in a direct listing "initial sales are conducted through the exchange, with the prices determined based on matching buy and sell orders and in accordance with applicable listing rules."); see also *Spotify's Direct Listing – A Look Under the Hood*, CLEARY GOTTlieb (Apr. 17, 2018), <https://www.clearlygottlieb.com/news-and-insights/publication-listing/spotify-direct-listing-a-look-under-the-hood>.

<sup>153</sup> See Sec. & Exch. Comm'n, *supra* note 152. In May 2021, the Nasdaq Stock Market's proposal to permit primary offerings through a direct listing was also approved by the SEC. See Sec. & Exch. Comm'n, Order Approving a Proposed Rule Change, as Modified by Amendment No. 2, to Allow Companies to List in Connection with a Direct Listing with a Primary Offering In Which the Company Will Sell Shares Itself In the Opening Auction on the First Day of Trading on Nasdaq and to Explain How the Opening Transaction for Such a Listing Will be Effected, Release No. 34-91947, File No. SR-Nasdaq-2020-057 (May 19, 2021).

<sup>154</sup> The direct listing has not yet been frequently used by sizeable companies. See Maureen Farrell, *Direct Listings Have Paid Off for Investors So Far*, WALL ST. J. (Aug. 30, 2021), [www.wsj.com/articles/direct-listings-have-paid-off-for-investors-so-far-11630315801](http://www.wsj.com/articles/direct-listings-have-paid-off-for-investors-so-far-11630315801).

<sup>155</sup> Sec. & Exch. Comm'n, *supra* note 152, at 10–11.



tors.<sup>156</sup> It wrote that “the Securities Act does not require the involvement of an underwriter in registered offerings.”<sup>157</sup> It did little to acknowledge the important role of the underwriter in protecting investors from uncertainty. It noted the possibility that the financial advisors who advised issuers about the proper price range might be liable under Section 11 as statutory underwriters in certain circumstances but also stated that they would not always be subject to such liability.<sup>158</sup>

Direct listings of companies with a significant economic value have only become possible because investors have become more confident in private market valuations. Private companies are now valued by sophisticated institutional investors during multiple fundraising rounds.<sup>159</sup> These valuations can serve as an anchor that can be used to generate a public valuation. Direct listings reflect the belief that markets can assess the risks for a company that has been valued highly by private investors for a lengthy period. The success of several direct listings in facilitating the move from private to public status has provided a precedent for future direct listings.<sup>160</sup>

But private valuations are still based on uncertain projections of future profitability. The direct listing might be appropriate for a private company with a history of profitability sufficient for it to qualify as established rather than emerging. But because of the lack of transparency with respect to private valuations, there is an argument that such valuations are uncertain even for companies with a long operating history. Moreover, the danger is that in a rising market, the direct listing increasingly becomes used by companies that are clearly emerging rather than established.

A significant advantage of the direct listing is that it addresses the problem of IPO underpricing. When IPO shares are viewed as attractive investments, the trading price in secondary markets can be immediately much higher than the IPO price. One view is that the higher trading price reflects a decision by the underwriter to set the IPO price too low for various reasons.<sup>161</sup> The underwriter may base the price on projections that are significantly lower than reasonable estimates. Secondary market traders realize this and bid the price up to its true value. As a result, issuers raise less from the IPO sale than they should. A direct listing would make the pricing decision

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<sup>156</sup> *Id.* at 33-34.

<sup>157</sup> *Id.* at 33.

<sup>158</sup> *Id.* at 33, n.101. The Commission also noted that plaintiffs could still sue the “issuer, officers, directors, and accountants,” but those parties are not as directly responsible for the pricing of the direct listing. *Id.* at 33.

<sup>159</sup> See, e.g., Elizabeth Pollman, *Startup Governance*, 168 U. PA. L. REV. 155, 165-70 (2019) (describing different stages of start-up companies).

<sup>160</sup> See, e.g., Farrell, *supra* note 154.

<sup>161</sup> See, e.g., Patrick M. Corrigan, *The Seller’s Curse and the Underwriter’s Pricing Pivot: A Behavioral Theory of IPO Pricing*, 13 VA. L. & BUS. REV. 335 (2019) (arguing that underpricing reflects naive issuers).

more democratic, relying on investor orders within a price range rather than a specific IPO price determined by the underwriter.<sup>162</sup>

Another interpretation of the first day pop in IPO price is that secondary market investors are often willing to take on uncertainty.<sup>163</sup> At least some portion of the premium above the IPO price likely reflects trading by uninformed investors and speculators. Securities regulation thus does not allow recovery of losses for purchases made at above the IPO price.

In contrast to speculating traders, underwriters have stronger incentives to be conservative in their risk assessment. They are distributing the shares to their investor clients at the IPO price. If such investors lose significant amounts in the IPO, they will be less likely to invest in the next IPO.<sup>164</sup> Underwriters are also subject to liability under Section 11 of the Securities Act of 1933 and thus have an incentive to keep the IPO price reasonable.

Even if banks serve as financial advisors in a direct listing, they will have less incentive to set a conservative valuation because they are not distributing IPO shares to their clients. Moreover, because there is an argument that the financial advisor is not subject to Section 11 liability, there is less risk that the advisor will be accountable for a valuation that is too high.<sup>165</sup> As noted earlier, the SEC has acknowledged the possibility that financial advisors are not covered by Section 11 but saw no cause for concern because the issuer, auditor, and its directors could still be liable.<sup>166</sup> However, those parties perform different roles than the underwriter,<sup>167</sup> which has the greatest incentive to question a company's valuation in a traditional IPO. The potential for underwriter liability is especially important if an issuer goes bankrupt soon after the offering.<sup>168</sup> Moreover, there are potentially other barriers that

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<sup>162</sup> Sec. & Exch. Comm'n, *supra* note 152, at 38.

