EXHIBIT A

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

COMPASS, INC., *Plaintiff* *v.* ZILLOW, INC., ZILLOW GROUP, INC., and TRULIA, LLC, *Defendants.*	Case No. 1:25-cv-05201-JAV

EXPERT DECLARATION OF DEBRA J. ARON, PH.D.
September 12, 2025

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I. INTRODUCTION

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16. The indirect evidence of market power includes Zillow's dominant market share in a highly concentrated market in which Zillow's platform has more than double the traffic of the next largest competitor; and the substantial barriers to entry into the relevant product market.

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III. CONTEXT OF THIS CASE

A. The Residential Real Estate Marketplace in the United States

19. Most residential properties in the United States are bought and sold with the help of real estate brokers or sales agents. Both brokers and sales agents must meet minimum licensure requirements to legally practice.[3] Brokers are licensed to own their own businesses and practice independently, whereas sales agents must work with a licensed real estate broker.[4]

[3] Real Estate Brokers and Sales Agents," *U.S. Bureau of Labor Statistics*, August 28, 2025, https://www.bls.gov/ooh/sales/real-estate-brokers-and-sales-agents.htm (hereafter, *Real Estate Brokers-BLS*).

[4] *Real Estate Brokers-BLS.*

20. A real estate brokerage is a legal entity that employs brokers and sales agents.[5] Realtors are a subset of brokers or sales agents who are members of the National Association of Realtors (NAR), the largest trade association in the United States involved in the real estate industry. Not all brokers or sales agents are Realtors (i.e., not all brokers and agents are members of NAR).[6]

[redacted]

22. Real estate brokers and agents earn money through commissions. The commissions earned by real estate brokers and agents consist of a portion of the sale price of a property and are paid out after the completion of a sale.

23. Brokerages compete with each other to provide agents to sellers of for-sale homes. Properties that are for sale whose owners are represented by a brokerage's agents can be thought of as the brokerages' inventories. Brokerages also compete with each other to provide agent services to home buyers, and they compete with each other to attract and retain productive and talented agents.[8]

24. Real estate brokers and sales agents representing buyers and sellers often leverage online marketing avenues when searching for and advertising properties. For example, a 2024 survey conducted by the NAR found that the internet played a role in the home search process

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[5] "Choosing a real estate brokerage: What agents need to know," *Real Estate News*, accessed September 9, 2025, https://www.realestatenews.com/explainers/choosing-a-real-estate-brokerage-what-agents-need-to-know.

[6] "About NAR", *National Association of Realtors*, accessed September 9, 2025, https://www.nar.realtor/about-nar; "When is a Real Estate Agent a Realtor," National Association of Realtors, accessed September 9, 2025, https://www.nar.realtor/about-nar/when-is-a-real-estate-agent-a-realtor.

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[8] Compass, Inc., Form 10-K, for the fiscal year ended December 31, 2024 (hereafter, *2024 Compass 10-K*), p. 8.

for all home buyers surveyed.[9] Online platforms that aggregate listings, such as Zillow and Realtor.com are used by buyers and their agents to search for properties that may be of interest to the buyer, and by sellers and their agents to advertise properties for sale.[10]

25. There are two markets that are relevant to the issues that I will discuss in this declaration. First, as I will demonstrate in Section V, there is a relevant antitrust market for online home search platforms. This is the market in which Zillow primarily operates and in which the competitive harm associated with the challenged conduct is occurring.

26. The second market of relevance to the case is the market for brokerage services. In that market, companies (brokerages) contract with agents and brokers, whose job is to attract listings (properties for sale) by representing the seller in the sale of the property, and to attract buyers to represent them in the purchase of real estate.[11] It will not be necessary for me to finely delineate the antitrust boundaries (product or geographic) of the market for brokerage services; rather, this market is relevant because it is the primary market in which Compass and other brokerages, who also compete with Zillow in the online home search platforms market, operate. Hence, while this market is relevant for the parties in this litigation, it is secondary with respect to the antitrust allegations in this case.

B. Zillow's Business

[redacted]

9 "Highlights from the Profile of Home Buyers and Sellers," *National Association of Realtors*, accessed September 9, 2025, https://www.nar.realtor/research-and-statistics/research-reports/highlights-from-the-profile-of-home-buyers-and-sellers.

10 "The Role of a Real Estate Agent in the Digital Age," *Century 21*, The Harrelson Group, September 25, 2023, https://www.c21theharrelsongroup.com/blog/role-real-estate-agent-digital-age/.

11 I understand that the traditional structure of the real estate brokerage industry has been for brokerages to classify real estate agents as independent contractors rather than employees; however, this is not a necessary condition of the industry. NAR states that it "strongly supports the continued right of brokers to choose whether to classify agents as employees or independent contractors." *See* "Business / Worker Classification (independent contractor v. employee)," Business Issues Policy Committee, *National Association of Realtors*, accessed September 9, 2025, https://narfocus.com/publication-issue/view/2024-07-15-business-worker-classification-independent-contractor-v-employee.

