

Ads Aren't Stocks, or How Bad Analogies Make Bad Law

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Abstract

A bill recently introduced in the U.S. Senate would fundamentally remake the online digital-display advertising market by forcing the physical separation of a vertically integrated market, and by imposing fiduciary-like duties on those buying and selling online ads for others. Proponents of this legislation—previously called the Competition and Transparency in Digital Advertising Act (CTDA), although the current version is known as the Advertising Middlemen Endangering Rigorous Internet Competition Accountability (AMERICA) Act—have pointed to rules allegedly used in the regulation of securities markets as the basis for the legislation. According to the academic and political proponents of the legislation, these two principles—physical separation and a best-interests rule—are effectively used in stock-market regulation. This article demonstrates that these claims are false. Stock markets are not physically separate from brokers, either in law or fact, as the backers of the AMERICA Act claim. Moreover, rules about best-price execution are (1) utilized only because vertical integration is permitted and common, (2) are nevertheless not a significant limitation on trading behavior, and (3) yet require a massive federal and private apparatus to support them. But more importantly, this article shows that, whatever the facts on the ground in stock markets, any analogy to them is misplaced, because it fails to appreciate the purpose of stock-market regulation. The sale of stocks is regulated in the way that it is because of the centrality of stocks to the savings and investments of everyday Americans, as well as the various vital roles stocks and stock markets play in the capitalist economy. Stock-market regulation protects the nerve center of the economy. Ads are not stocks, and any claim that they should be regulated as stocks is deeply misleading.

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Table of Contents

ABSTRACT	2
I. INTRODUCTION	4
II. SOME ADTECH BASICS	9
III. ANALOGIES AND THE ROLE OF PURPOSE	13
A. The Dual Purposes of Stock Market Regulation	16
1. <i>Protecting Investors</i>	<i>18</i>
2. <i>Capital Allocation, Efficiency, and Economic Productivity</i>	<i>22</i>
B. Why Ads Are Different	26
1. <i>High Stakes Versus Low Stakes</i>	<i>27</i>
2. <i>Intrinsic Value Versus What Something Will Fetch</i>	<i>28</i>
3. <i>Consumption Versus Investment or Speculation</i>	<i>30</i>
4. <i>Vulnerability</i>	<i>30</i>
5. <i>Liquidity</i>	<i>32</i>
C. Other Analogies	32
IV. THE FALSE FOUNDATIONS OF THE AMERICA ACT	36
A. The Myth of Physical Separation in Stock Markets	37
1. <i>Broker-Owned Exchanges, or Dark Pools</i>	<i>38</i>
2. <i>The Exchange Model</i>	<i>43</i>
B. The Problems with Best Prices	45
V. SOME PARTICULAR CONCERNS	50
VI. CONCLUSION	53

I. Introduction

On May 19, 2022, “the most significant change to antitrust law in a generation” dropped on Capitol Hill.¹ Bipartisan groups of lawmakers in both houses of Congress introduced companion bills to regulate online or digital advertising.² The “Competition and Transparency in Digital Advertising Act” (CTDA) would amend the Clayton Act as it applies to online advertising. In March 2023, several of the CTDA’s U.S. Senate sponsors reintroduced the legislation in the 118th Congress under a new name: the “Advertising Middlemen Endangering Rigorous Internet Competition Accountability Act” (AMERICA Act).³

Both bills include two major reforms that would completely remake the way online advertising is bought and sold. These reforms are premised on an analogy between online advertising and stock markets. As Matt Stoller of the American Economic Liberties Project put it in a press release announcing the introduction of the AMERICA Act:

No one would accept Goldman Sachs running the New York Stock Exchange, representing buyers of stock, and sellers of stock at the same time, just as no one would accept a lawyer representing both sides in a trial. Neither should Congress let corporations run all sides of a transaction in online ad markets.⁴

This article argues that this analogy is false and does not justify the proposed reforms.

The legislation has two major pieces. First, companies with more than \$20 billion in digital-ad revenue (that is, Google) cannot own an “exchange,” a place where online ads are bought and sold, if it also provides services to buyers and sellers of ads, or it sells advertising space itself.⁵ As discussed below, Google (and other “adtech” companies) vertically integrate across the adtech stack, providing tools to buyers and sellers (known as demand-side or sell-side platforms), as well as operating the market in which these buyers and sellers come together. Google also buys and sells its own advertising for its properties, like YouTube. There are, as set out below, good, socially regarding reasons for adtech companies to provide all these functions under one roof. But AMERICA Act

¹ Keach Hagey, *GOP-Led Legislation Would Force Breakup of Google’s Ad Business*, WALL ST. J. (May 19, 2022), <https://www.wsj.com/articles/gop-led-legislation-would-force-breakup-of-googles-ad-business-11652969185>.

² On the Senate side, the bill was sponsored by Sens. Mike Lee (R-Utah), Ted Cruz (R-Texas), Amy Klobuchar (D-Minn.), and Richard Blumenthal (D-Conn.); on the House side, the bill was sponsored by Reps. Ken Buck (R-Colo.), Burgess Owens (R-Utah), Pramila Jayapal (D-Wash.), David Cicilline (D-R.I.), and Matt Gaetz (R-Fla.); Competition and Transparency in Digital Advertising Act, S. 4258, 117th Cong. (2022).

³ Advertising Middlemen Endangering Rigorous Internet Competition Accountability Act” or the “AMERICA Act,” S. 1073, 118th Cong. (1st Sess. 2023).

⁴ Press Release, *The AMERICA Act: Lee Introduces Bill to Protect Digital Advertising Competition*, SEN. MIKE LEE (Mar. 30, 2023), <https://www.lee.senate.gov/2023/3/the-america-act>.

⁵ *Id.*

would ban them from doing so. As discussed below, it is based on a misunderstanding of and deeply misleading analogy to financial-market regulation.

Second, companies with more than \$5 billion in digital-advertising revenue (such as Google, Facebook, Amazon, Verizon, Comcast, Microsoft, Yahoo, and others) that provide services to buyers and sellers of digital advertising would have a legal duty to act in a customer's "best interest" and would have to comply with various transparency requirements, among other things.⁶ This reform is also based on a misplaced analogy to financial-market regulation. A best-interests rule would add significant costs to the system and require a massive bureaucracy to enforce, despite there being little to no evidence that it would do any good.

The ideas of physical separation (reform #1) and of imposing fiduciary duties on ad brokers (reform #2) are inspired by financial regulation. In a fact sheet accompanying the original CTDA, primary Senate sponsor Mike Lee (R-Utah) stated: "These restrictions and requirements mirror those imposed on electronic trading in the financial sector— an industry to which Google itself has compared its technology."⁷ In related antitrust litigation against Google brought by the State of Texas,⁸ this inspiration was made explicit: an analogy was made between Google's vertical integration in the adtech stack and a hypothetical vertical integration on Wall Street—it is as "if Goldman Sachs . . . owns the NYSE."⁹ As Sen. Lee noted in the *Wall Street Journal* the day the CTDA was introduced: "When you have Google simultaneously serving as a seller and a buyer and running an exchange, that gives them an unfair, undue advantage in the marketplace, one that doesn't necessarily reflect the value they are providing."¹⁰ In the stock market, the argument goes, brokers (who provide services to buyers and sellers of stocks) are legally separate from owners of exchanges (who provide the venue where trades happen), and strict duties police the boundaries, as well as the behavior of participants to ensure deals are fair.

As this article shows, this is mostly myth. It is founded on a deep misunderstanding of the way that stock markets work and, more importantly, on the purpose of securities regulation. If one understands the mechanics of stock markets and the reasons they are regulated as they are, the analogy completely falls apart.

Defenders of the new regulations argue that brokers like Goldman Sachs are prohibited from owning the exchange on which stocks are traded. While it is true that Goldman Sachs (a broker) does not

⁶ *Id.* (quoting Sen. Klobuchar).

⁷ Fact Sheet, *Competition and Transparency in Digital Advertising Act*, SEN. MIKE LEE (May 19, 2022), available at <https://www.lee.senate.gov/services/files/5332FC38-76F0-4C8B-8482-3F733CF17167>.

⁸ *Texas, et al. v. Google LLC*, No. 1:2021cv06841 (SDNY 2022) (third amended complaint), available at [https://www.texasattorneygeneral.gov/sites/default/files/global/images/TAC%20-%20Redacted%20Version%20\(public\).pdf](https://www.texasattorneygeneral.gov/sites/default/files/global/images/TAC%20-%20Redacted%20Version%20(public).pdf).

⁹ *Id.* at 12.

¹⁰ Hagey, *supra* note 1.

own the NYSE (an exchange), it does own a *different* stock exchange, called SigmaX2, where the same stocks sold on the NYSE are bought and sold.¹¹ In fact, about half of all stock trades occur on trading venues (*i.e.*, exchanges by a different name) owned by brokers.¹² If an investor hires Goldman Sachs to buy a share of stock of Google, Goldman can execute this transaction on the NYSE (or other public exchanges), on its own exchange (SigmaX2), or, remarkably, from shares of Google stock that it owns, through a process called “internalization.”¹³ In this last case, there is not a potential conflict of interest, as if Goldman did the transaction on an exchange it owned, but a direct one.

The AMERICA Act would ban Google from acting as a broker on its own ad exchange, but securities law, on which the law is purportedly founded, *permits* exactly this same conduct. Moreover, the NYSE is a publicly traded company (owned by many investors, including, likely, Goldman Sachs) and offers many services for buyers and sellers of stocks. Banning Google from owning an exchange because it could not do so if it were in the stock-brokerage business makes no sense, because it could. The bill’s insistence on the centrality of physical separation is not supported by the facts of how markets work.

To put a nail in this particular coffin, here is how the current state of stock-market regulation on this point is described in a new book-length treatment:

In some cases, the *same* institution can potentially advise an individual on which stock to buy and then either arrange execution of the order on that person’s behalf on a trading venue or act as counterparty on the other side of the order. Moreover, in the case where it arranges execution, the trading venue can be one owned by the broker dealer.¹⁴

There is simply no support for the claim that stock markets must be physically separated in the way proposed by the AMERICA Act.

The second part of the bill—creating a legal duty to act in a client’s best interest when helping them buy or sell ads—is (more or less) part of the stock-market world. It is important to note, however, that one of the reasons there are duties like this in the securities world is precisely because there is *not* a general obligation of physical separation in the securities world. The “best interests” rule in securities regulation exists precisely because brokers may own exchanges and otherwise act on behalf of clients when there are real or potential conflicts of interest. In short, the AMERICA Act takes a belt-and-

¹¹ John McCrank, *Goldman Sachs to Launch New “Dark Pool” for Stocks on Friday*, REUTERS BUS. NEWS (May 11, 2017), <https://www.reuters.com/article/us-goldman-sachs-stocks-darkpool/goldman-sachs-to-launch-new-dark-pool-for-stocks-on-friday-idUSKBN18729A>; see also, *Sigma X2 Monthly Metrics*, GOLDMAN SACHS (Mar. 2023), available at <https://www.goldmansachs.com/what-we-do/global-markets/gset/equities/liquidity-access/sigma-x-us-monthly.pdf>.

¹² *US Equity Market Structure Analysis: Analyzing the Meaning Behind the Level of Off-Exchange Trading*, SIFMA INSIGHTS (Sep. 2021), available at <https://www.sifma.org/wp-content/uploads/2021/09/SIFMA-Insights-Analyzing-Off-Exchange-Trading-09-2021.pdf> (reporting 44% of trades in 2021 (through June 30) were “off-exchange”).

¹³ See, e.g., *How Stock Markets Work: Executing an Order*, SEC. EXCH. COMM’N, <https://www.sec.gov/fast-answers/answersinternalization> (last visited Apr. 9, 2023).

¹⁴ MERRITT B. FOX, LAWRENCE R. GLOSTEN, AND GABRIEL V. RAUTERBERG, *THE NEW STOCK MARKET: LAW, ECONOMICS, AND POLICY* 261 (2019).

suspenders approach that offers more supposed protection for advertisers and ad buyers than stock traders, even though the potential mischief and consequences are greater in the securities world. Ordinary Americans have their savings and their futures bet in the stock markets, not in ad markets, which are merely places where commodities are bought and sold. There is no investment or speculation in ad markets.

Even more fundamentally, the “best interests” obligations in the securities world have much less bite than the proposed rules under the AMERICA Act. To be sure, when Goldman executes a transaction for a client (on its exchange or elsewhere), it is required by a complex set of regulations to execute the trade at the best available price. This is the inspiration for the fiduciary duty part of the AMERICA Act.

But even this is not exactly as it seems. As discussed in detail below, there are several reasons why the best-price obligation nevertheless permits most trades to happen at something other than the best available price. While everyone in the chain for a particular transaction (retail broker, wholesale broker, exchange) is required to execute trades at the best price (called the “national best bid offer” or NBBO price), there is some discretion baked into the system, especially since price is not the only factor customers care about. Moreover, even U.S. Securities and Exchange Commission (SEC) rules permit trades to be made at inferior prices, so long as some of the trade is made at the NBBO.¹⁵ A recent empirical study found that only about 43% of trades were made at the NBBO price, because of the impact of various discounts and other factors paid by exchanges.¹⁶

To sum up, neither of the two proposed reforms is supported by the analogies that their proponents have made to financial regulation. Brokers and exchanges are not physically separated, and best-interests rules (which are premised on them not being physically separated) are effective less than half the time, due to the complexities of stock markets. On this last point, ad markets are many times more complicated than stock markets, meaning the vast regulatory bureaucracy necessary to support such rules in stock markets will have to be many times larger for ad markets.

Although the way in which the stock market works and is regulated does not provide any support for the proposed reforms to ad markets, there is a much more fundamental problem with the analogy. The biggest difference between the example of Goldman buying a *share of stock* on various exchanges for its customers and Google buying *advertising* on various exchanges for its customers is founded in the purpose of stock-market regulation. The stock market is regulated as it is because of the profound social importance of accurate stock prices, not because of overriding concerns about

¹⁵ For a discussion of Rule 611, see, *Rule 611 of NMS*, SEC. EXCH. COMM’N (Apr. 30, 2015), available at <https://www.sec.gov/spotlight/emsac/memo-rule-611-regulation-nms.pdf>.

¹⁶ See Sida Li, Mao Ye, & Miles Zheng, *Financial Regulation, Clientele Segmentation, and Stock Exchange Order Types*, NAT’L. BUREAU ECON. RESEARCH WORKING PAPER SERIES No. 28515 (2021), available at https://www.nber.org/system/files/working_papers/w28515/w28515.pdf.

conflicts of interests in general. Stocks are regulated as they are because they are stocks. Ads are not stocks, and thus, regulating them like stocks makes no sense.

Plenty of markets involve vertical integration with conflicts of interest, but do not require physical separation or impose fiduciary duties. Auction houses provide a venue where buyers and sellers come together to bid on art and antiquities, while also providing services and advice to buyers and sellers, as well as sometimes bidding on items themselves. Or consider the local drug store. One can think of CVS or Walgreens as a place where buyers and sellers of various products come together, and where the owner of the market offers various services to buyers and sellers (e.g., placement, data, and inventory management for sellers; discounts, loyalty programs, information, and credit for buyers), as well as offering its own goods (that is, generic brands) for sale. Or, moving online, think about eBay or Amazon, or frankly any platform. eBay runs auctions for buyers and sellers; it also provides ancillary services. Amazon runs an “exchange,” provides numerous services for buyers and sellers, and sells its own products on its website. Potential conflicts of interest abound. We do not look to financial regulation for how to think about resolving these potential conflicts, because stocks are fundamentally different for the reasons set out below.

The analogy between online-advertising markets and the stock market originated in a law review article—“Why Google Dominates Advertising Markets: Competition Policy Should Lean on the Principles of Financial Market Regulation”—published in 2020.¹⁷ The subtitle plainly reveals the analogy. In the article, Dina Srinivasan explains how Google “engag[es] in conduct that lawmakers prohibit in other electronic trading markets,” namely, stock markets. The article identifies several practices that are allegedly banned in financial markets but permitted in the advertising market. In all of these cases, the prohibited activity can be described as a party acting as an agent for another party while serving their own selfish interests. For example, somewhat imprecise analogies are made to “front running” (the practice of a stockbroker receiving an order from a customer and buying or selling ahead of it to earn a profit at the expense of the customer), to “insider trading,” and to other nefarious practices.¹⁸

More compelling points are made where the article compares various common features of online auctions for ads and stocks, such as the advantages of speed and the potential for steering transactions in selfish ways. At the end of the day, Srinivasan recommends that regulators use the “toolbox” of securities regulation to “provide[] a framework for understanding and addressing competition problems in advertising.”¹⁹

Srinivasan’s article, which appears to be the wellspring of the Lee bill, alleges that Google’s exchange gives speed and information advantages to Google ad tools; that Google favors its own properties

¹⁷ Dina Srinivasan, *Why Google Dominates Advertising Markets: Competition Policy Should Lean on the Principles of Financial Market Regulation*, 24 STAN. TECH. L. REV. 55 (2020).

¹⁸ *Id.* at 84.

¹⁹ *Id.* at 68.

(YouTube and Search) for placement of ads (and, by implication, that advertising on other sites would be better in some unexplained way); and that (vaguely) “Google abuses its access to inside information.”²⁰ Whether or not these things are true is a factual question, of course, and one beyond the scope of this article. The point here is not to challenge the allegations or to defend Google or any other business. Rather, the point is to assert that, even if true, the AMERICA Act does not necessarily follow as a logical response. There is a large leap made from the facts to the law.