<sup>163</sup> See, e.g., Patricia J. Hughes & Anjan V. Thakor, *Litigation Risk, Intermediation, and the Underpricing of Initial Public Offerings*, 5 REV. FIN. STUD. 709, 734 (1992) (concluding that higher variance of cash flows is associated with underpricing). Moreover, because IPO shares are first distributed by the underwriter to select investors who are permitted to purchase at the IPO price, and many of these investors will not sell their shares right away, the supply of IPO shares is limited. See Sec. & Exch. Comm'n, Office of Investor Education and Advocacy, *Investing in an IPO* 5 (2013), <https://www.sec.gov/files/ipo-investorbulletin.pdf>.

<sup>164</sup> See, e.g., Stephen J. Choi & A. C. Pritchard, *Should Issuers be on the Hook for Laddering? An Empirical Analysis of the IPO Market Manipulation Litigation*, 73 U. CIN. L. REV. 179, 180 (2004) ("A drop in stock price before the institutional investors sell their IPO allotments into the secondary market would damage the underwriters' IPO reputations among the institutional investors.").

<sup>165</sup> For an argument that the financial advisor is subject to Section 11, see Benjamin J. Nickerson, *The Underlying Underwriter: An Analysis of the Spotify Direct Listing*, 86 U. CHI. L. REV. 985, 1014-24 (2019).

<sup>166</sup> Sec. & Exch. Comm'n, *supra* note 152, at 33.

<sup>167</sup> For an analysis of the interaction between various gatekeepers for an IPO, see Andrew F. Tuch, *Multiple Gatekeepers*, 96 VA. L. REV. 1583 (2010).

<sup>168</sup> Some of the issuer's liability can be covered by insurance but such insurance has limits. See, e.g., James J. Park, *Securities Class Actions and Bankrupt Companies*, 111 MICH. L. REV. 547, 556-60 (2013).

could generally preclude Section 11 liability for direct listings.<sup>169</sup> For example, the defendant in one case argued that because there is no IPO price for a direct listing, it is unclear what damages a plaintiff is entitled to recover in a Section 11 lawsuit.<sup>170</sup> Put another way, it contended that the direct listing does not establish a foundational price that an investor can rely upon.

The IPO price serves as a way of separating risk from uncertainty in public offerings. The underwriting process has long been structured in such a way to produce a conservative reference point at which trading can occur. To the extent that public offerings move away from that reference, there is a greater danger that stock valuations become based on speculation.

#### IV. INITIAL COIN OFFERINGS AND THE BOUNDARIES OF SECURITIES REGULATION

The willingness of investors to take on Knightian Uncertainty has extended beyond the traditional context of companies selling securities to the public. The unexpected success of the cryptocurrency Bitcoin, which arose out of a decentralized network rather than a typical business, spurred investment in speculative digital investments. Investors hoped that the value created by Bitcoin could be replicated by projects developing applications of Bitcoin's underlying technology, blockchain. Initial Coin Offerings (ICOs) utilized blockchain technology to easily distribute digital tokens to investors without the services of an underwriter. Promoters raised billions of dollars by selling ICO tokens that had many attributes of securities but did not file a registration statement with the SEC as required by Section 5 of the Securities Act of 1933.<sup>171</sup>

The SEC's response to ICOs illustrates how entrepreneurship has created new regulatory challenges. ICO tokens were initially characterized as currencies with inherent value that were beyond the scope of securities regulation. It was only when the SEC established that ICO projects were more like start-up companies shrouded in Knightian Uncertainty that it became clear that ICO tokens were often securities subject to SEC jurisdiction.

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<sup>169</sup> One issue is that in a direct listing, a combination of shares that are registered with the SEC and shares that are not registered with the SEC are sold at one time to the public. This is because some of the early shareholders who sell their shares as part of the offering will have held them for many years, permitting them to be sold without registration. *See* SEC Rule 144, 17 C.F.R. § 230.144. Because Section 11 only applies to shares issued pursuant to a registration statement, there is a question as to whether a plaintiff must prove that the shares it purchased were registered. The Ninth Circuit has held that a plaintiff who cannot determine whether it purchased registered or unregistered shares can bring suit under Section 11 because the shares could not have been purchased without the filing of a registration statement. *See Pirani v. Slack Tech.*, 13 F.4th 940 (9th Cir. 2021). However, it is unclear whether other circuits will follow.

<sup>170</sup> *Pirani v. Slack Tech.*, 445 F. Supp.3d 367, 381-82 (N.D. Cal. 2020).

<sup>171</sup> *See* Securities Act of 1933 § 5, 15 U.S.C. § 77e (2018).

A. *The Precedents of Bitcoin and Ether*

To many observers, the willingness of investors to speculate on ICO tokens and other digital assets seems foolish.<sup>172</sup> Many of the ICO projects that raised funds were vague in their plans for creating platforms that would be of value to customers. But to be fair, there were valuation precedents that provided a basis for believing that some tokens would increase substantially in price. There was thus an argument that valuing new digital currency projects was partly an exercise in taking on Knightian Risk.

The first such precedent was Bitcoin. This digital coin went from a concept set forth in a 2008 white paper by an author writing under a pseudonym to a widely accepted currency with a total market value that was close to \$1 trillion at the end of 2021.<sup>173</sup> While its price has fluctuated greatly, the total market value of Bitcoin is now similar to the market capitalization of tech giants like Facebook or Tesla. By 2017, when ICOs began to emerge, the value of a single Bitcoin had grown from nothing to more than \$1000.<sup>174</sup>

Bitcoin showed that a digital currency could become widely adopted and accepted as a means of exchange. The value of Bitcoin rests in its effective use of blockchain technology, which provides a reliable system for recording transactions. The ownership of all Bitcoin is recorded in a decentralized ledger that can be copied and distributed widely. Rather than existing in the memory of one vulnerable computer server, the ledger can be downloaded and exist in multiple locations.<sup>175</sup> When Bitcoin is transferred, the transaction is verified by solving a complicated math problem that adds a block to the chain of prior transactions and amends the ledger so it accurately reflects the new ownership of a digital asset. The party that solves the problem first receives a transaction fee of Bitcoin. Because it relies on the incentive of parties to participate in maintaining the ledger, Bitcoin is self-sustaining and needs no central authority to coordinate the recording process.