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30. In addition to the Zestimate, Zillow's website provides other information on property posts. This information includes but is not limited to the number of days that the property has been on Zillow (determined by the On Market Timestamp provided by the MLS), referred to in the industry as the "days-on-market;" a price history for the property including

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listing price reductions;[26] the "climate risk" of the property;[27] and "Offer Insights."[28] I will discuss the relevance to this case of some of these components of Zillow listings in Section IV.C.

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[26] I understand that Zillow obtains information related to a property including its price history and its On Market Timestamp from the MLS through an Internet Data Exchange ("IDX"). "Where does Zillow get the price and tax history data for my home?" *Zillow*, accessed September 10, 2025, https://zillow.zendesk.com/hc/en-us/articles/212564748-Where-does-Zillow-get-the-price-and-tax-history-data-for-my-home; "How is the Time on Zillow determined?" *Zillow*, accessed September 10, 2025, https://zillow.zendesk.com/hc/en-us/articles/214734988-How-is-the-Time-on-Zillow-determined. I discuss IDX feeds and their function within an MLS in Section IV.A below.

[27] For every home listed for sale, Zillow displays scores on the extent to which a property may be at risk from five different climate-related events, including flood, wildfire, high winds, extreme heat, and poor air quality. *See* Susan Kelleher, "What Is Climate Risk Data and How to Use It When Shopping for a Home," *Zillow*, October 31, 2024, https://www.zillow.com/learn/what-is-climate-risk-data/.

[28] Zillow recently unveiled its "Offer Insights" feature that "lets home shoppers toggle between various offer levels to see how strong their offer might be," based on Zillow's Zestimate and other market data. *See* "Summer just got hotter: Zillow debuts five powerful new features," *Zillow Group*, July 15, 2025, https://investors.zillowgroup.com/investors/news-and-events/news/news-details/2025/Summer-just-got-hotter-Zillow-debuts-five-powerful-new-features/default.aspx. *See also*, Deposition of Soham Bhonsle, *Compass, Inc. v. Zillow, Inc., et al.*, United States District Court, Southern District of New York, Case No.: 1:25-cv-05201, August 19, 2025 (hereafter, *8/16/2025 Bhonsle Deposition*), 203:2-205:5; ZG-00026046, at 053.

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C. Compass's Business

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37. Compass is a real estate brokerage and technology company that engages agents to assist home sellers and home buyers.[43] Compass agents assist home sellers to market their properties, determine pricing strategies, and find suitable buyers.[44] Compass agents also assist home buyers to find suitable properties, track desired listings, schedule tours, and determine financing options.[45] Compass, like other real estate brokerages, earns its income in the form of commissions on the transactions that it brokers, as discussed above.[46] Compass's primary

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43 *2024 Compass 10-K*, pp. 4–6, 63.

44 *2024 Compass 10-K*, pp. 4–6, 63.

45 *2024 Compass 10-K*, p. 4–6; "The Tech-Savvy Real Estate Agent: How Compass Agents Use Innovative Tools for Buyers & Sellers," *White Oak Realty Group*, May 20, 2025, https://whiteoakhou.com/blog/the-tech-savvy-real-estate-agent-how-compass-agents-use-innovative-tools-for-buyers-sellersthe-tech-savvy-real-estate-agent/.

46 *2024 Compass 10-K*, p. 4; "Real Estate Glossary | CENTURY 21 - Brokerage," *Century 21*, accessed September 11, 2025, https://www.century21.com/glossary.

business, therefore, is brokerage services, and Compass competes with many other brokerages in the market for brokerage services.[47]

38. Compass has been recognized as the largest brokerage in the U.S. by sales volume (i.e., the total value of all properties sold by its agents) since 2021.[48] Compass reported over 228,000 transactions and $231 billion dollars in sales volume in 2024. Compass currently operates in 35 states across the U.S. with more than 400 offices and 33,000 agents. In 2024, Compass generated a gross profit of approximately $995 million.[49] In terms of the number of transactions, however, eXp is considerably larger than Compass (350,119 "sides" vs 228,785 for Compass).[50]

39. Compass invested approximately $1.6 billion dollars over the last ten years in creating an end-to-end proprietary technology platform for real estate agents that, it claims, "allows real estate agents to perform their primary workflows, from first contact to close, with a single log-in and without leaving the platform," and that "includes an integrated suite of cloud-based software for customer relationship management, marketing, client service, brokerage services and other critical functionalities."[51]

40. As I discuss below, Compass has also developed an online search website and mobile app (the "Compass mobile application") that are public-facing, on which internet users can search and learn about residential real estate properties that are for sale. Like Zillow and

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47 *2024 Compass 10-K*, p. 8.