Srinivasan points to “the market for electronically traded equities,” which she asserts bans these practices, as the proper analogy. The rhetorical move is powerful: society has banned these practices in one area of the economy, and so it is illogical that we would allow them in another, similar area of the economy. The problem with this is two-fold: first, the claims about how equity markets are regulated are somewhere between naïve and untrue; and second, the reason we regulate securities markets as we do is because they involve the socially vital trading of securities, not because of the problems she identifies. Srinivasan asks whether “[b]ecause ads now trade on electronic trading venues too, should we borrow these three competition principles to protect the integrity of advertising?”²¹ Although the question of whether to regulate online ad sales is beyond the scope of this article, the upshot of is that regulating based on analogy to securities regulation is deeply flawed, both in theory and in fact.

II. Some Adtech Basics

The Internet changed everything, including how advertisers reach potential customers. Before the world went online, advertisers used radio, television, magazines, and billboards to convey information about their products to the public. There were two significant characteristics of this pre-Internet market that are germane to the current regulatory push. First, these advertisements were bought and sold using ad agencies and other brokers through person-to-person direct sales. Second, advertising was largely depersonalized. To be sure, when Gatorade implored you to “Be Like Mike,” (as in, Michael Jordan) it did so in *Sports Illustrated*, not *Barron’s*. But by and large, ads were not tailored to individual people based on their prior actions, but rather to the preferences of groups using, at best, rough proxies. Thus, Gatorade targeted readers of *Sports Illustrated* but not, as it does today, Joe who just searched the Internet for “best electrolyte replacement.”

The movement of media online changed advertising radically along both these dimensions. As to the way in which advertising is sold, computers permitted publishers (those with advertising space to sell) and advertisers (those looking to raise awareness of their products) to find each other and do deals in much more efficient ways. Third parties developed computerized tools to help buyers and sellers of advertising to optimize their online spending. These tools—and thus, this industry—is known as “adtech.” If you are a publisher, like the *Wall Street Journal*, you might build or buy a

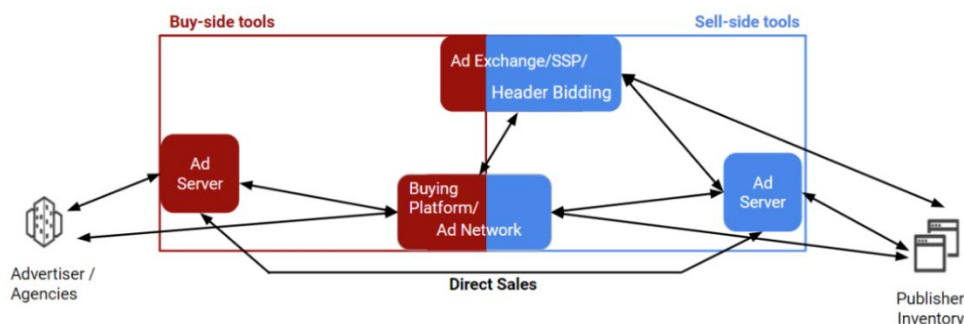
²⁰ *Id.* at 149-54.

²¹ *Id.* at 172.

software package that helps list your virtual real estate for sale to the highest bidder. Such bids may also be subject to any restrictions you want, such as banning certain ads, whether they be lewd or from a competitor. If you are an advertiser—again, like the *Wall Street Journal*—you might build or buy a software package that helps you target the best audience for your product. This relates to the second dimension of change. As an advertiser, the *Wall Street Journal* may be interested in sending ads to people who live in financial centers, who search for stock tips online, or who read other business publications. The Internet permits tailoring ads to individual consumers in ways unimaginable just decades ago.

The early 2000s saw a proliferation of new companies offering ad-optimization and placement services. Existing ad agencies developed and bought some of these new services, or built their own. New entrants, such as DoubleClick, developed standalone services for managing online advertising. A publisher or advertiser could purchase a software tool that would help buy or sell online advertising in a way that efficiently met the buyer's or seller's objectives. A familiar diagram used in this literature is shown below in Figure I.

Figure I: Tools to Manage the Adtech Stack



SOURCE: Bitton & Lewis

This diagram shows the several ways in which buyers and sellers of online advertising come together. The largest by volume and revenue is through direct sales or programmatic direct deals.²² According to an investigation by the UK Competition and Markets Authority (CMA), more than 80% of online display ads were direct sales in which the publisher and advertiser have a pre-existing relationship.²³ These transactions mimic ad sales of the pre-Internet days, with deals done between ad agencies and sales teams at major online sites, and computers used merely to make the process more efficient. This means the use of various “sell-side tools” and “buy-side tools,” such as an ad server that optimizes inventory management and price for sellers, and allocation and cost per impression for advertisers.

²² Daniel S. Bitton & Stephen Lewis, *Clearing Up Misconceptions About Google's Ad Tech Business*, COMP. POL'Y INT. (Jul. 13, 2020), <https://www.competitionpolicyinternational.com/clearing-up-misconceptions-about-googles-ad-tech-business> (“Direct transactions thus make up the large majority of online display ad sales...”).

²³ ONLINE PLATFORMS AND DIGITAL ADVERTISING MARKET STUDY, U.K. COMPETITION & MKTS. AUTH. (last updated Jul. 1, 2020), <https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study>.

This type of online advertising is not the object of the AMERICA Act or antitrust litigation efforts by the states.

Another way in which buyers and sellers of online ads come together is through auctions on ad exchanges, a process known as real-time bidding or indirect programmatic sales. An ad exchange is simply a marketplace in which publishers offer their online inventory, and advertisers can bid for that inventory in “real time.” This means that, when an individual person opens a web page, the ad exchange lists this event—the right to display one’s ad in a particular location on a web page to a particular visitor to that site—for sale to the highest bidder. Remarkably, the auction happens while the web page loads.

Importantly for purposes of this article, these auctions are highly individualized, finding a market-clearing price to place a particular message in a particular location in view of a particular person at a particular time. Compare this with a billboard. The owner of the billboard charges one price—say, a monthly fee—for the billboard, with that price depending on the number of cars likely to see it during that period. For online advertising sold through auction, it is as if the price for showing an ad on the billboard were different for every car that passes. This has significant ramifications for the fitness of any analogy to securities markets. At any moment, the value of a share of stock in, say, Google represents the market’s best guess at the value of Google in all future periods, divided by the number of shares outstanding, and discounted back to the present. Although individuals may have different estimates of this value, the price of Google sold at auction is the same (more or less) for everyone. The securities market is not individualized, but generalized. It is more like billboards, not online auctions.

But there is another way in which securities also differ from even billboards. As discussed below, there is an intrinsic value for a stock that represents the cash the stock will generate over time in present value. By contrast, a billboard advertisement or online auction is worth only what someone will pay for it. Ad prices are set by the forces of supply and demand, whereas stock prices reflect the actual value in terms of the cash flows of owning a security.

The online-auction process for advertisements can be simple or complex. In the simple version, publishers add a few lines of code to their website and set up an account with one of dozens of companies (like Google’s AdSense or Amazon’s Native Shopping Ads) that provide various tools to help the publisher achieve their goals.²⁴ This approach is generally used by less-sophisticated advertisers. It is a service, like any other.

In more complex versions, publishers and advertisers use a variety of tools—known as demand-side platforms (DSPs) and sell-side platforms (SSPs)—to process bids from multiple parties on a single ad-display option for a particular user. In its simple form, the process works something like this. First,

²⁴ Matteo D’Uo, *21 Best AdSense Alternatives to Consider for Your Website in 2021*, KINSTA (Mar. 11, 2020), <https://kinsta.com/blog/adsense-alternatives>.

when someone opens a webpage (either through a browser or an application), the publisher's ad-server tool sends a request to an SSP for advertising options available on a particular webpage for that particular user. Second, the SSP sends requests to DSPs for advertising. Third, the DSPs then determine whether and how much to bid for the particular online real estate, based on their advertisers' campaign objectives and information about the particular viewer of the webpage. Fourth, the SSP determines the winner of the auction, based on the price or other factors programmed by the publisher. Fifth, the SSP sends the winning bids to the publisher. Finally, the publisher's ad server compares the winning bids from the SSP (and potentially multiple SSPs) with any direct deals that may exist, and ultimately decides what ad to serve at the particular location for the particular user.

An alternative to the auction method run by Google and others for this narrow segment of the market debuted in about 2015. Known as "header bidding," it was developed as a mechanism to increase price competition across multiple SSPs, leading to higher prices for publishers. Header bidding is an "alternative to the Google 'waterfall' method" that "offers publishers a way to simultaneously offer ad space out to numerous SSPs or Ad Exchanges at once."²⁵ Here is how one service provider describes the advantage of header bidding:

[W]hen a publisher is trying to sell advertising space on its site, the process for filling inventory goes something like this: First, your site reaches out to your ad server. In general, direct-sold inventory takes precedence over any programmatically sold options. Next, available inventory is served through the site's ad server, such as Google DoubleClick in a waterfall sequence, meaning unsold inventory is offered first to the top-ranked ad exchange, and then whatever is still unsold is passed along to the second ad exchange, and so on. These rankings are usually determined by size, but the biggest ones aren't necessarily the ones willing to pay the highest price. (For publishers, this means lower overall revenue if the inventory isn't automatically going to the highest bidder.) To further complicate the process, sites using Google's DFP for Publishers has a setting that enables them to outbid the highest bidder by a penny using Google Ad Exchange (AdX). And since AdX gets the last bid, they are generally in a position to win most of these auctions. Publishers end up feeling like they aren't making quite as much money as they would without Google meddling in the bids.²⁶

Header bidding permits simultaneous auctions managed by the publisher: "By placing some JavaScript on their website, when a particular page is loaded, it reaches out to all supported SSPs or ad exchanges for bids before its ad server's own direct-sold inventory is called. Publishers can even choose to allow the winning bid to compete with pricing from the direct sales."²⁷ According to proponents, header bidding allows for increased control, increased revenue, improved yield, and

²⁵ *Back to Basics, What Is Header Bidding*, LOTAME (Mar. 4, 2021), <https://www.lotame.com/back-basics-header-bidding>.

²⁶ *Id.*

²⁷ *Id.*

reduced reporting discrepancies, when compared to the Google alternative.²⁸ Header bidding proved a popular alternative to the Google approach, with about 80% of large websites using it within a few years.²⁹

III. Analogies and the Role of Purpose

Lawyers reason by analogy.³⁰ New cases are compared with old ones, and where there is a fit, decided by reference to the way things have been done in other instances. As Edward Levi noted in his canonical text, “An Introduction to Legal Reasoning,” “[t]he finding of similarity or difference is the key step in the legal process.”³¹ Analogies are appealing because they build on what has worked, permitting accretive (but not revolutionary) change. It forces decision makers, be they judges or legislators, to offer some proof that their proposal is likely to work. And it can help convince outsiders that the result is justified. What worked over there might work over here, as long as here and there are similar problems.

Ad tech is a new case; financial regulation is an old one, and thus it serves as a potential analogy. The main body of securities regulation dates to the New Deal,³² and its several statutes and vast body of rules and regulations has helped to create the most liquid capital markets in history. Although there are many critics and criticisms of the efficacy of securities regulation,³³ its widely perceived success makes it a fertile ground for analogy to adtech markets. After all, both involve “exchanges,” brokers, auctions, and concerns about speed, misuse of information, and conflicts of interest.

The superficial similarity between *stock* markets and *ad* markets is not just made by critics of the big players. Google itself describes ad exchanges by reference to stock exchanges. In describing its buy-side services to potential customers, Google stated: “imagine the Ad Exchange as a stock exchange.”³⁴ Google’s competitors have made the analogy, too. One rival described itself as “the eTrade to

²⁸ *Id.*

²⁹ Ross Benes, *Five Charts: The State of Header Bidding*, INSIDER INTELLIGENCE (May 30, 2019), <https://www.emarketer.com/content/five-charts-the-state-of-header-bidding>.

³⁰ *Id.* at 13.

³¹ Edward Hirsch Levi, *An Introduction to Legal Reasoning*, 15 U. CHI. L. REV. 501, 502 (1948).

³² See, William A. Birdthistle & M. Todd Henderson, *Becoming a Fifth Branch*, 99 Cornell L. Rev. 1 (2013).

³³ See, e.g., Paul G. Mahoney, *The Economics of Securities Regulation: A Survey*, VIRGINIA L. & ECON. RES. PAPER NO. 2021-14 (Aug. 24, 2021) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3910557; Kevin S. Haeberle & M. Todd Henderson, *A New Market-Based Approach to Securities Law*, 85 U. CH. L. REV. 1313 (2018).

³⁴ *The DoubleClick Ad Exchange*, GOOGLE (Oct. 3, 2020), available at <https://static.googleusercontent.com/media/www.google.com/en//adexchange/AdExchangeOverview.pdf>.

Google's NYSE."³⁵ As noted above, academics first pressed this analogy,³⁶ while lawmakers and regulators subsequently seized upon it.³⁷

But is the analogy on point? The question matters a lot. If the analogy sticks, the online-advertising world may come to look more like the securities world, which is one of the most heavily regulated industries on earth. Thousands and thousands of regulators—public, private, and internal—walk the beat of securities markets. Billions are spent to comply with securities laws. These include the public enforcement costs (e.g., the SEC, the Financial Industry Regulatory Authority); private compliance costs (internal to firms, including issuers, brokers, investment funds, and banks); and the social impact of regulatory costs (e.g., how regulation benefits large firms compared with smaller ones).

The AMERICA Act's direct and indirect costs will be large enough to matter, but it is the camel's nose under the tent. As discussed below, something like the "best interests" standard that the AMERICA Act would impose simply cannot be meaningful without something akin to the massive regulatory apparatus that exists in securities regulation. It takes many thousands of people and many millions of dollars in compliance and lawyers and regulators to try to enforce the best-interests standard in securities law. If anything, as discussed below, many times this amount would be required to enforce it in ad markets—which, along this dimension, are far more complex. There is one single price for a stock, and it reflects an intrinsic value, while online display ads are particular to individuals, times, and places, and represent merely the interplay of supply and demand. These differences will make determining and enforcing a best-interests rule orders of magnitude more costly.

In light of the significant consequences that flow from analogizing ad markets to securities markets, such analogies need to be ironclad. The similarities between markets, to use Levi's language, must be fundamental and vastly outweigh the differences. But a problem with basing a massive governmental intervention into the economy and private ordering on an analogy like this is that there are innumerable similarities and differences between any set of extremely complex industries. The online advertising and securities markets are easily two of the most complex industries in history. There is the risk that there are too many variables that cut in different directions, which could therefore give government too much wiggle room to make its case.

In making any analogy, there are several important questions.

First, there is the choice of which market to compare the ad market to. As noted below, instead of comparing the ad market to the stock market, academics could have analogized it to the market for corporate bonds or the foreign-exchange market, both of which are as similar, if not more so, and

³⁵ On DoubleClick Ad Exchange: More Digital Media Industry Reaction, ADEXCHANGER (Sep. 22, 2009), <https://www.adexchanger.com/ad-exchange-news/on-doubleclick-ad-exchange-the-digital-media-industry-reacts>.

³⁶ Srinivasan, *supra* note 17.

³⁷ *Texas v. Google*, *supra* note 8.

yet are regulated nothing like the stock market, or the ad market as imagined under the AMERICA Act. The market for auctioning off valuable art or antiquities shares many of the same characteristics, as well, but is regulated largely by common-law fraud. Why didn't critics use these analogies instead? The choice of market is likely not random or based on which of all possible markets is most related or most logical from a regulatory purpose perspective. Rather, the choice of market was influenced by the end goal. If one wants to regulate, choose a regulated market as an analogy.

Second, there is the question of what level of abstraction is appropriate for making the analogy. Any complex industry can be viewed at numerous levels of detail, revealing different complexities in each. Things that appear similar at one magnification may be vastly different when magnifications are increased. The analogy that has been made to financial markets is made at the highest, most generic level, referencing popular works of general interest, such as Michael Lewis's book "Flash Boys," which has been widely criticized by securities-law scholars.³⁸ As discussed in the next section, the actual workings of the stock market bear little resemblance to the description in "Flash Boys" or in Srinivasan's article. The complexity of the stock market frustrates any attempt to draw direct lines from it, and its regulatory structure, to the ad market. It is simply too easy to cherry-pick examples or similarities along a few dimensions, while ignoring the underlying the stock market's complexity or other aspects that point in different directions, regulatorily speaking.

It is for this reason that analogies here, and in general, must be founded not on surficial similarities between the markets, but first and foremost on the reason that stock markets are regulated as they are. Analogies are fundamentally founded on purpose. One cannot compare the regulation of A to the potential regulation of B, unless one knows *why* A is regulated the way that it is. What is the point of the regulation? This is where every analogy must begin. Only from purpose can one find an answer to the question of whether to apply A's regulation to B. After all, law is about achieving public purpose, not simply increasing the power of government.

For stock markets, the *why* of regulation can be stated simply: because stock markets involve stocks. After all, there are many types of markets (or, even, markets involving "exchanges"), but they are not all regulated with the same methods or intensity as the stock market. The reason that there are several comprehensive federal statutes; hundreds of rules promulgated by multiple federal, state, and private regulatory bodies; and thousands of pages of detailed regulations covering every aspect of buying and selling securities is because of the central importance of stocks to our society. If one is selling fish or antique furniture, even on an online exchange, the stakes are completely different, and the justification for regulation different, as well.