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<sup>172</sup> Even after the SEC asserted its authority to regulate many tokens, the value of digital assets such as Bitcoin has soared. The success of Bitcoin has supported the proliferation of additional cryptocurrencies that are not securities because they do not claim to raise funds to develop a business. Speculation in such cryptocurrencies continues. *See, e.g.,* Anna Hirtenstein, *Dogecoin Soars After Elon Musk Says Tesla Will Accept It as Payment for Merchandise*, WALL ST. J., Dec. 14, 2021, <https://www.wsj.com/articles/dogecoin-soars-boosted-by-musk-tweet-11639486452>.

<sup>173</sup> For an overview of the workings of Bitcoin, see PRIMAVERA DE FILIPPO & AARON WRIGHT, *BLOCKCHAIN AND THE LAW: THE RULE OF CODE 20-26* (2018). A distinction can be drawn between coins, which are “entire blockchain systems” and tokens, “which run on other platforms.” J.S. Nelson, *Cryptocommunity Currencies*, 105 CORNELL L. REV. 909, 916 (2020).

<sup>174</sup> The value of Bitcoin has only grown. In 2020, its price exceeded \$10,000. *See* Paul Vigna, *Bitcoin is Riding High Again as Investors Embrace Risk*, WALL ST. J. (Aug. 2, 2020), <https://www.wsj.com/articles/bitcoin-is-riding-high-again-as-investors-embrace-risk-11596376800>.

<sup>175</sup> *See, e.g.,* DE FILIPPO & WRIGHT, *supra* note 173, at 22 (“Because the Bitcoin blockchain is redundantly stored across the globe and because of the payment network’s reliance on a peer-to-peer network, Bitcoin is resilient and exceptionally difficult to shut down.”).

As more parties came to view Bitcoin as a reliable way of transferring value, they were willing to exchange more established currencies for Bitcoin. Because there was a demand for digital currency transactions, and there was a limited amount of such currency, the price of Bitcoin increased. Early investors who paid pennies for Bitcoin now had an asset worth many times that amount.

The success of Bitcoin's use of blockchain technology encouraged efforts to create projects that went beyond a basic currency. In 2015, the Ethereum platform was launched to use blockchain to create smart contracts that could be used for a wide range of applications.<sup>176</sup> If blockchain could record basic transfers of digital currency, it could also be used to record events that triggered contractual obligations. For example, imagine a derivatives contract that pays off once an asset price exceeds a certain threshold.<sup>177</sup> A smart contract could be programmed so that once the price reaches a predetermined level, the appropriate payment is automatically deposited in the account of the holder of the contract. The transactions would be verified by third parties who would update the digital ledger.

The ambition of Ethereum was thus broader than Bitcoin. It could be used to launch thousands of small business projects that developed applications using smart contracts.<sup>178</sup> As the potential of Ethereum grew, the value of Ether (the digital currency used to build projects on Ethereum) increased steadily. By 2017, a single unit of Ether was worth hundreds of dollars, reflecting a total market value of close to \$20 billion.<sup>179</sup> The price of Ether reflected the potential demand for the currency if it became widely used to create valuable smart contract businesses.

The Ethereum platform was also notable because it provided a way for users to issue digital tokens to fund their projects. In a normal public offering, it is difficult for issuers to directly distribute securities to investors. An underwriter has experience in the mechanics of the process and is necessary to facilitate the distribution. Blockchain technology automated this process so that it could be performed by a novice. The sale of a token can be structured as a smart contract where currency is exchanged for the token. Once the correct amount of currency is transferred, the digital token is automatically issued to the purchaser. Instead of printing paper stock certificates and mailing them, issuers could use Ethereum to distribute an unlimited number of tokens electronically through a standard computer program.<sup>180</sup> ICOs made

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<sup>176</sup> For the white paper on the project, see *White Paper: A Next Generation Smart Contract & Decentralized Application Platform*, GRTHub, <https://github.com/ethereum/wiki/wiki/White-Paper>.

<sup>177</sup> *Id.*

<sup>178</sup> See, e.g., Nareg Essaghoonian, *Initial Coin Offerings: Emerging Technology's Fundraising Innovation*, 66 UCLA L. REV. 294, 306–14 (2019).

<sup>179</sup> By the end of 2021, the total amount of Ether was valued at almost \$500 billion.

<sup>180</sup> Other rules and conditions could be programmed into the smart contract. See, e.g., Shaanan Cohny, David A. Hoffman, Jeremy Sklaroff & David A. Wishnick, *Coin-Operated Capitalism*, 119 COLUM. L. REV. 591 (2019).

it possible for issuers to access millions of investors directly without the need for an intermediary. The basic template for ICOs was used by hundreds of ventures that wished to raise funding through an ICO.

### B. Risk, Uncertainty, and Tokens

In determining whether ICO tokens were securities that fell within its jurisdiction, the SEC had to grapple with the possibility that such tokens were currencies issued to facilitate the purchase of a service. Securities regulation only protects investors from uncertainty relating to the purchase of securities. Currencies that fluctuate in price are not securities even though their value can be uncertain.<sup>181</sup> The precedent of Bitcoin suggested that a digital asset could be a currency that could be used as a general means of exchange. The precedent of Ether suggested that a digital asset could be a currency that could be used to access a platform that provided a service.