48 "Compass Named Top U.S. Brokerage for the Fourth Consecutive Year," *Compass Newsroom*, April 4, 2025, https://www.compass.com/newsroom/press-releases/65VhOYHcQFj2SbNNZ9r0fr/ (hereafter, *2025 Compass News Release*); "Best Real Estate Brokerages in United States," *Real Trends Verified*, accessed June 23, 2025, https://www.realtrends.com/ranking/best-real-estate-agents-united-states/brokerages-by-volume/ (hereafter, *2025 Real Trends Brokerage Ranking*).

49 "About Us - Compass Real Estate," *Compass*, accessed September 11, 2025, https://www.compass.com/about/ (hereafter, *About Compass*); *2024 Compass 10-K,* p. 42; Compass, Inc. (COMP), *Yahoo! Finance*, accessed September 11, 2025, https://finance.yahoo.com/quote/COMP/financials/.

50 "RealTrends Verified 2025 Brokerage Rankings: Top Brokerages by Sides, Volume, and Growth," *RealTrends*, April 11, 2025, https://www.realtrends.com/blog/2025/04/11/realtrends-verified-2025-brokerage-rankings-top-brokerages-by-sides-volume-and-growth/. Transactions are counted by sides, meaning the buyer side or the seller side; transactions in which eXp agents represented both buyer and seller are counted twice.

51 *2024 Compass 10-K*, p. 4; "Compass Launches Compass One: The Industry's First-Ever All-in-One Client Dashboard Connecting Compass Agents to Their Clients in Real Time," *PR Newswire*, February 3, 2025, https://www.prnewswire.com/news-releases/compass-launches-compass-one-the-industrys-first-ever-all-in-one-client-dashboard-connecting-compass-agents-to-their-clients-in-real-time-302366747.html (hereafter, *2025 PR Newswire*); Robert Reffkin, Rory Golod, and Laura Monroe, "Step Inside the Compass Platform," *Compass*, accessed September 3, 2025, https://growatcompass.com/blog/step-inside-the-compass-platform.

other third-party aggregator sites, Compass.com also acts as aggregators of real estate listings.[52] A function of Compass's online search website is to connect home buyers with properties, allowing home buyers to search for properties by city, neighborhood, address, school, zip code, agent, or MLS number.[53] Compass's online search website also supports individuals looking to sell their homes by allowing them to submit their information and be connected with a Compass agent, who can assist with the sale and earn commission income from those transactions.[54] The Compass mobile application similarly allows home buyers to browse a real-time inventory of listings, save their favorite listings, and connect with a Compass agent.[55] Compass's online search platform allows the user to see property-specific content, including days-on-market, community features, nearby schools, and property history.[56]

41. Compass primarily generates revenues when it collects a share of the gross sales commissions that agents earn from representing sellers and buyers in home sales.[57] While the current purpose of Compass's online platforms is to support Compass's primary business of brokerage services, their capabilities and functionality have drawn comparisons to home search platforms like Zillow, Trulia, Redfin, Homes.com, and Realtor.com,[58] as they compete with those other online platforms in the market for online home search platforms.

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52 *8/19/2025 Bhonsle Deposition*, 189:14-190:10.

53 "Find your place", *Compass*, accessed September 11, 2025, compass.com.

54 "Sell With Us", *Compass*, accessed September 11, 2025, https://www.compass.com/sell/; *2024 Compass 10-K*, p. 4; Declaration of Will Hardy in Support of Plaintiff's Motion for a Preliminary Injunction, *Compass, Inc, v. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, June 26, 2025, ¶ 9.

55 Compass: Real Estate & Homes, *Compass Inc.*, App Store Preview, accessed September 11, 2025, https://apps.apple.com/us/app/compass-real-estate-homes/id692766504.

56 *See, for example*, the Compass online search platform result for 2252 Orrington Ave in Evanston, Illinois. "2252 Orrington Ave, Evanston, IL 60201," *Compass*, accessed September 12, 2025, https://www.compass.com/listing/2252-orrington-avenue-evanston-il-60201/1901021970577702049/. And the Compass online search platform result for 2951 Colfax St in Evanston, Illinois. "2951 Colfax St, Evanston, IL," *Compass*, accessed September 12, 2025, https://www.compass.com/listing/2951-colfax-street-evanston-il-60201/1900284941774091345/.

57 *2024 Compass 10-K*, p. 4.

58 *2024 Compass 10-K*, p. 4. *See, for example*, Josephine Nesbit, "10 Helpful House Hunting Apps for 2025," *U.S. News & World Report*, Last Updated February 4, 2025, https://realestate.usnews.com/real-estate/articles/the-best-apps-for-house-hunting.