³⁸ See, e.g., Robert Bartlett III & Justin McCrary, *How Rigged Are Stock Markets? Evidence from Microsecond Timestamps*, 45 J. FIN. MARKETS 37 (2019); see also, MERRITT B. FOX, LAWRENCE R. GLOSTEN & GABRIEL V. RAUTERBERG, *THE NEW STOCK MARKET: LAW, ECONOMICS, AND POLICY* 261 (2019); for a popular account of Bartlett & McCrary's empirical results calling Flashboys' claims into question, see Herbert Lash, *Berkeley Study Finds Scarce Evidence of Market Front-Running*, REUTERS (Jul. 29, 2016), <https://www.reuters.com/article/us-usa-markets-latencyarbitrage-study/berkeley-study-finds-scarce-evidence-of-market-front-running-idUSKCN1092AZ>.

Drilling down, there are two purposes of stock-market regulation that must be the basis on which any analogies to securities laws are grounded. First, stocks and stock markets are regulated as they are because they largely involve investments of savings and retirement money by individuals. The stock market is the primary means of wealth creation in the United States and, as such, is the place where every-day Americans safeguard their income and hope to grow familial wealth. These investments are susceptible to fraud because of the relatively small amounts invested in any company (making monitoring by individuals inefficient); the agency costs inherent in hiring managers to be in charge of one's money; the speed and complexity of modern trading markets, and because stock prices reflect nothing more than promises about the distant future. As such, there are enormous social stakes implicated in ensuring that stock markets are well-regulated.

Second, stocks and stock markets are regulated as they are because of their central role in determining how scarce resources are allocated in our capitalist economy. As discussed below, stock prices dictate where capital, labor, and raw materials are invested in the economy. If prices are “wrong”—that is, stocks in industry A are overvalued and those in industry B are undervalued—then resources will inefficiently flow to industry A instead of industry B, where it would be more productive. High prices are our best evidence of value, and equivalent to a giant flashing sign saying to everyone in the economy, “Do this!” If the *this* is not worth doing, we are all worse off.

Accurate prices, in turn, depend on liquid markets, which attract numerous traders and reward those investments that uncover information and truth about companies' prospects. If prices are wrong over extended periods of time—for one stock or for many—the knock-on effects transcend losses to individual investors. Every investor, entrepreneur, employee, and supplier in the economy makes decisions based, in part, on where the most value can be created, and the best proxy for that is the stock market.

These two purposes are explored in the next section.

A. The Dual Purposes of Stock Market Regulation

The U.S. stock market is the most important market on earth; nothing else comes close. More than \$134 trillion in U.S. equities were traded in 2021, making it among the largest global markets by volume.³⁹ The market for stocks in the United States is almost 700 *times larger* than the market for

³⁹ The largest overall is the foreign-exchange market (Forex), which sees more than \$6.6 trillion dollars traded each day. See Triennial Central Bank Survey, *Foreign Exchange Turnover in April 2019*, BANK FOR INTERNATIONAL SETTLEMENTS (Sep. 16, 2019), https://www.bis.org/statistics/rpfx19_fx.htm.

online advertising, which was about \$200 billion in 2021.⁴⁰ More than two-and-a-half times as much stock—about \$532 billion—is traded *every day*.⁴¹

It is not just the size of the market that makes stock markets fundamentally different from advertising markets, and much more essential from a social perspective. While ads can help get information about goods and services to potential customers, stock markets have two features that are essential to a functioning economy. At the most basic level, the stock market is where individuals with money come together to meet individuals with business ideas. The money invested in stocks is used by businesses of all sizes to make investments in projects that generate wealth, employment, and the goods and services that make people happy. On the other side of the equation, participation in the securities market is the primary way in which individuals save and invest money for retirement. Stock markets are profoundly forward-looking, not about the moment.

These two aspects of securities are what make the entire economy function efficiently, but they present several special problems. Most obviously, stocks are different than other things bought and sold in markets, like apples or advertisements. Stocks are just promises about the future, not something that is consumed immediately. They are intangible. You cannot kick the tires on a stock. A stock isn't consumed, but rather is just the right to receive cash that might or might not appear at some unknown point in the future. As such, there is a huge informational asymmetry between the people with the money and the people with the business idea. In general, the former turn over their money to the latter, who promise to, sometime in the future, turn it into more money. But the whole magic-box part (where the money becomes more money) is entirely within the latter's control. Without a regulatory apparatus to force truthful disclosure of certain things, the risk may be too great to justify an efficient investment. Finally, investors in a stock rarely go it alone, meaning that any bargaining about information disclosure or attempts to exert control over those running the business will be beset with collective action problems. Regulations about disclosure, voting, liquidation rights, control rights, and other matters are essential to ensure the system operates efficiently.

At their core, securities laws and regulations are about both sides of this capitalist market—about protecting investors and about ensuring businesses can raise money at the lowest possible cost. These are the dual purposes of securities regulation. Without them, there would be little need for regulation.

⁴⁰ See, e.g., *Online Advertising Revenue in the United States From 2000 to 2021*, STATISTA (2023), <https://www.statista.com/statistics/183816/us-online-advertising-revenue-since-2000>.

⁴¹ This is the notional value reported by Cboe Global Markets for all trading days in 2021. “Notional value” is the dollar value traded each day, and is the product of the price for each trade and the number of shares traded at that price. Cboe reports daily values for trades from 19 trading venues/sources. The author calculated the daily average for the year. Data from Cboe Global Markets is available at https://www.cboe.com/us/equities/market_statistics/historical_market_volume.

I. Protecting Investors

There is about \$50 trillion invested in U.S. public companies.⁴² Almost all of this is money that is owned (directly or indirectly) by individual Americans. From the investor's perspective, the goal is to turn money into more money long into the future, whether this is called savings, investment, or income smoothing. The stock market is the best place to do this.

Since 1928, valuation levels in the stock market have increased, on average, about 10% annually.⁴³ This means \$100 invested in the stock market in 1928 would be worth more than \$760,000 today. (Adjusting for inflation, the return is still more than 7%.⁴⁴) Alternative investments—corporate bonds, government debt, and real estate—perform much worse. The same \$100 invested in 1928 in corporate bonds would have yielded only around \$54,000; in government debt, it would have yielded about \$8,500; and, in a real estate portfolio, it would have returned just about \$4,700.⁴⁵

a. The centrality of individual investors

U.S. households are the largest holders of the \$50 trillion in stocks. As shown in Figure II, about 38% of stocks are owned directly by individuals. The next largest bucket (22%) is mutual funds, which represent stocks owned indirectly by individuals saving for retirement. Most of the other categories—including exchange-traded funds (ETFs) and private and public pensions—likewise represent mechanisms that allow individuals to smooth their incomes over time—that is, save for retirement.

These stock investments are the largest single category of liquid assets (that is, excluding real estate and personal possessions) for U.S. households. According to data from the Federal Reserve, stocks represent about 42% of liquid assets for individuals, compared with 23% held in bank accounts.⁴⁶ Stocks are vital to the economic health of millions of families. This is true not just insofar as the stock market enables capital raising that produces employment and the things we want, but also insofar as it is the primary mechanism of personal wealth creation.

Importantly, stock ownership is not limited solely to wealthy individuals. The Federal Reserve estimates that, in 2019, about 53% of households owned stocks (about 65 million households).⁴⁷ The median value of holdings is about \$40,000. According to analyses done by the Securities

⁴² *Total Value of the U.S. Stock Market*, SIBLIS RESEARCH, available at <https://siblisresearch.com/data/us-stock-market-value>, (last visited Apr. 9, 2023).

⁴³ Measured by the S&P 500, the stock-market return since 1928 is about 10.2%. See Kent Thune, *What is the Average Return of the Stock Market*, SEEKING ALPHA (Jan. 2, 2023), <https://seekingalpha.com/article/4502739-average-stock-market-return>.

⁴⁴ Inflation-adjusted returns over the past 30 years are more than 8%. *Id.*

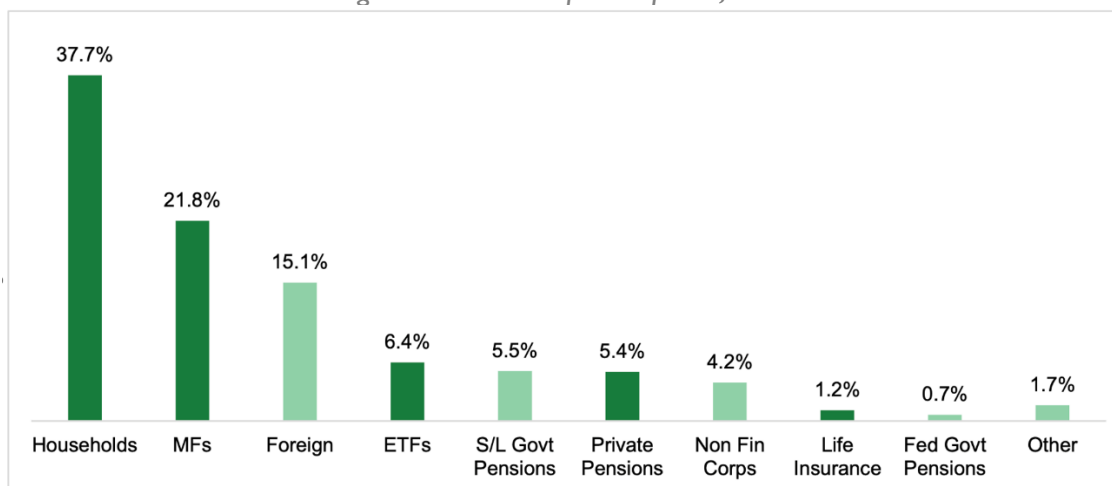
⁴⁵ Aswath Damodaran, *Historical Returns on Stocks, Bonds and Bills: 1928-2022*, NEW YORK UNIVERSITY STERN SCHOOL OF BUSINESS, https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html (last visited Apr. 5, 2023).

⁴⁶ *Id.*

⁴⁷ *Id.* This is in line with polling data, which suggests an average of about 54% since 2010.

Industry and Financial Markets Association (SIFMA), which used data from the Federal Reserve and the U.S. Census Bureau, the median stock ownership is associated with “an income range of \$77.2 thousand to \$126.6 thousand and therefore shows a wide universe of Americans own stocks, not just the 1%.”⁴⁸ Many typical Americans are heavily invested in securities, whether it is through individual accounts at E-Trade or similar services, or through mutual funds, ETFs, 401(k) plans, or private or government pension plans. Protecting the best source of wealth creation for American families is why we have securities regulation.

Figure II: Holders of US Equities, 2019



SOURCE: Federal Reserve, *Financial Accounts of the United States*⁴⁹

It is for this reason that the SEC’s unofficial moto is “We are the investor’s advocate.”⁵⁰ The approximately 4,500 staff at the SEC have a variety of jobs and areas of focus, but the mission is squarely focused on protecting individual investors, especially vulnerable, unsophisticated, poorer, and informationally disadvantaged investors.⁵¹ Concerns about these individuals motivated the securities laws passed during the New Deal, and have animated every major SEC action over the past century.⁵²

There are two specific worries. First, that investors will lose part or all of their savings by investing in businesses that are not what they appear to be. As noted above, buying a stock is a bet on the

⁴⁸ See, *Who Owns Stocks in America*, SIFMA INSIGHTS, available at <https://www.sifma.org/wp-content/uploads/2021/02/SIFMA-Insights-Who-Owns-Stocks-An-Update-FOR-WEB.pdf> (last visited Apr. 5, 2023).

⁴⁹ *Id.*; Households include nonprofit organizations. Other contains foreign banking offices in the United States, and funding corporations.

⁵⁰ Mary L. Shapiro, SEC. EXCH. COMM’N. *Address to the Council of Institutional Investors*, SEC. EXCH. COMM’N. (Apr. 6, 2009), <https://www.sec.gov/news/speech/2009/spch040609mls.htm>.

⁵¹ See, *Agency and Mission Information*, SEC. EXCH. COMM’N. (2014), available at <https://www.sec.gov/about/reports/sec-fy2014-agency-mission-information.pdf>.

⁵² See, e.g., Paul G. Mahoney, *The Economics of Securities Regulation: A Survey*, VIRGINIA LAW AND ECONOMICS RESEARCH PAPER NO. 2021-14 (Aug. 24, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3910557.

future based solely on promises, not something that will be consumed immediately. One can inspect an automobile or taste an apple; a stock is just a prediction about future cash flows. Since the future is uncertain and fully outside of the investor's control, there is significant risk of fraud, or of simple mistakes. This risk is far greater than in the purchase of goods, including advertising. If stock prices do not (as best as possible) reflect the intrinsic value of companies, then individual investors will not be saving for the future. They instead will suffer or have to rely on alternatives, such as less-efficient government-welfare programs.

This problem occurs in both the primary market for stocks, when buying from a company issuing stock—as in an initial public offering (IPO)—and in the secondary market, when buying from other investors on an exchange, such as the New York Stock Exchange (NYSE).

In the primary market, companies have information about their prospects that may not get out to investors. Companies have incentives to disclose positive information to investors voluntarily, but they are run by individuals who may privately gain from withholding full disclosure even of positive information. Overcoming these agency costs to ensure IPOs are accurately priced is a core function of securities markets. With regard to bad news, companies have much weaker incentives. If they raise money repeatedly, the incentive to have a reputation for fair dealing might do some work. But although mature companies do come back to the capital markets on occasion, the possibility of a one-and-done offer is significant.

If investors cannot distinguish these two types *ex ante*, then they will pay less for a security with a given intrinsic value as a means of self-insurance. This raises the costs of capital for all firms. Regulation in the form of mandatory disclosure, regularized disclosure, and strict anti-fraud rules can help to reduce the uncertainty, and thus the cost of capital. This has massive spillovers to the economy as a whole, since capital costs are a significant determinant of the amount of wealth creation possible in the system.

There are similar concerns in secondary markets. Although issuing firms are not directly involved in trades on securities exchanges, which happen among investors who are strangers both to each other and to the issuer of the securities, problems of information asymmetry remain significant. If companies do not keep information about their future prospects current, this will decrease the accuracy of the stock price at any moment, and therefore reduce the number of trades that happen. After all, if one is less certain about the value of the stock, and if the person on the other side has better information, then the range of offers and bids will increase, which in turn will decrease the chance that a deal can be reached. The net effect will be to reduce the liquidity of an investment in a particular company. Shares will be worth less, all else being equal, because they will be harder to move in and out of, ultimately reducing the amount that investors are willing to pay for shares in the primary market. The result is higher capital costs, and therefore less economic activity.

Although there exist incentives for voluntary disclosure by companies, mandatory disclosure is justified on the grounds that the amount of voluntary disclosure, especially regarding bad news, will

be suboptimal.⁵³ The goal is to provide traders with assurances that they are trading on reasonable terms and can exit their investment as easily as possible. This is, in part, about “fairness” for investors, but the ultimate goal is price accuracy and thus, efficient capital allocation.

The same logic that justifies mandatory disclosure also supports ancillary trading rules. Rules about trading on “inside information,” “front running,” and the like are all about ensuring that traders freely come to the market and can expect to get a fair deal. If they do not expect to get a price that reflects the fair value of the stock, they will not come or will apply a risk-adjustment to the price they are willing to take. The result will be more illiquid markets, less-accurate prices, and higher capital costs for firms. Concerns about fairness for the investors may sound like first-order issues, but they are not. After all, every stock trade has a winner and a loser, and the net social effect is zero. What motivates regulation is, instead, the impact that systematic biases about who wins and who loses might have on the market’s liquidity, and thus on capital efficiency.

The second concern follows from this possibility. If individual investors cannot confidently invest in stocks as a means of savings and building wealth, they may resort to alternatives that are riskier and less socially valuable. As noted above, the stock market is the place where individuals with ideas come together with individuals with money to cooperate to create valuable goods and services. If individuals looking to build wealth do not trust this system, they may bet their income in speculative assets like gold or cryptocurrencies; gambling on sports or horses; or any number of get-rich-quick schemes. This not only exposes them to greater risks (without offsetting increases in returns), but is also less socially valuable, since scarce economic resources are devoted to gambling instead of productive economic activity.

b. Special problems for intermediaries

Even when individuals’ investments in stocks are intermediated by professionals—either investment advisors or investment funds (such as mutual funds)—there are potential issues. The biggest one is the cost of trading. Institutional investors, such as pension funds or mutual funds, are generally not terribly concerned about the value of an individual stock. After all, if the fund holds a diversified portfolio, what matters is whether the market as a whole is up or down. What does matter for investment funds, however, is the cost of buying and selling stocks, as they purchase and sell countless stocks each day, as investors move in and out of their funds. The costs of trading include implicit costs based on information asymmetries in the market. This begets regulation to reduce these costs, since they are passed on to individual investors saving for retirement.

The costs arise because of the unique ways in which stocks are bought and sold. In general, buyers and sellers of stock come together in a market, be it on an exchange like the NYSE or through a variety of off-exchange markets. In each of these, liquidity (the existence of many buyers and sellers) is provided by high-frequency traders (HFTs), which are companies that are continuously entering

⁵³ *Id.*

buy orders and sell orders for all stocks. Some of these orders clear at market prices, meaning a buy order at a particular price from an HFT will intersect with a sell order from an investor at that price. The goal of the HFT is not to buy and hold that particular stock, however, but rather to turn around quickly and sell it to a different investor willing to own it. If the price at which the HFT buys is less (usually less than a penny less) than the price at which the HFT sells, then this is a profitable business to be in. The HFT is not an investor, but rather, a firm that makes the market happen—a “market maker.”