The success of these cryptocurrencies also provided a policy reason for not restricting investor access. Bitcoin and Ether had created billions of dollars of wealth and other projects might do the same. If the SEC arbitrarily destroyed the potential of digital assets for ordinary investors, it would have faced a backlash. One SEC Commissioner publicly took the position that the SEC should be cautious in reducing innovation with respect to cryptocurrencies and provide clear guidance about the scope of its authority.<sup>182</sup>

To successfully assert jurisdiction over ICO tokens, the SEC needed to offer a persuasive argument that such tokens had the characteristics of a security. One of the main doctrinal questions was whether the profits that investors would expect from purchasing the tokens were tied to the efforts of the founders of the ICO project to create a blockchain business.<sup>183</sup> The complication was that many tokens were arguably priced based on the desirabil-

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<sup>181</sup> See, e.g., James J. Park, *When Are Tokens Securities? Some Questions from the Perplexed*, LOWELL MILKEN INST. POLICY REPORT (2018), <https://lowellmilkeninstitute.law.ucla.edu/wp-content/uploads/2018/12/When-are-Tokens-Securities.pdf>.

<sup>182</sup> Hester M. Peirce, *Beaches and Bitcoins: Remarks Before the Medici Conference*, SEC. & EXCH. COMM'N (May 2, 2018) (noting wariness of a “blanket designation” of ICOs as securities and noting risk that “regulators will focus only on the harms the innovation may bring and miss entirely the opportunity it presents to improve people’s lives.”); see also Recent Guidance, SEC, *Framework for “Investment Contract” Analysis of Digital Assets*, 132 HARV. L. REV. 2418, 2422 (2019) (“Through selective enforcement of the most egregious fraud cases, the SEC has prevented judges from interpreting the application of securities laws to digital assets, leading to vague and nebulous regulation.”).

<sup>183</sup> The definition of a security is broad enough to include any investment contract. Securities Act of 1933 § 2 A(b)(1), 15 U.S.C. § 77(b) (2018). Under the Supreme Court’s *Howey* test, an investment contract is defined as an investment in a common enterprise with an expectation of profits that come mainly from the efforts of the seller of the investment contract. See SEC v. W.J. Howey Co., 328 U.S. 293, 298-99 (1946) (noting that “an investment contract for purposes of the Securities Act means a contract, transaction or scheme whereby a person [1] invests his money [2] in a common enterprise and [3] is led to expect profits [4] solely from the efforts of the promoter or a third party.”).

ity of the services that they could access rather than the prospect of sharing in profits generated from a business.

Viewed in terms of the Knightian framework, the question was whether there was a significant probability that the tokens developed by projects had value because they represented the pre-purchase of a service. If that was the case, their basic value would not depend on third-party efforts to develop a viable business. On the other hand, if the development of a functioning service associated with a token was so uncertain that its value mainly depended on such efforts, the token would be an investment in a venture and more likely to be a security.<sup>184</sup>

If a high percentage of ICO tokens were associated with functioning blockchain networks, it would have been more difficult for the SEC to assert that most tokens were securities.<sup>185</sup> For example, if the success rate of ICO projects was 75%, investors could have maintained that it was likely that their token purchases reflected the pre-purchase of a service. Rather than blindly speculating that a token could have value, they would simply be taking on the Knightian Risk that some companies that promise products do not deliver.

But very few ICOs ever produced anything of value. Many were outright frauds.<sup>186</sup> Purchasing a token was not an exercise in taking on risk, it was blindly speculating on the uncertain promise that some ICO tokens could have real value. It turned out that very few tokens became associated with functioning networks that could be accessed with the token. Without a viable service or system to access, most ICO tokens had no worth as a currency. The SEC could thus conclude that the value of most ICO tokens depended on the uncertain prospects that the project's founders would create a functioning business.<sup>187</sup>

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<sup>184</sup> There was a separate question as to whether ICO ventures sought to generate profits. It was clear that many ICOs marketed their tokens with the promise that they would increase in value.

<sup>185</sup> The SEC drew a distinction between tokens that were part of a functioning service and tokens that were part of a service that had not yet been built. Ether was no longer a security because it could be used to purchase access to a de-centralized blockchain network that facilitated the creation of smart contracts. While the price of Ether could fluctuate, the profits were not the result of a central group's efforts to run a profitable business. However, when the Ethereum network was being created, Ether was a security because its value depended on whether Ethereum's founders could establish a functional network. See William Hinman, *Digital Asset Transactions: When Howey Met Gary (Plastic)*, SEC. & EXCH. COMM'N (June 14, 2018), <https://www.sec.gov/news/speech/speech-hinman-061418>.

<sup>186</sup> Shane Shifflett & Coulter Jones, *Buyer Beware: Hundreds of Bitcoin Wannabes Show Hallmarks of Fraud*, WALL ST. J. (May 17, 2018), <https://www.wsj.com/articles/buyer-beware-hundreds-of-bitcoin-wannabes-show-hallmarks-of-fraud-1526573115>.

<sup>187</sup> The SEC moved slowly in asserting jurisdiction over ICOs. See James J. Park & Howard H. Park, *Regulation by Selective Enforcement: The SEC and Initial Coin Offerings*, 61 WASH. U. J. L. & POL'Y 99 (2020). This gave ICO projects time to demonstrate that they were creating value. The SEC was able to pursue a more deliberate policy because state enforcers helped police some of the more egregious cases of fraud. See *id.*; see also James J. Park, *Rules, Principles, and the Competition to Enforce the Securities Laws*, 100 CALIF. L. REV. 115 (2012) (describing roles of different enforcers).

The conclusion that the value of most ICO tokens was uncertain not only supported the doctrinal conclusion that they were securities rather than currencies, it supported the SEC's policy decision to make it difficult for such ICO tokens to avoid registration under the securities laws.<sup>188</sup> Disclosure of ICO projects would help investors assess whether they could calculate the Knightian Risk of such projects. It is telling that after it became clear that most ICO tokens were securities, ICO projects have basically been abandoned in the United States.<sup>189</sup> This is evidence that the prospects of ICOs were so uncertain that they could not generate disclosure that would comply with SEC regulation.