IV. THE INSTITUTIONAL CONTEXT OF THE REAL ESTATE INDUSTRY AND THE PARTIES INFORMS THE ECONOMIC ANALYSIS OF THE ANTITRUST CLAIMS IN THIS CASE

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A. The National Association of Realtors' Clear Cooperation Policy and Multiple Listing Options for Sellers

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46. While IDX is a NAR policy, many in the real estate industry also use the term to refer to the data feeds and software tools that MLS participants use to display MLS listings on

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their websites.[70] Zillow is a participant in many MLSs and therefore obtains listing information under the IDX policy.[71]

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49. Consistent with those broader trends, another tool used to market a property in some circumstances is known as a "private listing network," which is a system by which homes are not publicly available or accessible on the MLS and are instead only shared with an exclusive set of agents.[75] There are a variety of reasons, discussed in Section IV.C, that a client may prefer that the availability of their property be made known to potential buyers or their agents via a private listing network rather than or in advance of marketing the property on the MLS. Listings that are

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70 "What Is IDX?" 10 Real Estate Terms Every Agent Should Know," *Zillow Premier Agent*, July 23, 2014, https://www.zillow.com/premier-agent/idx-and-other-real-estate-terms/.

71 Zillow Group, Inc., Form 10-K, for the fiscal year ended December 31, 2021 (hereafter, *2021 Zillow 10-K*), p. 4; "NAR appoints Zillow employees to several key committees," *Zillow Group,* November 23, 2021, https://www.zillowgroup.com/news/nar-appointees/. *See also*, "Update on Switch to IDX Feeds & Agent Profiles," *Zillow Premier Agent,* January 16, 2021, https://www.zillow.com/premier-agent/listings-and-idx-feeds/.

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75 Zillow Research, "Agents and Private Listing Networks (PLNs), *Zillow, Inc.*, February 17, 2025, https://www.zillow.com/research/agent-pln-survey-34850/.

made available through private (non-MLS) networks or to other agents within the listing agent's own brokerage are sometimes referred to as "private listings" or "pocket listings."[76]

50. While private listings and private listing networks are not a new phenomenon in real estate,[77] by 2019 technological advances had vastly broadened their efficiency and capabilities. The increasing interest by brokerages in leveraging technology to advance new marketing methods carried the risk to the MLSs, however, of eroding their centrality in the real estate marketing process. And this, in turn, created concern among some MLSs that recognized an impending threat.[78]

51. In November 2019, "in response to concerns about the use of pocket listings, and other tactics to keep properties off the MLS to the disadvantage of homebuyers and sellers," the NAR adopted a new policy regarding the terms under which brokers are required to submit listings to NAR-affiliated MLSs.[79] The new policy was referred to as the Clear Cooperation Policy ("CCP"), and it requires listing brokers to submit to the MLS any publicly-marketed property within one business day of public marketing.[80] According to the NAR, "[p]ublic marketing includes, but is not limited to, flyers displayed in windows, yard signs, digital marketing on public facing websites, brokerage website displays (including IDX and VOW),

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76 "What Is a Pocket Listing?," *Zillow*, January 24, 2025, https://www.zillow.com/learn/pocket-listing/.

77 "The Residential Real Estate Brokerage Industry: Los Angles Regional Office Staff Report: Volumes I and II and The Butters Report," *U.S. Federal Trade Commission*, December 1983, https://www.ftc.gov/system/files/ftc_gov/pdf/The-Residential-Real-Estate-Brokerage-Report--Butters-Report.pdf , p. 74.

78 In a Fall 2019 whitepaper by the MLS Roundtable, it acknowledged concerns with the technology such platforms were able to build, "[r]eal estate has never had so many smart, software programmers and technology-savvy companies working in such a focused direction on dramatically changing the real estate listing and data game." *See* MLS 2022 Agenda, Fall 2019, T360, MLS Roundtable, https://www.mlsroundtable.com/wp-content/uploads/2021/01/MLS-2022-Agenda-PDF.pdf (hereafter, *MLS 2019 Roundtable),* p. 9. Further, the whitepaper stated on behalf of the members of the MLS Roundtable, "[t]he multiple listing service as we know it is in jeopardy and this call-to-action serves as an impassioned plea to brokers and MLSs to take immediate action." The whitepaper went on to identify some of the largest challenges MLSs face as "[t]he persistent, and increasing, presence of off-MLS home marketing" and "[a] proliferating large broker strategy of marketing homes exclusively on company websites before marketing in the MLS," resulting in what it called "a dwindling role as the market's primary location for all available inventory." *See* MLS 2019 Roundtable, pp. 4, 7, 8.