A problem for HFTs can arise, however, if in the period after they buy a stock and before they resell it, the price moves in a way that makes the trade unprofitable. Imagine the HFT buys at \$10, and is hoping to resell it at \$10.25, in order to cover its costs of operation with a small profit for investors. But suppose that, after it buys, negative news is revealed about the company's prospects, and the stock drops to \$9.75. The HFT can now only resell at a loss.

There are several ways in which an HFT can protect itself. Most obviously, it can demand more than 250 basis points compensation for the round-trip in and out of the stock. After all, its margins—the difference in the price to acquire the stock and the price to sell it (known as the bid-ask spread)—represent the profit it needs to make the business work. Any amount above its costs and reasonable allowances for profit is a form of insurance against trading against those with better information. If the HFT suspects it may be trading against investors with better information, it will widen the spread (to insure against this possibility). But if the HFT widens the spread, this means less liquidity for investors (like pension funds and individual investors), who are looking to move in or out of a stock. Less liquidity means higher risk, which translates into a greater cost of capital for companies, which reduces the number of profitable projects, which in turn reduces wealth and economic growth for everyone.

Others buying and selling stocks, like pension funds, can also find themselves bitten by informational asymmetries. They can address this by trying to time their trades so that they do not trade against an investor with an informational advantage. After all, if the pension fund systematically trades at inferior prices, it earns less returns for its beneficiaries, who are investing for retirement. Regulation of stocks and stock trading is designed to address all of these ways in which individual investors can be harmed in their pursuit of retirement savings.

2. Capital Allocation, Efficiency, and Economic Productivity

The other side of the stock market (from investors) consists of firms seeking to raise money. The stock market is one of the primary mechanisms by which firms raise capital, which is then used to invest in projects that provide employment and most of society's goods and services. Although more money is raised in debt markets than in stock markets, there is another way in which the stock market is vital to the market economy: the stock market produces price signals that investors and entrepreneurs use to direct their activities.

Therefore, from the firm's perspective, efficient stock markets are about two things. First, ensuring that businesses can raise money at the lowest possible cost. And second, the vital role that stock-price signals play in allocation of scarce capital (both financial and human) in the economy. These features make the stock market one of the, if not the, most important social institutions. As discussed below, while advertising is also important—in that it conveys information about products to consumers—the advertising market is trivial in comparison to the stock market, along just about any social dimension.

The price of a share of stock is not just what willing buyers and sellers are willing to accept, but a collective judgment about the intrinsic value of something. Specifically, a stock is not a thing to be consumed, like an apple or an advertisement, but rather the right to future cash flows, voting rights, and the full bundle of other rights (such as access to books and records or litigation claims for breach of duty) that arise from ownership.

In terms of economic rights, stock prices represents the market's estimate of the future value that will be produced by the company that issued the stock, divided by the total number of outstanding shares.⁵⁴ In this way, the price is society's best guess about the value of devoting scarce resources (that is, capital, labor, and raw materials) to this particular economic endeavor. Stock-price accuracy is therefore the foundation of resource allocation in the economy. If a stock is mispriced for a significant period, scarce resources will be misallocated.

For instance, from January 2000 through July 2001, the share price of Enron traded above \$50, reaching peaks of about \$90. During this period, money flowed into Enron's businesses, in the form of investments and loans. Workers chose Enron over alternative employers. Customers inked deals with Enron, and entrepreneurs started new businesses in the fields of energy trading that Enron touted as the key to its success. Countless people invested in Enron as a source of retirement funds or wealth enhancement. All of this was utterly wasted. By the fall of 2001, Enron was worth nothing.⁵⁵

Although thousands of individuals lost money betting on Enron stock, it is important to note that these losses were mostly offset by individuals on the other side of these trades. Stock trades are generally a zero-sum game. If A sells B a stock for \$100, and the stock drops to zero, A has avoided \$100 in losses, which offsets the \$100 lost by B. Without belittling B's losses, the true social harm arises from the fact that, for 18 months, if not longer, enormous numbers of decisions regarding allocation of scarce resources were influenced in whole or in part by the incorrect valuation of Enron

⁵⁴ *Intrinsic Value*, CORPORATE FINANCE INSTITUTE (Dec. 6, 2022), <https://corporatefinanceinstitute.com/resources/valuation/intrinsic-value-guide>.

⁵⁵ For a thorough description of the fall of Enron, see, e.g., Ron Rimkus, *Enron Corporation*, CORPORATE FINANCE INSTITUTE (Dec. 7, 2006), <https://www.econcrises.org/2016/12/07/enron-corporation-2001>.

stock. Getting Enron's stock price, and the stock price of every other company, as accurate as possible ensures efficient capital allocation. This cascades across every economic decision at every level of the economy and society.

A properly functioning stock market serves several essential social roles, which transcend questions of who wins or loses each trade in the stock market. If an apple or an advertisement is mispriced relative to value, there will be winners and losers. Buyers might suffer (if the price is too high), or sellers might be worse off (if the price is too low); middlemen might take too much of the surplus. But in these typical commodity markets, the harms, such as they are, are relatively limited. They are likely to wash out for people who are just as likely to be buyers as they are sellers. Stock prices are totally different. They have these aspects, but the social stakes are completely different.

First, an efficient stock market provides a signal to corporate managers about the health of and prospects for the corporation. Managing a public company, no matter the size, is a complex endeavor, and the stock price is a single reference point that gives managers a sense of whether things are going well or poorly. The stock price can therefore be thought of as the firm's slope or vector. If the price is rising, this suggests that the wisdom of the crowd of investors believes the company is going in the right direction. Managers can continue down that path. On the other hand, if the stock price is falling, managers may want to change course in some way.

This handy metric simplifies and distills countless questions or decisions—from human resources to research and development to project choice—into a single number. This massively simplifies management's role by giving it a scoreboard of its performance. In the absence of the stock market, managers would have to rely on multiple external signals (*e.g.*, from government or banks or consumers) along each key decision point, which would then have to be aggregated in some fashion. A stock price is a far more efficient tool, as it does all the aggregating, while integrating real-time assessments of everyone on earth with an interest in the marginal dollars that will be created or lost by the firm's activities. All of this depends on the stock price being accurate.

Second, an efficient stock market promotes alignment between shareholders and managers. As Adolph Berle & Gardiner Means noted in their canonical work, the modern corporation is characterized by a separation between those in charge of corporate decision making (known as managers) and those investors who benefit on the margin from each dollar the corporation earns (known as shareholders).⁵⁶ Unconstrained managers have incentives to act selfishly, serving their own interests, rather than those of shareholders. This might mean being lazy, taking less risk than shareholders would prefer, or lining their own pockets with money or perks.

Since the social value of corporations is premised on their serving the interests of shareholders (more or less), managerial agency costs are a significant social problem. The stock price, therefore, is an elegant mechanism to reduce agency costs. Just as it is a simple and useful signal to managers about

⁵⁶ ADOLPH BERLE & GARDINER MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* (1932).

how they are doing and what they should be doing, so too is it a useful signal for shareholders to gauge managerial performance. Shareholders can use the stock price to inform how they vote, whether the question is representation on the board (which picks management) or compensation for managers. In extreme cases, the stock price may fall sufficiently that it triggers a takeover by an investor who wants to replace the incumbent managers. The market for corporate control, enabled by stock-price signals and hostile takeovers, is thought to be a key driver of managerial performance and economic efficiency. It depends entirely on stock price accuracy. If a given company's stock price is "wrong," meaning systematically mispriced, then the stock market will send false signals about incumbent management's performance and the value to be gained from replacing them.

Third, and related to both of the first two points, an efficient stock market provides a mechanism to compensate managers for good performance. Prior to the 1990s, corporate managers were largely compensated with cash, in the form of a salary and bonus determined by the board of directors. Since pay was determined in large part in advance of any performance (salary) and performance pay was discretionary and set by a board largely appointed directly by or with the courtesy of the CEO, the system rewarded risk-averse CEOs of big firms with cozy board relations.

As a famous and influential *Harvard Business Review* article noted, what matters is not how much CEOs are paid, but how they are paid.⁵⁷ If shareholders are worried about managers being insufficiently focused on shareholder value (as discussed above), the solution is to align the interests of shareholders and managers by compensating the latter with stock. This helps to ensure that CEOs make decisions in the interests of shareholders. If the stock price goes up, managers' pay goes up; if it goes down, managers' pay goes down. Today, stock represents about 70% of the typical CEO's pay. This revolution in compensation has dramatically increased the efficiency and value of publicly traded U.S. companies. And, as above, it depends in large part on stock prices being accurate. If stock prices are wrong, then managers will be overpaid or underpaid. This would thus distort managerial decision making, the market for corporate control, and the labor market for CEOs.

Fourth, an efficient stock market can reduce the cost of capital for firms, thereby enabling them to invest in more projects and, consequently, to increase employment and output. Companies are devices for shareholders, creditors, employees, and other stakeholders to collectively engage in certain projects. Managers decide whether to invest in a particular project based on a simple calculation—if the expected cash flows from the project (discounted to present value) exceeds the cost of raising money to fund the project, then the company will invest. The cost of raising money—called the weighted average cost of capital (WACC)—is the sum of the cost of raising debt and the cost of raising equity to fund the project. All else being equal, the lower the cost of equity, the lower WACC, and the more projects a firm can invest in profitably.

⁵⁷ Michael C. Jensen & Kevin J. Murphy, *CEO Incentives—It's Not How Much You Pay, But How*, HARV. BUS. REV. (May 1990), <https://hbr.org/1990/05/ceo-incentives-its-not-how-much-you-pay-but-how>.

The cost of equity is, in turn, based on a variety of factors, but overwhelmingly on the risk of the investment. An efficient stock market can reduce risk in several important ways. Accurate stock prices for peer firms provide a metric against which the current investment can be measured. Moreover, if a stock market is liquid, risk will be lower, because investors will be able to exit bad or undesirable investments readily. Finally, liquidity depends on intermediaries, known as market makers, being willing to buy or sell at posted prices. Stock markets depend on market makers constantly buying and selling shares, rather than trying to match an investor willing to sell and an investor willing to buy.

In the old days, market makers were individuals who were contractually obligated to buy and sell a particular stock at quoted prices, while today, they are HFT firms that use more sophisticated computer programs to always make liquidity available. In either case, the intermediaries earn a profit for their liquidity-making role by pocketing the difference between the price investors are willing to pay and the price at which investors are willing to sell. This difference, known as the bid-ask spread, depends on whether market makers believe stock prices accurately and efficiently process available information. If a market maker is constantly buying a stock at the market price (say, \$10), it may worry that, if it tries to resell moments later, new information may reveal that the \$10 price was wrong. If this fear is substantial, the market maker will increase the bid-ask spread as a means of raising its profit on some trades to offset losses on others. Increased bid-ask spreads reduce liquidity, and therefore increase the cost of capital. This raises WACC and therefore reduces the amount of socially useful projects in which companies can engage. In short, accurate stock prices flow through directly to the ability of companies, great and small, to engage in an efficient amount of economic activity.

More could be said about the various ways in which the value of accurate stock prices go far beyond investor protection or even fairness. Books and articles are written on this topic alone. For present purposes, the above should be sufficient to demonstrate the central role that accurate stock prices play in the economy.

B. Why Ads Are Different

None of the foregoing discussion applies to advertising, let alone online advertising. As the title of this article declares, ads are not stocks, and this makes all the difference in the world. The discussion above sets out the importance of looking at the purpose of a regulatory system to form the basis for an analogy to another market. As this section sets out, there are several profound differences between advertisements and stocks that undercut any connection between the purpose of stock-market regulation and any regulation of advertising markets.

Stock markets are regulated as they are because of the peculiar characteristics of stocks—their role as the primary mechanism of savings and investment for individuals and their centrality in allocating capital in the economy. Ads—like packaging, signs, and product quality—are an important means of attracting and retaining customers for individual businesses, but they do not present any of the social

problems inherent in the buying and selling of stocks. This can be seen by considering the ways in which stocks are different than ads.

The sale of regular consumer goods, like avocados or antiperspirant, is not subject to the vast federal regulatory regime that the sale of stock is. Advertisements are much more akin to avocados than they are to stocks. There are several reasons for this.

I. High Stakes Versus Low Stakes

The first difference is that the stakes are much lower for the typical consumer good or advertisement, relative to stocks. As discussed above, stocks are the largest source of savings and investment for individual Americans. In addition, they provide an essential function in funding projects that provide most goods and services in the economy, as well as directing almost all economic activity. Accurate stock prices, enabled by various regulations, also enables efficient management, reduces agency costs within firms, provides a socially regarding mechanism of compensation for management, and enables the market for corporate control.

Advertising is also important. It provides consumers with information about goods and services that might not otherwise be available, or only available at a higher cost. It reduces search costs for consumers and producers. Advertising also serves as a bonding mechanism, since money spent developing a brand is a bond against bad performance. But while important, these considerations pale in comparison with the direct and indirect impacts of the stock market. For small businesses, something less than 10% of all sales are devoted to marketing of all kinds, making it an insubstantial business expense.⁵⁸ The cost of capital for funding projects is a bigger first-order concern for companies, not to mention the other impacts mentioned above.

The relatively low stakes of advertising can be seen in the ways that advertising is regulated. Under federal law, advertising must generally be truthful. The Federal Trade Commission (FTC) polices false and deceptive advertising, and there are special rules for certain types of specialty products (such as drugs) or certain types of advertisements (such as political endorsements). But there is no giant federal system for regulating billboards, print ads, or television ads, the way there is for securities. In fact, advertising about stocks and stock-related services are among the most heavily regulated advertising fields. Together, the major securities regulators—the SEC, the Financial Industry Regulatory Authority (FINRA), the Municipal Securities Rulemaking Board (MSRB), and the Securities Investor Protection Corporation (SIPC)—have together promulgated more than 30 different rules related to the advertising of brokerage services to the public.⁵⁹ These rules (and other stock-market regulations) go so far as to, in some instances, forbid brokers and issuers of securities

⁵⁸ Erin Ryan Connolly, *What's the Average Marketing Budget for Small Businesses (and How Much Should You Spend)?*, FAST CAPITAL 360 (Nov. 8, 2022), <https://www.fastcapital360.com/blog/small-business-advertising-budget>.

⁵⁹ *Advertising Regulation*, FINRA, <https://www.finra.org/rules-guidance/key-topics/advertising-regulation#rules> (last visited Apr. 9, 2023.)

from making *truthful* claims to the public, notwithstanding the First Amendment. This kind of speech restriction is typically found only for the most dangerous products, such as cigarettes.

2. *Intrinsic Value Versus What Something Will Fetch*

The second big difference is that the price of an advertisement is based on supply and demand, while stocks have intrinsic value. Whether an ad was placed at a “fair” price can be difficult to determine in the abstract, since anything set by the forces of supply and demand is worth only “what it will fetch.” An advertisement could be compared with other similar advertisements displayed to other similar people at other similar times, but there are numerous variables that make this comparison challenging. More fundamentally, there is a big difference between the goal of advertising markets (which offer buyers and sellers opportunities to come together at a market-clearing price) and stock markets (which are about price discovery).

The goal of the stock market is to determine, as best as practicable, the intrinsic value of a share of stock. A stock’s value is something that can be determined, and the purpose of the stock market is to determine what that value is. At a base level, the value of a stock can be approximated by the value of all the cash that the company expects to generate in the future, discounted to the present. Although there may be temporary deviations from this, as well as errors in estimating it, a stock is inherently “worth” something in a way that a consumer good is not. As noted above, ensuring a reliable mechanism of wealth creation and the proper allocation of scarce resources in the economy depends on stock markets to function as a mechanism to ascertain this value.

Consider, for instance, the stock of an oil company like ExxonMobil. How much is a share of ExxonMobil worth? Stock-market professionals estimate this value by looking at all the projects and activities of the company—its oil fields in production and its new explorations—as well as the demand for its products and the expected share of the market it is likely to have into the future. This involves complex calculations about the demand and supply of inputs and outputs from ExxonMobil’s sprawling operations. The final calculation involves estimating how much net cash ExxonMobil will generate each year, and then applying a discount rate to bring that value into present-dollar figures. This number, divided by the number of shares outstanding, tells one the approximate intrinsic value of a share of stock. Investors will, at any given moment, be willing to buy ExxonMobil if the price falls below its intrinsic value, and to sell it if it rises above it.

The price of an advertisement, by contrast, is just what someone is willing to pay to alert others to their product. The price is determined solely by the forces of supply and demand. The ad exchanges run auctions to get the ad space to the person who values it the most. That is not what the stock market is doing. The stock market is running an auction to allow people to shift in and out of savings versus consumption, to discover the more “accurate” price to help the real economy operate better.

There is another difference. A particular advertisement is worth something different to different people. Company A might be willing to pay \$1 to get the eyeballs of Person X, while Company B might be willing to pay just \$0.75. The possibilities are practically infinite, and the auction process

in online-advertising markets is designed to elicit the willingness-to-pay and willingness-to-sell prices of particular buyers and sellers for every piece of online real estate exposed to every individual. A share of stock, by contrast, is worth the same (more or less) to everyone.