## V. PROTECTING INVESTORS FROM KNIGHTIAN UNCERTAINTY

For the foreseeable future, the SEC will face regulatory challenges as emerging companies continue to attract capital. Investors are willing to pay substantial amounts for future earnings by unproven companies and some of their hopes have been validated as valuations have remained high. The SEC must innovate to remain relevant in this new age of entrepreneurship.

The SEC must be more precise in articulating the reasons for its investor protection policies. In the context of the sale of securities by emerging companies, the SEC's job is to protect investors from Knightian Uncertainty. In doing so, it helps maintain a distinction between investment and speculation that is necessary for public stock markets to function effectively. In responding to investor demands for earlier access to emerging companies, the SEC must develop regulation that provides a substitute for the uncertainty-reducing function of the underwriter. Specifically, the SEC should make access to public capital contingent on the ability of a company to develop and disclose a reasonable basis for projections about its future performance.

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<sup>188</sup> It is possible for tokens that are clearly for consumptive use and have a fixed value to avoid security status. See *Framework for "Investment Contract" Analysis of Digital Assets*, SEC. & EXCH. COMM'N (Apr. 3, 2019), <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>; see also Turnkey Jet, Inc., SEC No-Action Letter, 2019 WL 1471132 (Apr. 3, 2019) (finding token with limited value that could be used to pre-purchase time on a private jet was not a security).

<sup>189</sup> There are some alternative ways that an ICO could proceed to a public distribution. A project can initially distribute ICO tokens through a private placement to sophisticated investors who understand that they are taking on Knightian Uncertainty. If the project is successfully completed and becomes self-sufficient, ICO tokens that convey access to the service created by the project may not be securities and it might be permissible to sell them to public investors. For a description of how such a two-step process could work, see Yuliya Guseva, *A Conceptual Framework for Digital-Asset Securities: Tokens and Coins as Debt and Equity*, 80 MD. L. REV. 166 (2021).



A. *Maintaining the Distinction Between Investment and Speculation*

This Article has argued that securities regulation serves to protect public investors from purchasing securities of uncertain value. It does so by largely prohibiting companies from selling unregistered securities to unsophisticated investors and encouraging a system where securities are sold in public markets with disclosure subject to liability provisions that help ensure that some portion of their value is based on reasonable projections of their performance. But why should public investors be protected from uncertainty? Why shouldn't all investors be permitted to essentially gamble on investments of speculative value?

It is important to recognize that securities regulation does not strive to eliminate all losses from uncertainty. Such a policy would be futile. Even for a stock with a solid foundation of Knightian Risk, it is possible that investors will speculate and inflate the price so that a significant component of its price reflects Knightian Uncertainty.<sup>190</sup>

Federal securities law instead attempts to ensure that in public stock markets, a portion of a stock price is based on a reasonable assessment of the company's financial prospects. Under certain circumstances, investors that can show that a company has distorted its market valuation have a right to recover their losses. Through its policies, securities regulation helps ensure that some component of the purchase of a public stock reflects investment rather than speculation.

For centuries, regulation has attempted to encourage investment and discourage speculation.<sup>191</sup> Investment in productive enterprise is essential for any economy. In contrast, speculation has long been viewed as unproductive activity.<sup>192</sup> The distinction between Knightian Risk and Uncertainty maps onto the distinction between investment and speculation. Securities that can be valued based on reasonable projections of their performance are investments. Securities for which reasonable projections cannot be generated are speculative.

Securities regulation helps maintain the perception that the purchase of a public company stock is an investment. Its extensive disclosure and anti-fraud requirements provide some guarantee that at least a part of a company's stock price reflects reasonably certain value. Investments in private companies are not regulated and so there is no guarantee that such invest-

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<sup>190</sup> For the view that stock markets are inherently speculative, see Lynn A. Stout, *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, 81 VA. L. REV. 611, 702 (1995).

<sup>191</sup> BANNER, *supra* note 53.

<sup>192</sup> For a contrary view on the desirability of encouraging investment over speculation, see Christine Hurt, *Regulating Public Morals and Private Markets: Online Securities Trading, Internet Gambling, and the Speculation Paradox*, 86 B.U. L. REV. 371, 440 (2006) (arguing that divergence between investment and gambling "was based not on any logical differences in the activities, but instead on the classes of people that participated in these activities and who profited from them.").

ments are no more than a gamble. By encouraging public company valuations to reflect Knightian Risk, the SEC helps distinguish stock markets from casinos. Public stock markets play an essential role in allocating resources to net present value positive projects.<sup>193</sup> Ideally, companies with strong future prospects for creating such value should be able to raise funds from investors on more favorable terms than companies with weak prospects. Speculative trading in some circumstances can distort this process and overallocate capital to companies with uncertain value. Over time, if stock prices fluctuate too violently, investors may no longer trust the integrity of stock valuations and be less willing to invest.

ICOs were a threat to the existing order in part because they threatened to serve as a substitute for regulated stock markets to finance blockchain projects with public funds. Such a market would have been based on little more than speculation and investors would have suffered significant losses. By asserting its authority to regulate ICO tokens as securities, the SEC intervened to avoid the creation of a competing market that was based almost entirely on Knightian Uncertainty. While the SEC has not been completely successful in dampening speculation in digital assets,<sup>194</sup> it has limited the impact of such speculation to digital assets that are essentially currencies and thus not part of securities markets.