79 "Window to the Law: Understanding the MLS Clear Cooperation Policy: Transcript," *National Association of Realtors*, March 1, 2020, https://www.nar.realtor/window-to-the-law/understanding-the-mls-clear-cooperation-policy (hereafter, *Understanding MLS CCP*). The NAR stated that "[i]n recent years, there has been a significant growth in the use of pocket listings and misuse of various limited exposure marketing tactics," which created issues such as raising "questions about fair and equal opportunity leading to Fair Housing concerns, have skewed MLS data, and have resulted in breach of fiduciary duties lawsuits." See *Understanding MLS CCP.*

80 *2025 NAR Handbook*, Part 2 E, Section 17 (Policy Statement 8.0).

digital communications marketing (email blasts), multi-brokerage listing sharing networks, and applications available to the general public."[81] Notably, the CCP contained an exemption for "office exclusives" or private listings. The NAR defines these exempted listings as listings for which the seller prohibits her agent from allowing the MLS to disseminate the listing to other MLS participants. The exemption exists as long as the listing is not publicly marketed, according to the CCP's definition of public marketing, which includes multi-brokerage listing networks.[82] Hence, the CCP effectively was designed to limit or prohibit agents' ability to privately market or pre-market a home for more than one business day.

52. The CCP does not mention the possibility of penalties imposed by the NAR for failing to comply with the CCP; instead, compliance with the CCP is left to MLSs.[83] Penalties enforced by an MLS for failing to comply with the CCP typically involve escalating warnings and fines.[84] The CCP does not provide for banning a listing from an MLS for failing to comply with the CCP.[85]

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81 *2025 NAR Handbook*, Part 2 E, Section 17 (Policy Statement 8.0).

82 "MLS Clear Cooperation Policy," National Association of REALTORS®, https://www.nar.realtor/about-nar/policies/mls-clear-cooperation-policy# (hereafter *MLS CCP*), accessed September 11, 2025.

83 *MLS CCP*.

84 *MLS CCP*.

85 *MLS CCP*.

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55. Recognizing the need to allow for greater choice in how sellers market their homes, the NAR announced its Multiple Listing Options for Sellers ("MLOS") policy in March 2025.[91] The MLOS modified the CCP by introducing an additional exemption to accommodate certain marketing strategies (at each local MLS's discretion).[92] Now, if the seller signs an exempt listing disclosure, the MLOS policy allows brokers to delay public marketing and offer either an "office exclusive exempt listing" ("Office Exclusive") or a "delayed marketing exempt listing" ("Delayed Marketing"), subject to local MLS rules.[93] That is, under the MLOS policy, agents

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91 "NAR Introduces New MLS Policy to Expand Choice for Consumers," *National Association of Realtors*, March 25, 2025, https://www.nar.realtor/newsroom/nar-introduces-new-mls-policy-to-expand-choice-for-consumers (hereafter, *NAR Introduces MLOS*) ("Multiple Listing Options for Sellers" will exist in conjunction with CCP and other MLS policies to provide sellers and their agents more options and choice when marketing a property, while also supporting fair housing by providing buyers and their agents with equal access to important MLS property information. … NAR undertook a comprehensive review of CCP as part of our efforts to ensure home sellers and home buyers have the information and flexibility they need to make decisions that work for them. These policy changes allow for greater choice for sellers in marketing their properties while considering buyers' need to access information through MLSs.").

92 *NAR Introduces MLOS*.

93 "Multiple Listing Options for Sellers," *National Association for Realtors,* accessed September 12, 2025, https://www.nar.realtor/about-nar/policies/multiple-listing-options-for-sellers (hereafter, *NAR MLOS*)

participating with MLSs that enforce CCP who obtain the necessary disclosures no longer have to pay a fine for delaying public marketing of a property.

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74. From a buyer's perspective, buyers who believe they or their agents have adequate insight into the value of a property or who believe a property is a particularly good match for their needs may also benefit from access to the property before it is attached to a Zestimate. Such a buyer may believe he can obtain a property by making an attractive early offer before the seller and other buyers are influenced by what may be an unrealistically high Zestimate.

This may be a particularly relevant consideration when both buyer and seller have an urgent desire for a transaction and the pre-marketing facilitates a quick sale. Both buyer and seller benefit from a speedy transaction in that scenario, and both buyer and seller may benefit whether the price is higher or lower than it would have been after a conventional marketing campaign for the property. This is because, as a general matter, real estate transactions are not a zero-sum game in which price is the only determinant of the parties' satisfaction with the result. The benefits to a transaction for buyer and seller depend also (for both) on the speed of the transaction and, for the buyer, the quality of the match between the property and the buyer's preferences. A transaction at a higher price can be better for both parties than one at a lower price if the property is more to the liking of the buyer, just as a transaction at a lower price can be better for both parties than transacting the same property at a higher price if the deal is consummated sooner, and if the seller has high enough costs of waiting or costs of maintaining or showing the property in the interim.