Returning to the example of ExxonMobil, imagine that some large investors—such as so-called “environmental, social, and governance” (ESG) investment funds and university endowments—start selling their shares because they no longer want to be complicit in contributing to climate change. The influx of sell orders arriving at the stock market may reduce the current price, but any such demand-based reduction will be temporary. After all, what determines the value of a share of ExxonMobil stock is not the meeting of supply and demand for the stock at a given moment, but rather, the value of the cash that a share can expect to generate in the future. This, in turn, depends on how profitable ExxonMobil is at selling its products. If the demand for the stock drops but the demand for oil (and ExxonMobil’s efficiency at delivering it) does not, then the stock price will not change. Any temporary drop owing to the increase in sell orders merely generates profit-making opportunities for investors willing to buy shares at artificially depressed prices.

Nothing even remotely like this happens in advertising markets. An auction for advertising space on a particular website is worth precisely and only what someone is willing to pay for it at that moment. If there is a lot of interest, prices will be high; if little, prices will be low. As soon as the ad space sells, that is the end of it. There is nothing but a one-time shot to reach a potential customer. There is no opportunity to buy up undervalued space or, importantly, sell overvalued space. Prices clear markets, and then the thing—an ad—happens or is consumed. The process starts again for the next opportunity: a combination of real estate, an ad, and a particular set of eyeballs.

In the stock market, by contrast, the thing being auctioned lives on after it is sold. It can be resold. It can also be sold short, betting the price will fall. One can sell shares one does not own in the hopes that the stock price falls, and the borrowed shares can be repaid after being bought at a lower price. Shorting helps process information from pessimistic investors in the market hoping to get the stock price right. You can’t short an ad space because there is no “right” price.

Ads have many (infinite) prices, while there is one price for a particular stock at any time, knowable to everyone. A share of ExxonMobil is worth \$30 at this moment, and anyone can buy it for \$30. By contrast, in ad markets, the price of every ad is not just for a particular plot of land on every website, but also for a particular viewer of that site. There is not one price; there are effectively an infinite number of prices.

The upshot of this is that stock markets are engaged in the constant evaluation of the intrinsic value of a single thing, which has the same value for every holder, more or less. Finding that intrinsic value is the stock market’s purpose, and the regulation of disclosure and trading activity is centrally about that purpose. Ad markets, on the other hand, are not about finding the intrinsic value of information conveyed on a website to a particular individual, but rather just what someone is willing

to pay for it in that instant. This makes ads much more like regular consumer goods, rather than stocks.

3. *Consumption Versus Investment or Speculation*

A third big difference is that advertisements are consumed after they are sold, while stocks exist forever. Ads are, in this way, just like other consumer goods. This simple fact reduces the need for anything like the vast securities-regulation apparatus.

When one buys a regular good, like a cookie or a computer, the distance between the purchase and the realization of the value from the purchase is relatively close in time and something whose value is easily discernable to the average consumer. You know when you get a bad deal and, as a repeat player, you can choose to take your business elsewhere. Regulation is less necessary because self-help—in the form of an immediate, tangible, familiar experience—is readily and widely available. If the cookie tastes bad, the consumer will know, and will buy one somewhere else in the future. These transactions are consummated and evaluated in an instant. When that instant is gone, the price paid, and the value received vanishes. In economic parlance, it is consumed. And then there will be more opportunities for “consumption” based on that experience.

Stocks are different. As noted above, stocks are bets about the future and are primarily used as a mechanism for saving and investment over many years. The experience of buying stock in a company is completely different than purchasing a consumer good. Whether or not it was a good buy will likely not be revealed for perhaps decades, when the value is cashed out. Moreover, whether or not it was a good deal in the short run will depend on whether the price paid was the correct one, on an intrinsic level.

4. *Vulnerability*

A fourth significant difference between stock and advertising markets is that the typical participant in the ad market is likely to be far more sophisticated and better able to protect themselves than retail investors in the stock market. Although almost all businesses advertise in one way or another, even the smallest businesses buying or selling advertising are more sophisticated than the average retail investor. Even small businesses hire lawyers, deal with various bureaucracies, engage with suppliers and customers in complex legal and business situations, and must think critically about a range of issues at least as challenging as advertising. Every business must buy services in markets from a range of suppliers, whether it is inputs to the business, labor, or capital.

By contrast, many investors in the stock market have no experience with the complicated products and services offered by stockbrokers or other financial intermediaries. As noted above, many tens of millions of average Americans are invested directly or indirectly in the stock market. U.S. householders are the largest holders of U.S. equities, and, as research from the SIFMA shows, this is not limited to the wealthy.⁶⁰ The stock market is where everyday folks put their income in the

⁶⁰ SIFMA, *supra* note 48.

hopes of growing it over time. Moreover, this is where society wants individuals to put their money to save for retirement. Doing so is not just the best possible way to ensure a prosperous retirement, but it also generates liquidity that attracts traders with information about stock prices such that prices tend toward intrinsic value.

The vast majority of securities laws are based on the idea of protecting average Americans. That investor protection is the end goal of securities regulation can be seen in the fact that many of the rules and regulations are waived or relaxed in cases where the SEC determines that particular investors can “fend for themselves.” If individuals are sophisticated or reasonably wealthy, one can raise money from them without complying with most of the securities laws. If it is deemed that an investor does not need the protections of the securities acts or regulations, then the rules simply do not apply to them. Sophisticated investors—who can protect themselves through contract, monitoring, or otherwise—do not have to comply with the same obligations as other investors.

There are several places where this regulatory approach can be seen, both in the primary market for securities—where companies (or issuers of securities) first offer them for sale to investors—and in the secondary market for securities—where investors trade stock among each other. Both markets are interrelated, as the primary market is only attractive because a secondary market (where buyers in the primary market can find liquidity and the ability to exit their investment freely) exists. As noted above, the point of regulation in both markets is to ensure accurate prices. This ensures investor-protection goals (discussed above) and capital-market efficiency goals (discussed below) are met. Regulation is deemed unnecessary to achieve these goals in certain cases in both markets.

In the primary market, securities laws generally do not apply in “private placements.” While companies selling securities generally have to comply with a complex set of rules regarding the sales process (the “gun-jumping” rules) and have to disclose voluminous information to individual investors, these rules are waived if, among other things, the only purchases of the securities are “accredited investors” or “qualified institutional buyers.”⁶¹ For instance, under Regulation D, companies can raise an unlimited amount of money from “accredited investors”—such as those with annual income in excess of \$200,000—without complying with any of the disclosure obligations under securities laws.

This is emblematic of the view that securities laws’ investor-protection goals are deemed to be sufficiently satisfied by the parties’ self-interest and the available contractual mechanisms and private remedies. Mandatory disclosure is thought necessary to ensure accurate stock prices and investor-protection goals for average investors, but not for relatively sophisticated ones. If they can bargain for their own deal, the securities laws allow them to do so.

⁶¹ See, e.g., 17 CFR § 230.506; for a description of Regulation D private offerings, see, *Private Placements – Rule 506(b)*, SEC. EXCH. COMM’N, <https://www.sec.gov/education/smallbusiness/exemptofferings/rule506b> (last visited Apr. 9, 2023).

The same is true in the secondary market. There are private markets in which publicly traded stocks are bought and sold. So-called “dark pools” are stock exchanges owned by broker-dealers where certain sophisticated buyers and sellers can come together to do business without the regulatory requirements imposed by transactions in the same securities on public exchanges, like the NYSE. The logic in this example, as in the case of private placements, is that law and regulation is not essential to the delivery of investor protection or capital-market efficiency goals based on conduct in these markets.

5. Liquidity

A final difference for the purposes of this argument (but far from an exhaustive list) is that there are special problems in securities presented by issues of liquidity. As noted above, stocks are bought and sold in markets intermediated by market makers of various kinds. The riskiness of an investment in a particular stock, and thus what one would be willing to pay for that stock, is influenced in large measure by the ability of investors to move in and out of the stock—that is, the liquidity of the market. The secondary market for stocks has a profound impact on the primary market for stocks.

This interplay is completely absent in the advertising world. There is no secondary market for ads. As such, the problems addressed by much of the regulation of stock markets and brokers is entirely absent. These regulations are about ensuring a vibrant secondary market, with an eye to ensuring sufficient liquidity to reduce the risk of investment.

The liquidity of secondary markets in securities impacts the cost and value of retirement savings, the costs of capital for firms, and the allocation of scarce resources in the economy. It is for these reasons that there is abundant regulation of the potential conflicts of interest between investors and brokers, as well as regulation of exchanges. There are conflicts of interest throughout the economy, but these do not generate anything close to the regulatory scrutiny of securities markets, because these concerns are absent.

C. Other Analogies

There are some superficial similarities between advertising markets and stock markets. Both markets feature “brokers” and “exchanges” and “auctions.” As in all electronic transactions, speed matters in both stock markets and advertising markets. And there are potential conflicts of interest, as well.

But as mentioned in the introduction, there are also countless other markets in which all of these things are present. All of them raise issues similar to or greater than those presented by online-advertising markets. But none are mentioned as potential analogs. Perhaps this is because none of them are regulated anything like securities markets.

Consider art auctions. The art market sees about \$50 billion of sales annually, of which about 25% is done through online transactions.⁶² As in online advertising, there are a few major players that dominate. Three large auction houses, a few major museums, and a couple of galleries set the market's terms and do most of the deals for artists of all kinds and countless art brokers and advisors. According to experts, the market is plagued by a lack of transparency (one rated it a 3 out of 10), and it is, according to a former auction-house executive, completely unregulated.⁶³

As in securities markets and online advertising, there are buyers, sellers, brokers, and auction houses or exchanges. The firms that run the online and in-person marketplaces offer not just a place where buyers and sellers come together, but a variety of tools for buyers and sellers, as well. Christie's, Sotheby's, and the other auction houses sell services to sellers to help them figure out the value of their works. They also provide tools for buyers. For instance, in 2016, Sotheby's bought the buy-side art consultancy Art Agency Partners, expanding the range of services that it provides to its buy-side clients.⁶⁴ According to the *New York Times*, Sotheby's now helps "clients with everything from art consultation and investment to estate planning and museum development."⁶⁵

In addition to owning the exchange where buyers and sellers come together, and providing tools on the buy side and sell side to market participants, the major auction houses also actively participate in the auctions they run. Just as stockbrokers and banks do, as set out above. To attract sellers of art, auction companies will guarantee a minimum, effectively becoming a buyer standing on the other side of the transaction. This may work to the benefit of the seller, but it also presents an obvious conflict of interest. In theory, an auction house that wanted to buy the piece at the minimum could rig the auction—say, by failing to sufficiently publicize it or talk up the work to established buyers. The guarantee only kicks in if the piece fails to sell above that amount but, of course, the auction house has some influence on this. To guard against this potential conflict of interest, buyers can refuse a minimum (which raises its own problems) or take their business down the street to a competitor.

Not only do auction houses provide conflict-raising guarantees, but increasingly, they sell these guarantees to third parties, in whole or in part.⁶⁶ The guarantee is a risk for auction houses, and so they logically look to offload this risk, as well as to exploit a profit-making opportunity. Some auction houses pay a financing fee to a third-party guarantor regardless of whether the price exceeds the

⁶² *The Art Market Is in Massive Disruption*, FREAKONOMICS RADIO (Dec. 15, 2021), <https://freakonomics.com/podcast/the-art-market-is-in-massive-disruption>.

⁶³ *Id.* Comment of Amy Capalazzo.

⁶⁴ Robin Pogrebin, *Sotheby's, in a Gamble, Acquires Boutique Art Advisory Firm*, THE NEW YORK TIMES (Jan. 11, 2016), <https://www.nytimes.com/2016/01/12/arts/sothebys-in-a-gamble-acquires-boutique-art-advisory-firm.html>.

⁶⁵ *Id.*

⁶⁶ *Financial Machinations at Auctions*, THE ECONOMIST (Nov. 18, 2011), <https://www.economist.com/prospero/2011/11/18/financial-machinations-at-auctions>; Henri Neuendorf, *Art Demystified: Auction's and Buyer's Premiums*, ARTNET (May 12, 2016), <https://news.artnet.com/market/art-demystified-buyers-premiums-495035>.

guarantee, while others, such as Sotheby's, pay only if the guarantor does not end up buying the piece. In Sotheby's case, it might work as follows. Imagine the guaranteed price is \$1 million, which Sotheby's sells to an investor. The final hammer price is \$2 million. The auction house charges the buyer a 30% premium, meaning the buyer pays Sotheby's \$2.6 million. The investor's guarantee entitles it to a 50-50 split on 30% of the upside (the difference between the guarantee and the hammer price), as well as 50% of the buyer's premium. In this case, the investor's fee is \$600,000.

The economic incentives for the auction house here are complicated, but it is fair to say that they may not align perfectly with that of the sellers (for whom they are agents). According to an attorney in the field, the practice of third-party guarantees "conflicts with . . . traditional fiduciary obligations because the auction house is essentially negotiating deals with two different parties—the consignor and the third-party guarantor—all of whom have financial interests in the outcome of a sale."⁶⁷ Another lawyer notes that the third-party guarantors are not typically strangers to the auction house, but rather come from the auction house's top list of buyers. This makes the problem worse since the practice ends up "pitching two clients' interests against one another."⁶⁸

Moreover, these deals are often not entirely transparent, if at all. Under local law in New York, the existence of guarantees must be disclosed, but the amount or other details of the guarantee need not be.⁶⁹ This may give guarantors an advantage, since they know the minimum price and can use information about the minimum to manipulate the bidding to increase the profit they earn on the spread.⁷⁰

The economics are good for the auction houses too. If the hammer price, as in this example, is \$2 million, the typical auction house charges a premium of 25-30% to both the buyer and the seller, meaning (in the 25% case) that the seller gets \$1.5 million, and the buyer pays \$2.5 million.

There are other potential conflicts of interest in this market. Auction houses sometimes pay introductory commissions on both sides of the market. Sell-side introductory commissions are finders fees paid to third parties that introduce a collector interested in selling art to the auction house. The third party may share information with the auction house about the motives, price elasticity, negotiating prowess, wealth, and other details about the seller in return for a fee that is often a percentage of the final price. Buy-side commissions are also common. An art advisor may

⁶⁷ Amber Lee, *Secrecies, Guarantees, and Securities in the World of Auction Houses*, CENTER FOR ART LAW (Jul. 22, 2020), <https://itsartlaw.org/2020/07/22/secrecies-guarantees-and-securities-in-the-world-of-auction-houses/#post-55525-footnote-31>; see also, Anna Brady, *Guarantees: The Next Big Art Market Scandal?*, ART NEWSPAPER (Nov. 12, 2018), <https://www.theartnewspaper.com/2018/11/12/guarantees-the-next-big-art-market-scandal>.

⁶⁸ *Id.*

⁶⁹ The Rules of the City of New York, § 2-122(d).

⁷⁰ Rebecca Foden, *Auction House Guarantees: Friend or Foe?*, BOODLE HATFIELD (Jan. 1, 2017), <https://www.boodlehatfield.com/the-firm/articles/auction-house-guarantees-friend-or-foe>; Isaac Kaplan, *The Auction House Buzzwords New Collectors Need to Know*, ARTSY (Mar. 15, 2017), <https://www.artsy.net/article/artsy-editorial-auction-house-buzzwords-new-collectors>.

have an agreement with a client permitting a fee (say, 10%) to be added to the sale price of any art the client buys on their recommendation. In addition, the auction house or gallery may pay a fee (say, 10%) to the advisor for the introduction. These arrangements, which are not always disclosed, present potential conflicts of interest.⁷¹

One final example is illustrative. Auction houses occasionally engage in “mock bidding,” which sends false signals to the market. This mock bidding, sometimes called “chandelier bidding,” is a fake bid that starts or gooses the auction along.⁷² The practice generates mixed feelings. In an interview with *ARTnews* magazine, a former Christie’s director noted that “The auctioneer has to start the bidding somewhere. People don’t start bidding right away, and you need to build up momentum.”⁷³ On the *Art Law Podcast*, another commentator defended the practice of “warm[ing] up the room.”⁷⁴

On the other hand, critics point to the fact that the practice looks like market manipulation. A legislator in New York tried to outlaw the practice, noting that “Consumers can get hurt when everything isn’t out in the open, when they’re competing against imaginary bidders at an auction.”⁷⁵ As a blog post from the Center for Art Law noted, “Chandelier bids, which are essentially fake bids used to create the appearance of interest to warm up the auction room, would be illegal if transacted in the U.S. securities markets.”⁷⁶ These conflicts of interest, high margins, and lack of transparency have led University of Chicago economist Canice Prendergast to call the art market “one of the strangest markets that I think I have ever seen.”⁷⁷

Whatever its strengths and weaknesses, the art-auction market—worth tens of billions of dollars a year—is beset by various conflicts of interests that result from the fact that art-auction houses provide services that are fully integrated along the spectrum from buyer to seller. Market participants seem comfortable with this arrangement, notwithstanding the dominant market position of two leading players, Christie’s and Sotheby’s. This is not to say that improvements could not be made in transparency or other practices. Rather, it speaks to the fact that there are large and sophisticated markets that work effectively to reward buyers and sellers, and yet have features of vertical integration and conflicts of interest that are at least as bad, or worse, than those present in the online-ad market.