The view that public company stocks are investments is relatively recent. As noted earlier, it was only when managerial skill improved and public companies were better able to allocate resources that it became possible to generate meaningful projections of their future performance. As Stuart Banner has described, prior to the twentieth century, under the “prudent man” rule, trustees were only permitted to purchase government bonds.<sup>195</sup> Courts began interpreting the rule to permit long-term investments in public company stocks as it became clear that such stocks reflected Knightian Risk. The line between investment and speculation moved in part because “by the middle of the twentieth century there were some corporations that had proven stable and profitable for a long period of time.”<sup>196</sup>

The recent success of new entrepreneurial companies raises the question of whether a similar shift could be occurring where the value of private company securities is stable enough so that they can be characterized as investments. There is a belief that if established public companies are able to generate reliable projections, emerging private companies should also be

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<sup>193</sup> See, e.g., Merritt B. Fox, Randall Morck, Bernard Yeung & Artyom Durnev, *Law, Share Price Accuracy, and Economic Performance: The New Evidence*, 102 MICH. L. REV. 331 (2003). Disclosure aids markets in allocating capital. See, e.g., Merritt B. Fox, *Civil Liability and Mandatory Disclosure*, 109 COLUM. L. REV. 237, 260-64 (2009).

<sup>194</sup> Peter Santilli, Caitlin Ostroff & Paul Vigna, *From Bitcoin to Dogecoin: What's Driving Cryptocurrencies' Rise and the Challenges Ahead*, WALL ST. J., May 17, 2021, <https://www.wsj.com/articles/the-factors-driving-crypto-markets-boom-and-the-challenges-ahead-11621243809>.

<sup>195</sup> Banner, *supra* note 53, at 191.

<sup>196</sup> *Id.*

able to do so, even if they have not yet become profitable.<sup>197</sup> While private valuations may not be as certain as public valuations, they provide a reference point that can be used to generate reasonable valuations when a private company sells stock to the public.

But there is reason to be wary of the view that valuations of emerging companies are solid. The main issue with using valuation precedents to justify high values is that such precedents are not always transferable to new situations. Every company is different and valuing a company based on comparable companies only provides a rough starting point. Sophisticated investors are well-aware of the uncertainties associated with valuing by analogy, but unsophisticated investors are more susceptible to errors in applying valuation precedents. Moreover, at some point, it is difficult to distinguish between the rational use of a valuation precedent and simple irrational exuberance that lifts all valuations of a popular sector. When the momentum behind an industry falters, the willingness of investors to value stocks based on past precedents can operate in reverse and call into question valuations of all companies in the industry.

A serious problem with private valuations is that the process by which they are set is not sufficiently transparent. For public companies, there is a constant stream of information that permits investors over time to assess the reliability of their projections. Past performance, the credibility of a management team, and the input of multiple experts can give investors assurance that they are dealing with Knightian Risk rather than Knightian Uncertainty. In contrast, there is less information that can be used to assess a private company's projections.

Moreover, there is the troubling reality that founders and early investors have significant incentives to see the valuations of private companies increase quickly. There is a culture of risk-taking at emerging firms, which may not value open disclosure to investors.<sup>198</sup> When later investors compete to invest in the most promising startups, they may be too lax in scrutinizing the company and its valuation.<sup>199</sup> The ability to fundraise at a high private valuation is coveted as a validation of an emerging company's progress, and so there is an incentive to negotiate for an artificially high valuation. Even when investors are sophisticated institutions, they may give in to the pressure to invest at a higher valuation than warranted because only a few investors are permitted to invest at each stage of the company's development.

Consider the notorious example of Theranos. The company promised to build a machine that would only require a single blood drop for a range of medical tests. With only a prototype that did not achieve this goal, the com-

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<sup>197</sup> See, e.g., METRICK & YASUDA, *supra* note 72, at 171 (observing that forecasting is "not as difficult as it sounds because forecasts will be driven by a few common assumptions.").

<sup>198</sup> See, e.g., Pollman, *supra* note 3, at 377-85.

<sup>199</sup> See, e.g., Donald C. Langevoort & Hillary A. Sale, *Corporate Adolescence: Why Did 'We' Not Work?*, 99 TEX. L. REV. 1347, 1363-67 (2021).

pany was valued at \$9 billion based on projections that it would generate \$1 billion in profit.<sup>200</sup> But there was no basis for those projections and the SEC brought a fraud suit against the company and its founders. Its complaint noted that the “financial projections were important to investors because they gave the impression that Theranos had already secured contracts to deliver these revenues and that the company’s business was growing rapidly.”<sup>201</sup> Whether the fraud was the fault of Theranos, which had an incentive to generate a high valuation, or its investors, who did not sufficiently scrutinize the business, the company’s private valuation was unreliable.

At the same time, it is undeniable that entrepreneurial companies have been extraordinarily successful at creating new wealth. High private valuations continue to be validated over time in the public markets. There is thus some justification for loosening some of the barriers that prevent such companies from selling shares to a wider range of investors.

### B. Regulating Uncertainty

As entrepreneurship has proven that it can create value, there is a case that securities regulation should adapt to provide investors with more access to the securities of emerging companies. At the same time, it is essential to maintain regulation that helps ensure that public investors are protected from Knightian Uncertainty. The SEC seems to oscillate between issuing blanket prohibitions of certain investments by the public and standing by while markets evolve in ways that avoid traditional investor protections. Intermediate regulatory mechanisms between prohibition and permission are lacking.<sup>202</sup> This Section proposes that the SEC address the recent blurring of risk and uncertainty by clarifying liability rules and mandating increased disclosure relating to projections for companies that access public investors without an underwriter.

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<sup>200</sup> Sec. & Exch. Comm’n v. Holmes and Theranos, Inc., Complaint, Case No. 5:18-cv-01602 ¶¶ 83-89 (Mar. 14, 2018).

<sup>201</sup> *Id.* at ¶ 89.

<sup>202</sup> In December 2021, the SEC Chairman signaled that the agency would increase disclosure and other regulatory requirements with respect to SPACs. See Gary Gensler, *Remarks Before the Healthy Markets Association Conference* (Dec. 9, 2021) [https://www.sec.gov/news/speech/gensler-healthy-markets-association-conference-120921?utm\\_medium=email&utm\\_source=govdelivery](https://www.sec.gov/news/speech/gensler-healthy-markets-association-conference-120921?utm_medium=email&utm_source=govdelivery). While it has increased its enforcement efforts with respect to SPACs, such efforts have limited effectiveness because the SEC has finite resources. See, e.g., In the Matter of Momentus, Inc., Stable Road Acquisition Corp., SRC-NI Holdings, LLC, and Brian Kabot, Sec. & Exch. Comm’n, Order Instituting Cease-and-Desist Proceedings, Administrative Proceeding File No. 3-20393 (July 13, 2021) (requiring SPAC and business acquisition target to pay penalties for misleading investors about viability of technology and failing to disclose government concerns about national security that made the target’s projections unrealistic).