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V. THERE IS A RELEVANT ANTITRUST MARKET FOR ONLINE HOME SEARCH PLATFORMS IN THE UNITED STATES

A. The Antitrust Product Market for Online Home Search Platforms

94. There is a relevant antitrust product market for residential real estate online search platforms ("online home search platforms"). That market consists of online platforms specialized for the purpose of real estate searching on which individuals seeking to sell residential real estate and/or agents representing them may search for recently sold homes to gather market intelligence and post listings for sale, and on which individuals seeking to purchase residential real estate and/or agents representing them may search the posted listings for properties of interest.[149] The market does not include search services for rental properties, does not include search services for commercial properties, does not include generalized online search platforms such as google.com, does not include real estate search platforms that are not generally available to real estate buyers and sellers (such as the MLSs), and does not include offline search services such as newspaper advertisements.

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[149] One could define separate markets for buyers and sellers, but I have concluded that doing so provides no additional insights or substantive content to the analysis and does not change my conclusions; hence, I combine them into one market for purposes of my analysis. The reason to define separate markets may include analyzing the price elasticities and alternatives separately. *See, for example*, Jens-Uwe Franck and Martin Peitz, "Market Definition and Market Power in the Platform Economy," Centre on Regulation in Europe, May 2019 (hereafter, *2019 Franck and Peitz),* p. 28. For a statement of the situations when a single market may be preferred, *see 2019 Franck and Peitz,* pp. 25–28. In this case, however, there are no prices for buyers or sellers and the markets are entirely reliant on each other. Hence, parsimony supports treating them as one market. *See also*, Slip Opinion, *Ohio et al. v. American Express Co. et al.,* Supreme Court of the United States, Case No. 16–1454, June 25, 2018, pp. 13–15.

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2. The Practical Indicia of Market Definition

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3. Industry or Public Recognition

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109. This factor supports the conclusion that online home search platforms is a cognizable antitrust market. Financial analysts commonly treat online home search platforms as being a separate and distinct group of competitors. For example, in a recent report analyzing the competitive standing of CoStar Group, the owner of Homes.com and Apartments.com, analysts at Wells Fargo Securities compared what they identified as "real estate portals" to each other by measures of organic traffic and unique visitors. In their organic-traffic analysis, they included Apartments.com,[172] Homes.com, Zillow.com, Trulia.com, Redfin.com, and Realtor.com. In their analysis of the number of unique visitors, they included Zillow, Realtor.com, Redfin, and Homes.com.[173] In both comparisons, the analysts apparently did not consider it useful to compare Zillow's platform to, for example, general search engines, online classified ad websites such as Craigslist, the MLSs, or offline real estate search resources.[174]

110. Similarly, a recent William Blair report on Zillow analyzed "Residential Real Estate Listing Portals," treating them as a distinct group of competitors and tracking their website traffic between April 2023 and February 2025. William Blair included Homes.com, Redfin.com,

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172 While this list includes Apartments.com, which is focused on rental properties, and, indeed, Zillow itself and some other online home search platforms also have rental sections, the online home search platforms market does not, as noted earlier, include rental search. The fact that Wells Fargo Securities included Apartments.com in the group of comparators in its analysis appears to be driven by the fact that the subject of the report itself was CoStar Group, which, as noted above, owns both Homes.com and Apartment.com.

173 The methodology used in their analysis of the number of unique visitors includes visits to all such portals and sites affiliated with such portals.

174 Jason Haas, Audey Ashkar, and Jun-Yi Xie, "CoStar, Inc. - Homes.com in Need of Further Renovations; Initiate at Underweight," Wells Fargo Equity Research, February 5, 2025 (hereafter, *2/5/2025 Wells Fargo CoStar*), pp. 1–2, 4, 23.

Realtor.com, and Zillow.com.[175] Again, these analysts did not include the MLSs, general search engines, or other potential avenues by which buyers or sellers of real estate may seek to buy or find properties that I have not included in my proposed antitrust market.

111. Further, Statista, a provider of statistical data for a wide variety of industries,[176] tracks average monthly visits to what it defines as "the five most popular real estate websites in the United States." In a recent chart, it included Zillow.com, Realtor.com, Redfin.com, Trulia.com, and Homes.com.[177]

112. Indeed, Zillow views itself as competing with a separate and distinct group of businesses. In a recent presentation to investors, Zillow described its own app as the "Housing Super App," an app that purports to help people with every step in the process of purchasing or renting a new home. Zillow described itself as the "# 1 residential real estate app," and included competitors such as Realtor.com, Redfin.com, Rocket Homes (now Redfin), CoStar Appartments.com, CoStar Homes.com, and various others.[178]

113. It appears from the evidence just described that industry analysts and Zillow itself recognize and analyze online home search platforms as a separate and distinct product from other real estate services and other search services.

4. The Product's Peculiar Characteristics and Uses

114. According to this factor, a product or group of products is more likely to constitute an antitrust market if the products in the group have characteristics and uses that are distinct from those of other products. Online home search platforms have characteristics and uses that are distinct from other means of searching for and marketing real estate. Buyers use online home search platforms to view on a map the locations of homes that are for sale, and view their

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175 *4/21/2025 William Blair-Zillow*, p. 5.