⁷¹ Doug Woodham, *Identifying and Managing Conflicts of Interest in the Art World*, DOUG WOODHAM (Jan. 8, 2019), <https://dougwoodham.com/blog/2018/1/5/the-secret-middlemen-of-the-high-end-art-market>.

⁷² Hanna Feldman, *The “Chandelier” in the Phantom of the Auction*, CENTER FOR ART LAW (Jul. 24, 2018), <https://itsartlaw.org/2018/07/24/the-chandelier-in-the-phantom-of-the-auction>.

⁷³ Daniel Grant, *Legislators Seek to Stop “Chandelier Bidding” Auction*, ART NEWS (Sep. 4, 2007), <https://www.artnews.com/art-news/news/legislators-seek-to-stop-chandelier-bidding-at-auction-1563>.

⁷⁴ *Art of the Chase: Inside Art Auctions*, THE ART LAW PODCAST (May 10, 2018), <http://artlawpodcast.com/2018/05/10/art-of-the-chase-inside-art-auctions>.

⁷⁵ Grant, *supra* note 73.

⁷⁶ Woodham, *supra* note 71.

⁷⁷ *A Fascinating, Sexy, Intellectually Compelling, Unregulated Global Market*, FREAKONOMICS PODCAST (Dec. 1, 2021), <https://freakonomics.com/podcast/a-fascinating-sexy-intellectually-compelling-unregulated-global-market>.

The fact that this is vertical integration across the art-auction “stack”—that exchanges function as brokers, dealers, buyers, and sellers simultaneously—also suggests there are inherent efficiencies in this structure that should not be cast aside willy-nilly. There may be good reasons for participants in the art-sales market to want to buy a full-service product from an auction house, relying on competition among exchanges to provide a check on any conflicts of interest or unfair terms or conditions. In other words, general antitrust principles may be sufficient to regulate any shortcomings in this market. So long as there are alternatives, the details of the structure may be a second-order concern.

As noted in the introduction, the art-auction market is not unique in this regard. Vertical integration is extremely common in modern markets, with owners of platforms acting in various roles, providing services or tools to buyers and sellers in those markets, and sometimes acting as a market participant. This is true in various retail environments, in wholesale markets, and for almost all online platforms, from Amazon to eBay. In all these cases, we rely on general fraud law, some transparency requirements, and competitive alternatives as the protection mechanism for buyers and sellers. The primary reason why these markets do not require a massive federal regulatory apparatus is because they do not involve the purchase or sale of stocks, but rather normal consumer or business goods. Purpose dictates regulation, above an antitrust baseline.

Thus, the AMERICA Act’s invocation of financial regulation is misplaced because the object of the regulation (online advertising) shares nothing relevant in common with the object of financial regulation (stocks). This should be sufficient to raise significant concerns about the legislation, but there are additional problems with it. The next section offers a deep dive into the two parts of the bill, revealing that neither the physical-separation requirement nor the best-interests rule actually tracks with the way stock markets are regulated. Any claim that the AMERICA Act’s proposed reforms follows from stock-market regulation is unwarranted.

IV. The False Foundations of the AMERICA Act

The two parts of the AMERICA Act—physical separation and the “best interests” rule—are based on an incomplete understanding of how securities markets work and are regulated. While there is some truth to the claim that there is separation between companies that help others buy and sell securities, and some exchanges on which such trades happen, it is simply not true that there is a ban on such joint ownership in financial regulation. Banks and other brokers do own exchanges and provide services to both buyers and sellers of stocks. About half of the securities traded each day do so on exchanges owned by banks that provide brokerage and other services to buyers and sellers. The situation in advertising markets today (without the AMERICA Act) are, in that way, quite similar to stock markets. Arguing for the physical-separation portion of the legislation by analogy to current securities regulation is awkward, to say the least.

One reason why there is no legal requirement of physical separation in securities markets (as the bill would require for ad markets) could be the requirement that stock trades must execute at the best

available price. If stockbrokers are required to give their customers the best price, then ownership of exchanges is much less relevant. And there is, in fact, a rule requiring that, in directing stock trades to different trading venues, brokers must act in the “best interests” of the client. In stock markets, this rule is premised on the fact that brokers are permitted to direct trades to different exchanges, including ones that they may own, or to fill trades from their own inventory, a process called “internalization.”

If the AMERICA Act bans ad brokers from owning exchanges, a best-interests rule seems far less compelling. Moreover, the best-interests rule does not do the work in financial regulation that the legislation’s backers think it will do in the ad market. Most trades do not, in fact, take place at the best available price. And the regulatory infrastructure to enforce the rule, such as it is, is massive. The AMERICA Act elides this issue, with the implication that the bill’s drafters assume that enforcing a best-interests rule would be straightforward and not costly. Experience in financial markets tells a much different story.

Finally, a best-interests rule in stocks is actually far simpler than one in advertising markets would be, given the relative complexity of the two markets. Whatever would be required to enforce such a rule in ad markets would be significantly more than the large infrastructure in place for stock markets.

A. The Myth of Physical Separation in Stock Markets

A central premise of the AMERICA Act is that there is something anti-social about Google simultaneously owning an ad exchange and providing services for buyers and sellers of online ads, or buying or selling ads. The assumption is that vertical integration across the ad stack creates conflicts of interest that systematically disadvantages certain participants in ways such that individual choices in the market cannot reduce to acceptable levels. This is why the bill requires Google to get out of the adtech business.

The argument for this part of the bill can be found in Dina Srinivasan’s article, where she notes that a structural separation of brokers and exchanges is a mechanism to protect competition in securities markets.⁷⁸ To put a fine point on it, Srinivasan declares: “a company that runs an exchange like the NYSE cannot also operate a division involved in trading.”⁷⁹ In support of this assertion, she cites to “[c]onversations with securities professionals”⁸⁰ This idea found its way into the rhetoric around the Texas antitrust suit (which she helped to draft).⁸¹

⁷⁸ Fox, Glosten, & Rautenberg, *supra* note 14 at 81-2.

⁷⁹ *Id.*

⁸⁰ *Id.* at fn. 51.

⁸¹ Daisuke Wakabayashi, *The Antitrust Case Against Big Tech, Shaped by Tech Industry Exiles*, THE NEW YORK TIMES (Dec. 20, 2020), <https://www.nytimes.com/2020/12/20/technology/antitrust-case-google-facebook.html> (“In September, Ms. Srinivasan became a technical consultant to the team of lawyers in the Texas attorney general’s office working on the

News reports about the introduction of the original CTDA also referenced the analogy to financial regulation. The *Wall Street Journal* noted that, “[a]t its core, the bill . . . borrows concepts from financial regulation and applies them to the market for electronically-traded, or ‘programmable,’ online advertising.”⁸² The *Register*, a technology-news website, explained that “[s]imilar to rules governing financial trading, the bill forbids entities with more than \$20bn in annual digital advertising revenue from participating in the online ad ecosystem in a way that creates conflicting interests, such as simultaneously buying ads, selling ads, and operating the ad exchange that handles those transactions.”⁸³ One of the bill’s co-authors, Sen. Richard Blumenthal (D-Conn.), echoed the idea, allegedly based on the stock market, that the same party can’t represent the seller, the buyer, make the rules, and conduct the auction.”⁸⁴

There is a nugget of truth in the claim that vertical integration is forbidden in financial markets (that is, that brokers cannot own exchanges), which is what makes it plausible, and thus likely to lead lawmakers astray. If one looks just at the surface of the market for stocks, the claim that “a company that runs an exchange like the NYSE cannot also operate a division involved in trading” is literally true. The SEC uses its regulatory authority to prevent certain exchanges, such as the NYSE and Nasdaq Composite, from owning or being owned completely by broker-dealers. Neither the NYSE, Nasdaq, nor any of the other 22 exchanges⁸⁵ operate a trading division.

A more fulsome look at the way securities markets operate, however, reveals that this foundational claim for the AMERICA Act is misleading in two ways. First, stockbrokers do own and operate stock exchanges. Second, the NYSE is owned by public shareholders, including banks that function as brokers, and provides services to buyers and sellers of stocks.

I. Broker-Owned Exchanges, or Dark Pools

Stocks do not trade just on the NYSE or Nasdaq, but on numerous “exchanges” of various kinds. The article cited in support of the original CTDA itself noted that stocks “trade on dozens of electronic trading venues at the same time . . .,” not just on the NYSE—the exchange held up as the paramount of independence imagined by the Lee bill’s supporters. None of these other venues share the characteristics claimed by those who supported the CTDA and now support the AMERICA Act.

investigation into Google. With her understanding of economics and the advertising market, she took on an expanded role and was instrumental in drafting the complaint . . .”).

⁸² Keach Hagey, *GOP-Led Legislation Would Force Breakup of Google’s Ad Business*, WALL STREET JOURNAL (May 19, 2022), <https://www.wsj.com/articles/gop-led-legislation-would-force-breakup-of-googles-ad-business-11652969185>.

⁸³ Thomas Claburn, *Lawmakers Launch Bill to Break up Tech Giants’ Ad Dominance*, THE REGISTER (May 19, 2022), https://www.theregister.com/2022/05/19/senate_ctda_advertising.

⁸⁴ Press Release, *Senator Blumenthal Week In Review 05/13/2022 - 05/20/2022*, SEN. RICHARD BLUMENTHAL (May 20, 2022), <https://www.blumenthal.senate.gov/newsroom/press/release/senator-blumenthal-week-in-review-05/13/202205/20/2022>.

⁸⁵ National Securities Exchange, SEC. EXCH. COMM’N, <https://www.sec.gov/fast-answers/divisionsmarketregmrexchangesshtml.html> (last visited Apr. 9, 2023).

The claim that there is legally enforced physical separation in financial markets is, however, deeply misleading. As discussed below, about half of the trades in publicly traded U.S. stocks take place on exchanges owned by brokers.⁸⁶ The CTDA was originally premised on the idea that it would be absurd if “Goldman . . . owned the NYSE.” In fact, Goldman Sachs owns SigmaX2, an off-exchange trading platform that, by itself, accounts for about 6% of stock-market trades.⁸⁷

There are three primary places in which stocks are traded on exchanges.⁸⁸

First, there are 24 official exchanges licensed by the SEC under section 6(a) of the Securities and Exchange Act as national securities exchanges.⁸⁹ These include the NYSE and Nasdaq, as well as the Cboe BYX and BZX exchanges (formerly the BATS Exchange); the Miami International Securities Exchange (MIAX); and the Members Exchange (MEMX).⁹⁰ These national securities exchanges are independent of banks or brokers, as Srinivasan notes. But as discussed below, even these are not quite the model of independence that advocates of the AMERICA Act appear to believe. The registered national securities exchanges account for a little more than half of all stock trades.⁹¹

Second, there are broker-owned exchanges, known officially as “alternative trading systems” (ATS), and known colloquially as “dark pools.” The SEC adopted Regulation ATS in 1998 to “encourage market innovation, while ensuring basic investor protections.”⁹² The rule permits operators of securities markets to either register as a national securities exchange (like the NYSE) or to operate as an ATS. The regulation defines an ATS as “any organization . . . [t]hat . . . provides a market place . . . for bringing together purchasers and sellers of securities . . . [t]hat does not . . . [s]et rules governing the conduct of subscribers . . . other than by exclusion from trading.”⁹³

In other words, ATS cannot engage in the kinds of quasi-governmental regulation of participants that the self-regulatory exchanges like the NYSE do, but rather are limited merely to prohibiting bad actors from trading on their exchange in the future. Notably, implicit in this regulatory structure is

⁸⁶ *Analyzing the Meaning Behind the Level of Off-Exchange Trading*, SIFMA INSIGHTS, (Sep. 2021), available at <https://www.sifma.org/wp-content/uploads/2021/09/SIFMA-Insights-Analyzing-Off-Exchange-Trading-09-2021.pdf> (reporting that, through June 30, 44% of 2021’s trades were “off-exchange”).

⁸⁷ 13% of ATS trades, according to FINRA. See, *ATS Quarterly Statistics*, FINANCIAL INDUSTRY REGULATORY AUTHORITY, <https://www.finra.org/filing-reporting/otc-transparency/ats-quarterly-statistics> (last visited Apr. 9, 2023); And then 44% off-exchange, from SIFMA. *Id.*

⁸⁸ *US Equity Market Structure Analysis Analyzing the Meaning Behind the Level of Off-Exchange Trading Part II*, SIFMA Insights (Dec. 2021), <https://www.sifma.org/wp-content/uploads/2021/12/SIFMA-Insights-Analyzing-the-Meaning-Behind-the-Level-of-Off-Exchange-Trading-Part-II.pdf>.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² For a discussion, see Press Release No. 2018-136, *SEC Launches New Strategic Hub for Innovation and Financial Technology*, SEC. EXCH. COMM’N (Oct. 18, 2018), <https://www.sec.gov/news/press-release/2018-136>.

⁹³ Rule 300(a) of *Regulation ATS* at 17 CFR 242.300(a).

the power that an ATS has to exclude certain traders. This ability to admit only certain traders, as well as the fact that trades on an ATS do not have to be publicly disclosed, is what has earned them the moniker “dark pools.”

According to data from FINRA, there are 33 dark pools.⁹⁴ They are shown in Figure III. As demonstrates, many of these prominent securities exchanges are owned by large investment banks and broker/dealers, such as UBS, Barclays, J.P. Morgan (JPM), Morgan Stanley (MS), and Goldman Sachs (Sigma).

Figure III: Alternative Trading Systems

Name	MPID	Name	MPID
UBS ATS	UBSA	CODA	CODA
SIGMA X2	SGMT	INSTINET BLOCKCROSS	BLKX
CROSSFINDER	CROS	DEALERWEB	DLTA
JPM-X	JPMX	MS RPOOL (ATS-6)	MSRP
LEVEL ATS	EBXL	CBX	ICBX
MS POOL (ATS-4)	MSPL	LIQUIDNET H2O ATS	LQNA
IBKR ATS	IATS	LIQUIDNET NEGOTIATION ATS	LQNT
THE BARCLAYS ATS	LATS	LUMINEX ATS	LMNX
BIDS ATS	BIDS	CITIBLOC	CBLC
INTELLIGENT CROSS LLC	INCR	USTOCKTRADE SECURITIES, INC.	USTK
VIRTU MATCHIT ATS	KCGM	AQUA	AQUA
INSTINCT X	MLIX	INSTINET CROSSING	XIST
SUPERXATS	DBAX	XE	PJCX
MS TRAJECTORY CROSS (ATS-1)	MSTX	TZERO ATS, LLC	PROS
CROSSSTREAM	XSTM	BOATS	BLUE
POSIT	ITGP	STIFEL X	STFX
JPB-X	JPBX		
TOTAL	33		

SOURCE: FINRA, Q2 2021

There are also various independent exchanges. The four biggest, accounting for about half the market, are owned by UBS (17% of volume), Goldman (13%), Credit Suisse (10%), and JP Morgan (8%). (At the time of writing, Swiss regulators are considering whether to approve UBS' proposed acquisition of Credit Suisse.)⁹⁵

All of the ATS exchanges are owned by registered broker-dealers. This is legally required. This bears repeating in light of the claim that the AMERICA Act must ban brokers from owning exchanges for buying and selling ads because brokers cannot own exchanges for buying and selling stocks—the law *requires* some stock exchanges to be owned and operated by stockbrokers.

⁹⁴ Rule 300(a), *supra* note 90.

⁹⁵ John Revill, *Swiss Finance Minister Sees No 'Stumbling Blocks' to UBS Takeover of Credit Suisse*, REUTERS (Apr. 8, 2023), <https://www.reuters.com/business/finance/swiss-finance-minister-sees-no-stumbling-blocks-ubs-takeover-credit-suisse-2023-04-08>.

Third, there are over-the-counter (OTC) markets where buyers and sellers come together to trade. According to FINRA, there are more than 200 of these stock exchanges. An OTC venue is a network of market makers and brokers, trading as a principal for their own account. These exchanges are places where wholesalers and consolidators direct the buy and sell orders of retail investors. Like ATS exchanges, these stock markets are owned and operated by banks acting as broker-dealers.

The two types of off-exchange trading venues (ATS markets plus OTC markets) account for a bit less than half of the total equity-trading volume. This is shown in Figure IV.⁹⁶ These off-exchange venues, owned by brokers, are growing faster than the independent stock exchanges. According to the securities industry trade association, SIFMA, “[f]rom 2016 to 2020, total consolidated equity volumes increased 50.0%, while off-exchange volumes increased 69.4%, a 19.4 pps differential.”⁹⁷

Figure IV: Trading of All NMS Stocks

	2016	2017	2018	2019	2020	Average	Change	CAGR
Consolidated Volume (T shares)								
Total	1.8	1.6	1.8	1.8	2.8	2.0	50.0%	8.4%
On-Exchange	1.2	1.0	1.2	1.1	1.6	1.2	38.7%	6.8%
Off-Exchange	0.7	0.6	0.7	0.7	1.2	0.8	69.4%	11.1%
OE % Total	36.7%	37.5%	36.3%	37.2%	41.5%	37.8%	4.8	

SOURCE: SIFMA

There are myriad reasons for this growth, but fundamentally, broker-owned exchanges (ATS and OTC) are attractive because they may provide customers with better services across a range of demands. Buyers and sellers are not just interested in the price they are willing to pay. Price may be paramount, but the costs of trading, the speed at which trades execute, whether the trade will be anonymous, whether the trade will execute, and the reliability and integrity of the broker and exchange will all matter, as well. It is not as simple as “get the best price” for the client, an issue discussed further below. Order size matters, as the best price may be available only for a fraction of the amount demanded by a client. There is also the possibility of slippage in price or volume available depending on the presence or absence of retail or institutional investors. Finally, there are the search and transaction costs of finding the “best” venue to trade. A better price (or some other better) may be found at a different venue than the one chosen, but the costs (in broker time) may be greater than the gains from price reduction.