## 1. Clarifying Liability

Section 11 of the Securities Act of 1933 recognizes the importance of a sound valuation for a company that is selling securities in an IPO. Without a history of performance as a public company, it is more likely that a company's valuation reflects a greater degree of Knightian Uncertainty. The underwriter is thus potentially liable for investor losses if an IPO stock falls below the IPO price. Such liability gives the underwriter an incentive to base the IPO price on reasonable projections of future performance.

The SEC should ensure that similar liability is available when companies go public without an underwriter. A first step would be to clarify that a financial advisor in a direct listing is subject to Section 11 liability. Such advisors should be accountable for ensuring that the initial price range for trading largely reflects Knightian Risk.

For SPAC transactions, the SEC should ensure that SPAC sponsors stand behind the reasonableness of the price at which they acquire a private company.<sup>203</sup> One way of doing so would be to ensure through rulemaking or statute that Section 11 applies to such sponsors and the independent boards that approve SPAC acquisitions.<sup>204</sup>

Another possibility is to amend the PSLRA safe harbor so it does not cover projections associated with a SPAC acquisition. The current safe harbor is best justified for companies that begin filing periodic reports after going public with an IPO price verified by an underwriter. Projections in subsequent reports can thus be evaluated in relation to that price. In contrast, SPACs do not go through the typical process that would confirm the reliability of the acquired company's projections. Therefore, there is less reason to believe that SPAC projections are entitled to a presumption of deference that would warrant protection from securities fraud liability by a safe harbor.

## 2. Projections Disclosure

To protect investors from the Knightian Uncertainty of emerging companies, the SEC should develop disclosure mandates that shed more light on

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<sup>203</sup> There have been a number of recent proposals directed at SPACs. *See, e.g.*, Rodrigues & Stegemoller, *supra* note 133, at 67 (proposing a redemption threshold that cannot be exceeded for a SPAC deal to go forward); Jessica Bai, Angela Ma & Miles Zheng, *Segmented Going-Public Markets and the Demand for SPACs* 33-34 (Sept. 2021), <https://ssrn.com/abstract=3746490> (proposing long-term phase-in structure for SPAC founder stock compensation).

<sup>204</sup> Currently, Section 11 is only triggered for SPAC acquisitions that require the issuance of securities to SPAC investors. *See, e.g.*, Coates, *supra* note 148. While a material misrepresentation in the proxy statement circulated to SPAC shareholders in connection with the vote to approve the acquisition could trigger liability under Section 14(a) of the Securities Exchange Act, the plaintiff has the burden to prove that the misrepresentation caused its loss in a Section 14(a) lawsuit. *See* Grace v. Rosenstock, 228 F.3d 40, 46-47 (2d Cir. 2000). In contrast, Section 11 puts the burden of proof on the defendant to establish loss causation as a defense. *See* Securities Act of 1933 § 11(e), 15 U.S.C. § 77k(e) (2018).

the assumptions behind the valuations of such companies. The SEC should require that a private company seeking public investment without an underwriter disclose the projections that are the basis for its valuation.<sup>205</sup> In addition to disclosing such projections, such companies should be required to disclose the assumptions behind such projections.<sup>206</sup> While some private companies already voluntarily disclose projections to investors in various circumstances, there are no standard requirements with respect to what information must be provided to support such projections.

Under this proposal, a company that is going public through a SPAC or direct listing would be obligated to generate projections of its future financial performance.<sup>207</sup> If its valuation assumes that the company's sales will grow by 10 percent a year, that fact should be disclosed in the registration statement. Moreover, the assumptions behind that projection should also be disclosed. For example, if a 10 percent growth rate assumes a certain profit margin for the company's products, that information should be provided to investors.

The reliability of the company's projections and the basis for such projections could be verified through an audit. Auditors have developed guidelines for assessing such forward-looking statements that could be developed further.<sup>208</sup> Such standards should focus on assessing the internal processes a company uses for generating projections.

Disclosure of additional information on the basis for a company's projections would give investors a more solid foundation for assessing the cer-

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<sup>205</sup> The SEC currently permits public companies to issue projections but does not mandate such projections. This policy has evolved over the decades. Initially, the SEC feared that investors would be misled by such forward looking projections. *See, e.g.,* Harry Heller, *Disclosure Requirements Under Federal Securities Regulation*, 16 *BUS. LAW.* 300, 307-08 (1961). By the 1970s, the SEC came to the realization that projections were an important part of company valuation. *See, e.g.,* REPORT OF THE ADVISORY COMMITTEE ON CORPORATE DISCLOSURE TO THE SECURITIES AND EXCHANGE COMMISSION (Nov. 3, 1977). It also faced substantial criticism from academics. *See, e.g.,* Homer Kripke, *The SEC, the Accountants, Some Myths and Some Realities*, 45 *N.Y.U. L. REV.* 1151, 1199 (1970) (arguing that SEC policy was antiquated given distribution of projections). By the end of the 1970s, it had changed its policy to permit and even encourage companies to include projections information but did not require it. *See, e.g.,* Guides for Disclosure of Projections of Future Economic Performance, Securities Act Release No. 5992, Securities Exchange Act Release No. 15305 (Nov. 7, 1978) ("encourag[ing] companies to disclose management projections . . . whether or not included in Commission filings."). The Management Discussion & Analysis section of SEC disclosures, which requires a qualitative discussion of developments in the company's business, was introduced 40 years ago. 17 *C.F.R.* § 229.303(a)(3)(ii) (2019) (requiring companies to "describe any trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income.").