176 "Who we are: The company behind the success," *Statista*, accessed September 9, 2025, https://www.statista.com/aboutus/.

177 "Average monthly visits to the five most popular real estate websites in the United States from 2020 to 2024 (in millions)," *Statista*, accessed September 12, 2025, https://www.statista.com/statistics/381468/most-popular-real-estate-websites-by-monthly-visits-usa/.

178 "Zillow Investor Presentation," *Zillow Group*, February 2024, https://s24.q4cdn.com/723050407/files/doc_presentations/2024/Mar/13/zillow-investor-presentation-feb-2024.pdf (hereafter, *2/2024 Zillow Investor Presentation*), pp. 5, 10. The names of the "various others" were not provided, but the slide reports that Zillow and the five named competitors accounted for 99.3% of "average daily active app users;" Dan Onken, "Redfin is joining Rocket: Frequently asked questions," *Rocket Mortgage*, July 1, 2025, https://www.rocketmortgage.com/learn/rocket-redfin-faq.

proximity to each other, to major streets, schools, shops, parks, and amenities. Searchers can peruse photographs of the interiors and exteriors of the homes, review floor plans, and create recallable lists of "favorite" properties to which the user may wish to return and review. In a recent survey of home buyers and sellers, the buyers surveyed identified "photos," "detailed property information," and "floor plans" as important website features.[179]

115. Zillow recognizes that online home search platforms have distinctive characteristics that drive demand as well. For example, in an article appearing on Zillow.com intended to help sellers "Write Listing Descriptions that Sell," the author wrote that "[w]hen buyers (and their agents!) are browsing online real estate listings, professional photos are what grab their attention first, but it's the listing description that really tells the story of the home."[180] Further, in 2025, Zillow reported that "86% of buyers said they were more likely to view a home if the listing included a floor plan they liked."[181] Zillow CEO, Jeremy Wacksman, stated that he believes users' preferences for one online home search platform relative to others is influenced by the tools and services it can offer to buyers in their listing search that provide a better experience, and therefore Zillow focuses its internal research on such tools and services as well.[182] A Zillow executive testified that Zillow believes its own competitive advantage is driven by features of its platform such as the availability of floor plans and its augmentation of listings with climate data.[183]

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179 "Highlights From the Profile of Home Buyers and Sellers," *National Association of Realtors*, accessed June 24, 2025, https://www.nar.realtor/research-and-statistics/research-reports/highlights-from-the-profile-of-home-buyers-and-sellers.

180 Tali Bendzak, "Property Descriptions 101: How to Write Listing Descriptions That Sell," *Zillow*, November 26, 2019, https://www.zillow.com/learn/listing-descriptions-that-sell/.

181 "2025 Consumer Housing Trends Report for Agents," *Zillow*, 2025, https://delivery.digitalassets.zillowgroup.com/api/public/content/2025_SZ_AgentCHTR-MiniBook_Digital_downloadOriginal.pdf?v=4ab198e3, p. 32.

182 Deposition of Jeremy Wacksman, *Compass, Inc., vs. Zillow, Inc., et al.*, United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, August 26, 2025 (hereafter, *8/26/2025 Wacksman Deposition*), p. 61:3–8.

183 Further, Zillow's Chief Industry Development Officer stated that Zillow believes its competitive advantage is created by "building great consumer experiences" highlighting "floor plans for photos," its augmentation "of climate data" to its listings, and the mobile apps ease of use. *See* Deposition of Errol Samuelson, *Compass, Inc., vs. Zillow, Inc., et al.*, United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, August 28, 2025 (hereafter, *8/28/2025 Samuelson Deposition*), pp. 112:16–113:3; *8/26/2025 Wacksman Deposition*, p. 9:5–12

116. Sellers use online home search platforms to make the fact that their home is for sale known to anyone searching on the platform, and to display photographs, characteristics, and the location of the property in an easily accessible, attractive, and informative way. In addition, sellers can use the platform to assess how many other homes are for sale in the neighborhood, their characteristics, and their asking prices, which can provide the seller information useful for their own pricing decisions.