There is one final “exchange,” or market in which brokers may execute client trades, and it puts a fine point on the argument above that the idea of “physical separation” in the trading of stocks is deeply misleading. A broker can direct a client’s buy or sell orders not only to the independent

⁹⁶ US Equity Market Structure Analysis Analyzing the Meaning Behind the Level of Off-Exchange Trading Part II, SIFMA INSIGHTS (Dec. 2021), available at <https://www.sifma.org/wp-content/uploads/2021/12/SIFMA-Insights-Analyzing-the-Meaning-Behind-the-Level-of-Off-Exchange-Trading-Part-II.pdf>.

⁹⁷ Analyzing the Meaning Behind the Level of Off-Exchange Trading, Part II, SIFMA INSIGHTS (Dec. 13, 2021), <https://www.sifma.org/resources/research/insights-analyzing-the-meaning-behind-the-level-of-off-exchange-trading-part-ii>.

exchanges (NYSE, etc.) and to the off-exchange markets (ATS and OTC), but also fill the order from *their own inventory*. The process is called “internalization.” The SEC describes it this way:

Instead of routing your order to a market or market-makers for execution, your broker may fill the order from the firm’s own inventory. . . . In this way, your broker’s firm may make money on the ‘spread’—which is the difference between the purchase price and the sale price.⁹⁸

This system of independent and broker-owned markets competing with each other did not arise by accident, but was a deliberate policy choice by Congress and the SEC. Historically, buyers and sellers came together in a single, centralized exchange, such as the NYSE. In fact, the SEC approved an NYSE rule that prohibited members of the exchange from trading NYSE-listed stocks on venues other than the NYSE.⁹⁹ This approach was plagued by inefficiencies and high commission fees, owing to the fact that the exchange had monopoly power.¹⁰⁰ Bid-ask spreads (a measure of liquidity and costs for traders) and commissions were much larger than they are today.¹⁰¹

Competition could check these inefficiencies, but prior to the 1970s, technology was not available to link competing exchanges in a way that ensured liquidity and investor protection. By 1975, however, advancements in communications technology portended a time in which a network of connected markets could increase innovation and offer a range of services to buyers and sellers of securities. In the Securities Act Amendments of 1975, Congress required the SEC to create a “national market system” along these lines. Those amendments are now found in Section 11A of the Exchange Act.¹⁰²

The development of the national market system has taken decades. Congress delegated to the SEC power to develop the system, and the SEC has promulgated a series of rules to nudge the hundreds of stakeholders and market participants in this direction. The SEC promulgated the most recent rule, Reg NMS, in 2005.¹⁰³ Reg NMS has several notable rules regarding the trading of securities on the various markets noted above. These include rules about reporting trades,¹⁰⁴ dissemination of

⁹⁸ *Executing an Order*, SEC. EXCH. COMM’N, <https://www.sec.gov/fast-answers/answersinternalization> (last visited Apr. 9, 2023).

⁹⁹ See, *In the Midst of Revolution: The SEC, 1973–1981*, SECURITIES AND EXCHANGE HISTORICAL SOCIETY, <http://www.sechistorical.org/museum/galleries/rev/rev03g.php> (last visited Apr. 9, 2023).

¹⁰⁰ See, e.g., Craig Pirrong, *The Thirty Years War*, 28 REG. 54 (2005-2006) at 4 (“[F]undamental economic considerations can create inefficiencies in securities markets. Network effects arising from the rational choices of traders tend to cause trading to consolidate on a single exchange that can then exercise market power by rationing access either explicitly (through membership limits) or through price.”).

¹⁰¹ See, e.g., Paul G. Mahoney, *The Economics of Securities Regulation: A Survey*, VIRGINIA LAW AND ECONOMICS RESEARCH PAPER NO. 2021-14 (Aug. 24, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3910557.

¹⁰² Securities Exchange Act of 1934, 15 U.S.C. § 78k-1 (2021)

¹⁰³ 17 C.F.R. 242, available at <https://www.sec.gov/rules/final/34-51808.pdf>.

¹⁰⁴ Rule 601.

prices,¹⁰⁵ routing transparency,¹⁰⁶ fee limits,¹⁰⁷ and best-price rules.¹⁰⁸ The best-price rules are discussed in the next section, but in general, it holds that all trades be reported to a consolidated trade tape and must take place at the best price reasonably available.

2. *The Exchange Model*

Even in the half of the market that trades on exchanges, the model of pure separation imagined by Dina Srinivasan and the AMERICA Act does not exist. The NYSE is owned and operated by International Exchange Inc. (ICE), a publicly traded corporation. This means that it is, in fact, owned by countless individual and institutional investors, including banks and broker-dealers. No individual broker-dealer “owns” the NYSE, it is true, but many have a stake in it, while also selling shares for their clients. Moreover, the demutualization of the NYSE, and its conversion to a profit-making enterprise, has meant that the NYSE has entered the business of offering services to buyers and sellers of stocks. The NYSE sells products and services to its customers through a large sales team, representing a large portion of its income.

Consider two types of products offered by ICE. First, ICE offers various types of trades for buyers and sellers on the NYSE. These products, whether widely used or bespoke, are designed to drive volume to the NYSE in light of the leakage to off-exchange venues (ATS and OTC) discussed above. Exchanges have designed products, such as “hide not slide” or “iceberg orders,” that permit buyers or sellers to transact in ways that skirt the rules or achieve an advantage over off-exchange venues.

For instance, in a “hide not slide” order,¹⁰⁹ an exchange permits a trader to buy at a price forbidden by the rules. The problem arises because transactions are supposed to happen at the NBBO prices, which are aggregated from orders on all markets into a single bid-ask spread. These prices are set on different exchanges and systems, however, and they have different latencies and processing speeds. Thus, it is possible that quotes will arrive at times when prices have moved, and the best available bid or ask shown will be “out of date.” This can lead to the bid-ask spread being zero—the bid is the same as the ask. One would think that the trade would just execute at that price, but it exists because of out-of-date information. The SEC calls this a “locked” market, and prohibits it.

To resolve this problem, a trader who wants to put in an order that would “lock” the market has two choices. The trader can put in a “limit order” that will clear when prices move to the point specified by the order, allowing it to clear. But, in this case, the trade will be prioritized in time at the point

¹⁰⁵ Rule 602.

¹⁰⁶ Rule 606.

¹⁰⁷ *Id.* Rule 610.

¹⁰⁸ *Id.* Rule 611.

¹⁰⁹ Scott Patterson & Jenny Strasburg, *How 'Hide Not Slide' Orders Work*, THE WALL STREET JOURNAL (Sep. 18, 2012), <https://www.wsj.com/articles/SB10000872396390444812704577605840263150860>; Matt Levine, *'Hide Not Slide' Orders Were Slippery and Hidden*, BLOOMBERG (Jan. 13, 2015), <https://www.bloomberg.com/opinion/articles/2015-01-13/hide-not-slide-orders-were-slippery-and-hidden>.

when prices move. If a trader instead wants to have its trade time stamped at the time the order is entered, it cannot do so if it would lock the market. The order would “slide” up or down by a penny to the next lowest/highest price in order to unlock the market. Here, the exchange offers a service that permits the trader to enter the order with the specified time stamp, but “hide” it from public view and the consolidated bid-ask record. When the prices move in a way that unlocks and allows the trade to clear, the trade is revealed, with the earlier time stamp. It clears at that price. The order permits the trader to hide, not slide.

This exchange-provided service or tool for trader is fairly generic and has been deployed by multiple exchanges. There are dozens of other tools that exchanges provide to buyers and sellers to get them to route their business to that exchange.¹¹⁰

Exchanges also offer more sophisticated buy-side and sell-side tools. For instance, the NYSE now offers potential traders a suite of algorithmic-trading tools. High-end hedge funds and institutional investors have developed high-speed trading algorithms that enable them to improve their returns by being faster to market. Increasingly, these investors have taken their business to off-exchange venues and, when they stay on exchange, they are able to outperform other investors. To compete with investors who have developed their own algorithms, the NYSE offers algorithmic-trading tools, advertising that “Floor Brokers can choose from NYSE-provided algos or contract directly with algos available from third-party providers.”¹¹¹ If traders choose exchange-provided “algos,” they enter into an “algorithmic routing access agreement” with the NYSE. The agreement sets out the nature of the tools provided by the exchange to its traders:

WHEREAS, [the trader] desires to make certain of its proprietary and/or licensed computerized or electronic algorithms and related services (collectively, the “Algo Product”) available to certain Member Organizations over Exchange trading systems . . . and

WHEREAS, the NYSEM desires to allow [the trader] to interface with the NYSE System and provide Authorized Floor Brokers with access to the Algo Product using the NYSE System on the terms and conditions set forth herein.¹¹²

This market structure makes perfect sense. Multiple exchanges bring competition (although the top three—NYSE, Nasdaq, and Cboe—account for about 50% of all trades). Exchanges and other markets (some owned by brokers) compete with each other for volume by offering services and tools to

¹¹⁰ *Order Type Differences*, NYSE, available at https://www.nyse.com/publicdocs/nyse/markets/nyse/Pillar_Differences.pdf (last visited, Apr. 5, 2023); *NYSE Pillar Binary Gateway Order Type Matrix*, NYSE, available at https://www.nyse.com/publicdocs/NYSE_Pillar_Binary_Gateway_Order_Type_Matrix.pdf (last visited, Apr. 5, 2023).

¹¹¹ *Algorithms for NYSE Floor Brokers*, NYSE, available at https://www.nyse.com/publicdocs/nyse/markets/nyse/Algos_Fact_Sheet.pdf (last visited, Apr. 5, 2023).

¹¹² *Algorithmic Routing Access Agreement*, NYSE (Jan. 26, 2015), available at https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSEM_Algo_Routing_Access_Agreement_Form.pdf.

customers. Those investors who can build their own tools may do so, while those for whom it is more efficient to buy off-the-rack tools may do so, from exchanges, brokers, or other providers.

The above examples show that, in today's stock markets, exchanges provide buying and selling tools for their customers. This is exactly the type of conduct that would be prohibited in ad markets under the AMERICA Act. Any contention that the legislation is supported by what has "worked" in regulating securities markets is, therefore, deeply misleading. The "physical separation" envisioned by the bill does not exist in financial markets.

B. The Problems with Best Prices

The second reform proposed by the CTDA, and now the AMERICA Act, is that those offering services to buyers and sellers of advertisements act in the "best interests" of their customers. For the larger digital-advertising companies, this would require several things. First, they must "make the best execution for bids on ads"; second, they must provide "transparency to their customers"; third, they must "erect firewalls to prevent . . . conflicts of interest"; and finally, they must "provide fair access to all customers with respect to performance and information related to transactions, exchange processes, and functionality."¹¹³

As noted in the original Lee bill explainer, these rules "mirror those imposed on electronic trading in the financial sector."¹¹⁴ Specifically, the original CTDA was based on Reg NMS, promulgated by the SEC in 2005. Reg NMS is designed to ensure that traders are treated fairly in a world of competitive exchanges. Remember, in a world of a single exchange, there is no concern about orders being routed to locations with inferior prices, but there are monopoly concerns about prices being set too high or trading options being limited. Congress intended to move toward a competitive exchange model with the 1975 amendments to the securities laws, and delegated to the SEC the authority to implement regulations to ensure that the various trading venues (some owned by brokers and banks) compete on fair terms. In 2005, the SEC promulgated Reg NMS, which requires exchanges and other venues to report trades in a timely manner,¹¹⁵ to disclose prices,¹¹⁶ and to be transparent about the routing of orders,¹¹⁷ as well as imposing fee limits,¹¹⁸ and setting best-price rules.¹¹⁹

¹¹³ See, *Competition and Transparency in Digital Advertising Act*, SEN. MIKE LEE, <https://www.lee.senate.gov/services/files/5332FC38-76F0-4C8B-8482-3F733CF17167> (last visited, Apr. 5, 2023).

¹¹⁴ *Id.*

¹¹⁵ Rule 601.

¹¹⁶ Rule 602.

¹¹⁷ Rule 606.

¹¹⁸ Rule 610.

¹¹⁹ Rule 611.

Several of the proposed reforms in the AMERICA Act seem relatively unobjectionable, although it is not clear whether the benefits exceed the costs. It is straightforward to support “transparency” and “fair access,” but these things are not free and, so long as there exists competitive alternatives in the market and market participants are relatively sophisticated, it is possible that additional regulation may impose unnecessary costs. These issues are beyond the scope of this paper.

It is important to note, however, that the reasons Reg NMS imposed similar rules on securities markets had to do, in large part, with the fact that securities have social importance that far exceeds advertisements. Reg NMS rules are designed to ensure that the prices of stocks are as accurate as possible because, as noted above, this matters greatly to individuals (saving and investing) and for the economy writ large, in terms of capital allocation and efficiency. Stock markets are the engine and nerve center of the market economy. If individuals are cheated by their brokers, they may invest their money in less-efficient ways (e.g., buying gold), leading to higher costs of capital for firms that create jobs and generate wealth. Moreover, if prices are inaccurate, because a lack of transparency or competitive alternatives cause trades to happen at inferior prices, this may lead to capital being misallocated or, at a minimum, to socially inefficient arbitrage opportunities for certain investors.

But there is one element of the AMERICA Act’s proposed “best interests” regulation that warrants closer scrutiny here. The bill draws from financial regulation to impose a requirement that digital-advertising companies must make the best execution for bids on ads. This translates into an obligation that advertising sold through auctions happen at the “best price” available in the market. As Sen. Lee’s explainer describes, such an obligation would be “enforced by the Department of Justice and state attorneys general,” and “includes a private right of action for violations of the best interest, transparency, and other requirements imposed at the \$5 billion threshold when committed by companies over the \$20 billion threshold.” In other words, Google (the only company with more than \$20 billion) will be subject to oversight by the federal government, state governments, and plaintiffs’ lawyers regarding whether the prices it charges are the best available prices.

As with the other elements of the AMERICA Act, the “best price” rule is premised on rules from the stock market. As noted above, Reg NMS Rule 611—the “order protection rule”—requires a “trading center” to “establish, maintain, and enforce written policies and procedures that are reasonably designed to prevent trade-throughs on that trading center of protected quotations in NMS stocks”¹²⁰ This means that any securities market—an exchange, ATS, or OTC market—is required to ensure that trades do not happen at inferior prices—that is, “at a price that is lower than a protected bid or higher than a protected offer.”¹²¹ In essence, brokers have to direct customer trades to markets in which they will receive a price equal to the best price available in the market. The SEC requires that all trading venues report price quotes and trades to a consolidated tape as soon as practicable (but not later than 10 seconds), and that trades take place at the best price

¹²⁰ Rule 611.

¹²¹ *Memorandum SEC Division of Trading and Markets, SEC. EXCH. COMM’N* (Apr. 30, 2015), available at <https://www.sec.gov/spotlight/emsac/memo-rule-611-regulation-nms.pdf>.

reasonably available, typically at or within the bounds of the current national best bid and best offer (NBBO) in accordance with Reg NMS Order Protection Rule.

There are problems with this approach. First, as noted above, traders care about more than just price. If the rule required brokers to always send an order to the market with the best price, some customers would be worse off. Traders may also care about the quickest execution of a trade, reliability in execution, or other aspects of account management, anonymity, or particular tools or services offered by one market and not another. It is all about the margins. A slight improvement in price might be worth less to a trader than a trade that is anonymous, certain, and immediate.

Second, trying to ensure that trades happen at the best price is not free. All the parties in a transaction chain—brokers, clearing banks, trading firms, and trading venues, as well as the government—must invest in systems and people to ensure compliance with the rules and regulations. On the private side, the compliance industry (internal and external to firms) has grown enormously in the past few years, much of it having to do with enforcing rules like Reg NMS. In a shareholder letter a few years ago, J.P. Morgan CEO Jamie Diamond bragged that his bank was hiring thousands of compliance professionals.¹²² There is little evidence that the social benefits of this work exceeds the costs, which are born by investors and society at large.

In addition to the growth of compliance departments within firms, the SEC and FINRA have thousands of employees, many of whom engage in oversight, audits, and enforcement against brokers who allegedly violate Reg NMS and related rules. As argued above, while this is of debatable value, the value it does have is related to the fact that the object of the trading sits at the nerve center of the capitalist economy. We do not, for example, have a regime to ensure the best price across multiple car dealers or grocery stores.

Notwithstanding all of the money spent on compliance and regulation to ensure that trades happen at the “best price,” recent empirical evidence suggests that only about half of trades in public securities take place at the best (or NBBO) price. In an empirical look at the prices of millions of stock trades, a recent paper finds that “57% of the orders in [their] sample refuse Reg NMS routing to the NBBO.”¹²³ They find that the most sophisticated investors using the most sophisticated orders routinely route their orders to places offering something less than what regulators believe is the “best” price for them.

There are two possible theories as to why this happens. Under the agency-cost theory, brokers are routing trades of unwitting customers to trading venues with inferior prices because it serves the brokers’ interests (e.g., through rebates that the brokers can capture) rather than clients’ interests.