<sup>206</sup> *See, e.g.,* Henry B. Reiling & John C. Burton, *Financial Statements: Signposts as Well as Milestones*, 50 *HARV. BUS. REV.* 45, 53 (1972).

<sup>207</sup> Such projections could be required for particular documents associated with public transactions. They could be required for the registration statement for the sale of securities and the proxy statement that must be filed before soliciting votes to approve a SPAC transaction.

<sup>208</sup> AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS, FINANCIAL FORECASTS AND PROJECTIONS TASK FORCE, GUIDE FOR PROSPECTIVE FINANCIAL INFORMATION WITH CONFORMING CHANGES AS OF MAY 1, 2006 (2006).

tainty of an emerging company's valuation. Finance professor Aswath Damodaran has noted that the current disclosure regime permits emerging companies to provide selective information on projections without enough detail for investors to evaluate claims of growth.<sup>209</sup> To the extent that a company's valuation is based on unrealistic projections, or the company cannot adequately articulate the assumptions for its projections, investors will have fair warning that they are speculating on an uncertain investment. While disclosure would not completely eliminate the uncertainty of a valuation, it would give investors a better sense of the nature of their investment.

Better disclosure relating to projections would be a substitute for the IPO price that an underwriter sets in a traditional IPO. The IPO price essentially provides an expert judgment of the present value of the earnings that will be generated over time by the emerging company. With a traditional IPO, investors have less need to generate their own projections or examine the company's projections in deciding how much to pay for an IPO stock.

Mandatory disclosure of projections could help provide documentation about the claims that are being made by the founders of entrepreneurial companies.<sup>210</sup> Because under the current system, companies are permitted to issue projections in various forms but not required to include them in SEC disclosure, it can be difficult to reconstruct the information that was used to solicit investors. A mandate requiring the disclosure of projections would mean that emerging companies would need to stand behind their projections and potentially be accountable for them. If combined with a determination that the PSLRA safe harbor does not apply to such projections, companies that do not use an underwriter to go public would have strong incentives to issue projections with sound support.

An objection to the proposal is that mandating disclosure of projections might mean that SPACs and direct listings would not be viable.

Many emerging companies may not be able to generate sufficiently certain projections to comply with the mandate. But if that is the case, it is unclear why such companies should achieve high valuations in public markets. Such companies could still raise funds from sophisticated private investors who are aware that they are gambling. Moreover, all companies that strive to raise significant funds from private investors must generate projections that are used to justify their valuations. It is likely that many emerging companies affected by this proposal will have already developed the information to comply. Finally, there would still be incentives for companies to use these alternative ways of going public. SPAC founders would still receive substantial compensation for completing a successful merger of a com-

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<sup>209</sup> Aswath Damodaran, *Disrupting the Disruptors? The "Going Public Process" in Transition* (July 14, 2021), <https://ssrn.com/abstract=3892419>.

<sup>210</sup> There is some evidence that SPAC projections provide useful information to investors. See, e.g., Kimball Chapman, Richard Frankel & Xiumin Martin, *SPACs and Forward-Looking Disclosure: Hype or Information?* (Sept. 2021) (finding that intensity of forecasts relating to SPAC acquisitions does not result in lower returns).

pany that could not otherwise go public. Direct listings would still be attractive for entrepreneurial companies who believe that their IPO would be substantially underpriced.

A mandate to disclose projections and their basis could be applied not only to companies that are ready to take on full public status, but also smaller companies that take advantage of certain exemptions from the securities laws. Permitting wider investment in crowdfunding ventures and private placements would raise fewer investor protection issues if companies were required to develop and publish the basis for their projections. Additional disclosure mandates could even supplement or replace other methods for protecting investors. Prior efforts to give investors more access to private investments have generally conditioned such access on investment limitations and screening. As noted earlier, the JOBS Act limited the amount that could be raised and invested in crowdfunding offerings.<sup>211</sup> The JOBS Act also conditioned general solicitation for private placements on the implementation of verification measures that only accredited investors purchased the securities.<sup>212</sup> With stronger disclosure of projections, there would be a case that some of these restrictions should be relaxed.

More ambitiously, a projections disclosure rule could be applied to traditional public offerings by emerging companies, all IPOs, or periodic disclosure for all public companies.<sup>213</sup> Because the valuation of even established public companies is determined by projections of future performance, there is a case that transparency would benefit investors in that context.

## CONCLUSION

The increasing willingness of investors to assign high valuations to entrepreneurial investments is difficult for regulators to address because it is not based entirely on unfounded speculation. As emerging companies have generated lasting value in public markets, investors believe that they can meaningfully assess the risks of new ventures. This poses a challenge for a securities regulation model that attempts to restrict access to investments in companies characterized by Knightian Uncertainty. The increasing blurring of the line between risk and uncertainty should be addressed by creating liability incentives that encourage reasonable valuations and increasing disclosure that will better permit investors to assess the prospects of emerging companies.

The SEC has relied upon the simple message of investor protection for decades to support extensive regulation of the sale of securities to the general public. This age of entrepreneurship has created new challenges for this

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<sup>211</sup> JOBS Act §§ 301-305; *see also* Regulation CF, 17 C.F.R. Part 227.

<sup>212</sup> JOBS Act § 201.

<sup>213</sup> A more ambitious proposal would be to require mandatory disclosure of projections in periodic reporting. *See* JAMES J. PARK, *THE VALUATION TREADMILL: HOW SECURITIES FRAUD THREATENS THE INTEGRITY OF PUBLIC COMPANIES* (forthcoming 2022).



longstanding approach. As pressure increases to permit investor access to private companies, there is a need to better articulate the goals of the securities laws. This Article has set forth a new conception of investor protection based on the distinction between risk and uncertainty that better frames the challenges the SEC is facing.