¹²² See, e.g., *Annual Report 2011*, JPMORGAN CHASE & CO. (Mar. 30, 2012), available at <https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/investor-relations/documents/JPMC-2011-annual-report-letter.pdf>.

¹²³ See Sida Li, Mao Ye, & Miles Zheng, *Financial Regulation, Clientele Segmentation, and Stock Exchange Order Types*, NBER WORKING PAPER SERIES, 1-52 (2021), available at https://www.nber.org/system/files/working_papers/w28515/w28515.pdf.

This may, indeed, be the case in some instances, but the authors conclude that it is not generally retail investors whose orders are routed at inferior prices, but large institutional investors. This is consistent with the second theory, which is that the “best” price set by regulators is not, in fact, the best price for traders.

Whether the first or second theory is the predominant explanation, the implications for the digital-advertising market is that, contrary to the claims of proponents of the AMERICA Act, securities trades are frequently executed at other than the “best” price. There are a variety of ways this can happen.

First, the SEC permits trades to happen at inferior prices, even though other SEC rules seem to forbid it. SEC regulations permit trades to be routed to locations with inferior prices, so long as the “top of the book” (the specific number of shares available at the best price) is cleared. Rule 611 protects only the volume available at the top of the book. If the two “best” quotes available for a particular stock at a particular time are both available in one market, and thus superior to any prices in another market, a broker may nevertheless fill an order on the market with inferior prices, so long as the inventory available at the best price on the first market is utilized to fill part of the order.

For instance, imagine a DNS order for 10,000 shares is routed to the BATS exchange, but the NYSE has a better price available for 1,000 shares (the top of the book) and a slightly better price than BATS available for the remaining 9,000 shares. Under Rule 611, BATS has to avoid “trading through” the better price available on the NYSE for the top of the book. It can accomplish this, however, by sending the order for the first 1,000 shares to the NYSE—taking this liquidity from the NYSE—and then filling the rest on BATS. This type of limit order, known as an inter-market sweep, enables traders to achieve the balance of various interests (in speed, pricing, anonymity, and reliability) that maximizes for them. Importantly, the 9,000 shares trade at prices that are clearly not the “best” available price.

Another reason that trades can happen at “inferior” prices is because of payments and rebates made to traders by exchanges to attract trades to their venue. These are called “payment for order flow” or “maker-taker liquidity payments.” Exchanges or other trading venues earn money by charging fees for each trade. It is therefore important that they attract brokers to send trades to their markets. To do this, they offer not just trader tools and services, but also give rebates to brokers for directing trades to them. For instance, a trading venue might offer a rebate of, say, \$0.10 per-share for orders that provide liquidity to the venue (offer shares for sale), and charge a fee of, say, \$0.20 per-share for orders that route trades outside the exchange. Net of these fees, a price that appears better in one venue may turn out to be worse for a particular trader. To route orders to a particular exchange, brokers attach “do-not-ship” instructions (DNS), which instruct the venue to which an order is routed not to send it to another exchange.

Here is how a recent paper describes this phenomenon:

We find that exchange fees serve as one driver of exchange-routing refusal. We find that exchanges often have to route displayed limit orders to worse prices after adjusting for fees to comply with Rule 610 of Reg NMS, which prohibits a displayed order in one exchange to lock or cross an existing quote in another exchange. Suppose that the best NYSE ask price is \$10.00 while the best NYSE bid price is \$9.98. A trader who submits a sell limit order at \$9.99 would improve the NYSE best ask price by one tick. If NASDAQ has a bid price of \$9.99, even if the bid is established a small fraction of a second earlier, the NYSE limit sell order at \$9.99 locks the NASDAQ bid at \$9.99, and Rule 610 would require the NYSE to route the limit sell order at \$9.99 to take liquidity from NASDAQ. Routing unlocks the market, but it leads to a worse price for the NYSE limit sell order because the NYSE offers a rebate of 0.13 cents per share for orders that make liquidity and charges a fee of 0.30 cents per share for routing orders outside the exchange. Therefore, we find that more than 50% of non-marketable orders are attached with “do-not-ship (DNS)” instructions, which ask the NYSE to cancel an order if it locks or crosses quotes in another exchange. We find that DNS limit orders earn a small and quick profit of 1.34 bps after collecting the rebate but would lose 0.38 bps if they paid the routing fee.¹²⁴

To be clear, brokers have an obligation to ensure that they pursue the “best interests” of their customers. Some have criticized “payment for order flow” and various “maker-taker” liquidity payments as serving the interests of brokers and trading venues, rather than investors.¹²⁵ Without weighing into that debate, one thing is clear and germane to this article: in the relatively straightforward world of stocks—where value is inherent, a single definable thing is being exchanged, and price is the same for everyone at a given moment—the complexity of multiple venues and individuals pursuing their own self-interest nonetheless makes enforcing a “best interests” standard extraordinarily complex.

Now imagine this obligation being required for online advertising. While a stock has one price for every potential investor at any time, and it has some intrinsic value, online advertisements have many more degrees of interest. In online display-ad auctions, there is a price for a particular viewer for a particular location at a particular time. The multiple factors and the lack of an objective valuation makes determining the “best” price, or even a reasonable price, far more complex.

As discussed above, the best-interests rule is difficult to enforce in stock markets, and accordingly only about half of all trades happen at the established NBBO (or best available) price. Establishing something akin to the NBBO price would be a monumental task in online display advertising. One wonders, if that were even possible, what the deviations would look like. After all, considerations include not only the three particulars discussed above, but how various ads might be inappropriate for some users or sites, the placement of competing ads next to each other, and so on.

¹²⁴ *Id.*

¹²⁵ The SEC recently promulgated a proposed rule on the topic. See, *SEC Proposes Rule to Enhance Competition for Individual Investor Order Execution*, SEC. EXCH. COMM’N (Dec. 14, 2022), <https://www.sec.gov/news/press-release/2022-225>.

It would be an understatement to suggest that the bill's proposal to have the best-interests rule enforced by "the Department of Justice and the states attorneys general" represents a massive underestimate of the bureaucracy needed to establish and enforce such rules on market participants.

V. Some Particular Concerns

Dina Srinivasan's law-review article that spawned the CTDA (and now, the AMERICA Act) identified a few specific concerns about the online display-auction market that should be mentioned briefly. There were three major "problems" identified with the market and, specifically, with Google's behavior in that market.

First, there is the issue of speed and latency. The article alleged that Google somehow manipulates its auctions to exclude certain bidders from them within the time allotted, giving preference to certain other (favored) bidders or to its own properties. According to data at that time, about one in four bids submitted to Google's exchange "timed out" because they were not received by the time the auction ended.¹²⁶

Srinivasan leaps from this to an analogy to securities regulation: "Like the trading firms on Wall Street that benefit from speed advantages, Google-owned intermediaries . . . also have speed advantages."¹²⁷ Google responded to these concerns by offering any sales intermediaries to co-locate in the cloud and by promising equal access, as the article notes.¹²⁸ Nevertheless, the article attributed part of Google's market success to these speed advantages.

That argument is far from convincing. No data was presented to make this link, other than the topline claim about one in four bids being timed out. We cannot say whether these bids were ones that would have been successful or whether this timing matters sufficiently to buyers and sellers to dictate their choice of intermediary. The article seemingly recognized this by claiming, at the end of a series of accusations against Google, that more transparency was needed regarding speed and transactions.

As noted above, more transparency may be a good thing in this market, although it is not costless. But it is notable that, when the UK Competition and Markets Authority dug into transaction-level data for millions of Google's online display-ad auctions, it did not find any unfairness or significant impact from these policies.¹²⁹ At their core, the article's allegations come down to an assertion that

¹²⁶ Srinivasan, *supra* note 17, at 110.

¹²⁷ *Id.* at 109.

¹²⁸ *Id.*

¹²⁹ See, e.g., *Online Platforms and Digital Advertising Market Study: Appendix R: Fees in the Adtech Stack*, UK COMPETITION AND MARKETS AUTHORITY, 275 (Jul. 3, 2019), available at https://assets.publishing.service.gov.uk/media/5fe49625e90e071207e10eff/Appendix_R_-_fees_in_the_adtech_stack_WEB.pdf; for a full set of appendices, see <https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study>.

Google runs unfair auctions. The most comprehensive transaction-level look at the data found no support for this claim.

Even if the claim was that Google was giving a speed advantage to owned intermediaries, this may not be a problem. By vertically integrating, Google is offering potential efficiencies to its customers. This is a feature of all vertically integrated markets. Whether it is problematic depends on whether there are ready alternatives. If an ad buyer or seller can choose an alternative provider on commercially similar terms, then the issue becomes second order, if it matters at all. Google is offering a bundle, and insofar as customers can choose other bundles, then they are protected from abuse. In this way, the speed issue, like others, becomes a simple antitrust question at the higher-level of generality.

Whether additional transparency would improve the market is arguable, at least, but the analogy to securities markets is deeply misplaced. At the most basic level, online display ads are sold in auctions, while stocks are not. This matters a great deal. Auctions have a set duration, and so long as the bid arrives in time, it will be considered. Speed (within the window) is irrelevant in online advertising. Stock markets, however, are sold instantaneously. If one has a millisecond advantage over a competitor in the stock market, this can be the difference between a profitable and an unprofitable trade. The stock in question is available at a given price at a given moment to the first person who arrives to claim it. When it is gone, the price may move in the next instant in a way that disadvantages the second person to arrive.

It is for this reason that Wall Street firms, as Srinivasan makes much of, spend large amounts of money to decrease their latency with exchanges, and why the colocation of intermediaries' servers and exchanges' servers are so tightly regulated. If they were not, then exchanges could dictate winners and losers in the market simply through location of their servers. This cannot happen in advertising markets. Not only is speed much less important, but there cannot be competition across exchanges in the same way as there is on stock markets, as there effectively is a single national market in which stocks are sold.

It is also far from obvious that the speed issue is a first-order concern. There is a time-out problem for all auctions, and every player in the market has time-out requirements and latency issues. Each exchange sets the time based on a tradeoff: the longer the duration, the slower the web page will load, while the longer the duration, the better the price likely will be because the auction will include more bidders. For example, context ads are timed out more often. This choice, which seems like a primary one for customers to make, differs across platforms, but the times and choices are basically in the same ballpark. At the end of the day, the fact that Google is painted as manipulating markets is, at base, nothing more than a claim that Google has a large market share.

Second, there is the issue of informational advantage. Srinivasan analogizes these features of the adtech market to insider trading and front-running in securities markets, claiming that Google has informational advantages that it uses to disadvantage competitors. Specifically, the article alleged

that Google knows the identity of certain potential consumers of advertisements (based on search history), and it uses this information to provide more value to advertisers, while scrambling the unique identifiers when it comes to third-party access.

The arguments here are similar to those about speed. For one, the issue is not simply one of fairness, as there are concerns about storing and sharing personal data. Moreover, insofar as Google offers a bundled service, the question devolves into a simple antitrust issue at the macro level. If Google does not have viable competitors or earned its dominant position through anticompetitive behavior, rather than superior service, then an antitrust remedy may be warranted. Again, however, the only deep dive into transaction-level data found no evidence of any unfairness in Google's behavior.

Moreover, the analogy to securities markets is deeply misplaced. Stocks have posted prices that apply to everyone. At a particular time, a stock might be available at \$10. Certain people may know—for sure—that this price is wrong. An insider with private information that the company has discovered the cure for cancer can buy the stock at \$10, and earn a for-sure profit when the news is revealed, and the stock price jumps to \$100. Similarly, a broker who receives a large limit buy order at a price up to \$15 can buy the stock at \$10 and resell it to its customer at prices up to \$15, earning a riskless profit. The former is called “insider trading” and the latter “front running.” Both are banned by regulation and are illegal. Of course, nothing like this could happen in online-advertising markets, as there is not a single price, not an intrinsic value, and no riskless profits akin to these schemes.

There is another big difference. If insider trading is not banned, this would open the door to deliberate market manipulation or other conduct that would have serious knock-on effects on the economy. If an insider can profit from nonpublic information, that insider would have incentives to delay the release of market-moving information, which would make stock prices wrong, and therefore disrupt capital allocation. In extreme cases, the insider could have incentives to destroy value or create excessive volatility, simply to be able to profit from insider trades.

Again, nothing like this is remotely going on in the online display-ad market. Insofar as Google uses information from users of some of its products, like Search or YouTube, to provide a better service for its advertising customers, this looks like the behavior of any retailer or the operator of any platform, rather than a problem akin to securities manipulation.

Think about a trip to the grocery store or to Walgreens. These retailers collect data about everything you do in their store, from what products you buy, to how long you spend in particular aisles, to where your eyes go when looking at shelves. They use this to their advantage, and they do not share it with competitors, including the companies that stock their shelves. After all, retailers offer both brand-name and generic options for many products, and when and how they do so is not random. It is based on data and customers' observed buying patterns.

The same is true of Amazon, of art-auction houses, and of countless other providers of markets and services. If these companies have a monopoly, that may be a problem; if they do not, it may instead

seem like a source of competition and value to customers. But in any event, none of the special concerns about securities regulation are remotely implicated.

VI. Conclusion

In nature, the saying goes, dogs wag tails, not the other way around. The case against Google's behavior in the online display-ad market is premised on a claim about tails wagging dogs. Google's revenues and profits are overwhelmingly derived from its Search business, not its online-ad business. The profitability of Search depends on people using online search tools to access content on the Internet, instead of, say, app-based walled-gardens, like Facebook, Amazon, or the *New York Times'* apps. One of the key features that makes Search valuable is tailoring and quick-loading web pages. And since Google's vertical integration across the ad stack means that it is simultaneously serving buyers, sellers, and consumers of advertising, it has strong incentives to optimize an efficient way.

After all, sellers of advertising might prefer slower-loading web pages that allowed more bidders and thus higher prices, while buyers of advertising might prefer the opposite. Of course, customers may have various preferences related to tailoring and speed. By owning every aspect of this, and being able to make tradeoffs with the goal of the "open Internet," Google is offering a compromise product with a clear end goal. In this way, it is competing with alternative conceptions, such as the walled-garden approach. The rise of "header bidding" and other features discussed above is a clear example of this. If the AMERICA Act is enacted, it will hobble Google's ability to make market-regarding tradeoffs, and thus bias the development of the Internet in a particular direction.

At root, the case against Google amounts to a claim that it runs unfair auctions. This is, however, belied by the only transaction-level look at Google's online display-ad auctions. The UK Competition and Markets Authority did not find unfairness in these auctions; they find the opposite when they dig into Google's event-level data.

With all of that being said, it is beyond the scope of this article to determine whether there is an antitrust problem with regard to Google's market position or its behavior. Google has recently responded to the concerns of some critics with commitments to increased data sharing and unbiased integration, including with servers that participate in header bidding.¹³⁰ Whether these are sufficient or whether more transparency would be worthwhile from a social perspective is arguable.

What is inarguable, however, is that the analogies between online display-ad auctions and securities markets that have been made by academic and legislative proponents of the AMERICA Act are utterly unfounded and based on a deep misunderstanding of the purpose and reality of securities regulation. Most importantly, securities markets are not selling commodities, like online ad markets are. Securities markets are regulated as they are because they are selling stocks, and stocks are not

¹³⁰ Maria Gomri, *Some Changes to Our Ad Technology*, GOOGLE BLOG (Jun. 7, 2021), <https://blog.google/around-the-globe/google-europe/some-changes-our-ad-technology>.

ads. Stocks are the market's primary mechanism of savings and investment, and they are the nerve center of the capitalist economy. Stocks have intrinsic value, and getting that value "right" is one of the most important social activities in which humans engage. The way that every business is run, what gets built, what people do for a living, and the goods and services we all enjoy all depend, at a fundamental level, on the accuracy of stock prices. These facts, coupled with the fact that informational advantages would enable riskless profits and encourage manipulation, make stock markets unique, and amendable to a vast regulatory apparatus. None of this is remotely true for online ad markets.

Not only is the purpose of securities regulation strikingly different than the purpose of ad-market regulation, the descriptions of securities regulation that have been offered in pieces supporting the CTDA and the AMERICA Act are misleading. Proponents allege that there is a physical separation between owners of stock exchanges and those selling services or providing tools to stock-market participants. This is false. Brokers do own and operate exchanges, and these broker-owned exchanges are where about half of trades execute. Moreover, they are growing faster than traditional exchanges. Indeed, even the traditional exchanges like the NYSE provide services to buyers and sellers of stocks.

Broker-owned exchanges do present potential problems of front-running and inferior price trades due to conflicts of interests. It is for this reason that securities markets impose various best-interests or best-price rules. (Note here, that the two parts of the AMERICA Act are already at odds with securities regulation, being a belt-and-suspenders approach that actually is more restrictive than securities regulation.) But even then, such rules have much less bite than proponents of the AMERICA Act believe. SEC rules permit trades to happen at less than the best price for a variety of reasons set out above, and the end result is that only about half of trades happen at the best price.

It is worth further noting that the best price is a known and published quantity for a particular stock at a particular time, and it has nothing to do with who the buyer, seller, or others are. This is not the case in online advertising, which is infinitely more complex. And yet, it still requires a massive regulatory apparatus for stock markets to police various best-price rules. Any analogous regulatory regime for online ad markets would have to be much, much bigger and much more intrusive.