117. These features and uses of online home search platforms are distinct from the uses and features available on other means of real estate search. For example, the information from MLS listings is provided to the public free-of-charge, but potential buyers and sellers of real estate cannot typically search the MLS themselves. Direct access to MLSs is restricted to licensed real estate agents, appraisers, and brokers and their assistants.[184] A potential buyer or seller could potentially find a broker willing to share her MLS login information, or convince a broker to vouch for said buyer or seller as her assistant, then fill out the necessary paperwork and pay for MLS access as an assistant, but the most straightforward way for potential buyers and sellers to access information from MLS listings is through one of the online home search platforms (like Zillow) that pull their information from MLSs.[185]

118. Indeed, many consumers turn to online search platforms before even engaging with an agent. According to the NAR's 2024 "Profile of Home Buyers and Sellers,"[186] 43 percent of home buyers said their first step was to search for homes on the internet.[187] Furthermore, while 86 percent of home buyers used a real estate agent, 100 percent used the internet to search for a home.[188] That is, many consumers continue to use online search platforms even after engaging

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184 "How To Get MLS Access In 6 Ways (Even Without A License)," *Real Estate Skills*, accessed September 10, 2025, https://www.realestateskills.com/blog/mls-access (hereafter, *How to Get MLS Access*).

185 *How to Get MLS Access*.

186 "The NATIONAL ASSOCIATION OF REALTORS® Profile of Home Buyers and Sellers is an annual survey of recent home buyers and sellers who recently completed a transaction between July 2023 and June 2024." See "Profile of Home Buyers and Sellers," *National Association of Realtors*, 2024, https://www.nar.realtor/sites/default/files/2024-11/2024-profile-of-home-buyers-and-sellers-highlights-11-04-2024_2.pdf, p. 6.

187 "Highlights from the 2024 Profile of Home Buyers and Sellers," *National Association of Realtors*, 2024, https://www.nar.realtor/research-and-statistics/research-reports/highlights-from-the-profile-of-home-buyers-and-sellers (hereafter, *2024 Profile of Home Buyers and Sellers*).

188 *2024 Profile of Home Buyers and Sellers*.

with an agent, suggesting that online search platforms and the services provided by real estate agents (such as access to MLS listing information) are compliments, not substitutes.

119. The features and uses of online home search platforms are also distinct from online classified ads such as Craigslist. Craigslist, like Facebook Marketplace and other online classified ad sites, does not cater specifically to the convenience of homebuyers and sellers, providing little or no contextual information about a property (e.g., neighborhood amenities and nearby schools) or homebuyer-specific tools, such as payment calculators and suggestions of similar listings, as do online home search platforms.[189] A survey by Owners.com suggests that consumers find these features valuable—more respondents (42 percent) indicated that they were influenced in their decision to buy a particular property by "lifestyle data" like walkability scores and the quality of nearby schools than did respondents who indicated that they were influenced to buy a particular property by the investment potential (32 percent) of the property.[190]

120. The features and uses of online home search platforms are also distinct from the features and uses of social media such as, Instagram and Snapchat. While real estate agents may use social media to advertise inventory and communicate with clients,[191] they do not provide search functionality, mapping features, systematic lifestyle data, and listing details that are available on home search platforms.[192]

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189 "Real Estate near Chicago, IL," *Craigslist*, accessed September 10, 2025, https://chicago.craigslist.org/search/chicago-il/rea?lat=41.888&lon=-87.635&search_distance=15#search=2~gallery~0; "CONDO For Sale - Chicago - West Loop - real estate - by owner - apartment real estate sale," *Craigslist*, accessed September 10, 2025, https://chicago.craigslist.org/chc/reo/d/chicago-condo-for-sale-chicago-west-loop/7875868780.html; "Welcome to charming, bright and sunny, beautiful one-bedroom condo in desirable Arlington Glen!" *ClassifiedAds.com*, accessed September 10, 2025, https://www.classifiedads.com/condos/87197vrmk3dd3; "4 Beds 2 Baths House," *Facebook Marketplace*, accessed September 3, 2025, https://www.facebook.com/marketplace/item/627261850066256/?ref=search&referral_code=null&referral_story_type=post.

190 "Owners.com Survey Reveals Home Buyers Seek More Tech-Based Tools from Real Estate Agents," *Altisource*, May 17, 2018, https://ir.altisource.com/news-releases/news-release-details/ownerscom-survey-reveals-home-buyers-seek-more-tech-based-tools.

191 "Social Media," *National Association of Realtors*, accessed September 2, 2025, https://www.nar.realtor/social-media; "2022 Technology Survey," *National Association of Realtors*, accessed September 3, 2025, https://www.nar.realtor/sites/default/files/documents/2022-technology-survey-11-01-2022.pdf, pp. 20–21.

192 Real estate search platforms often offer built-in search criteria. See, for example, "Chicago IL Real Estate - Chicago IL Homes For Sale," *Zillow*, accessed September 9, 2025, https://www.zillow.com/chicago-il/; Susan Kelleher, "Where Should I Live," *Zillow*, June 2, 2025, https://www.zillow.com/learn/where-should-i-live/. Meanwhile, social media search lacks similar built-in search criteria and listing information. See, for example, Adam Mosseri, "Breaking Down How Instagram Search Works," *Instagram*, August 25, 2021,

121. Online home search platforms are also distinct in use from general search engines. Indeed, the Court in the Google search case distinguished general search engines, such as Google, from specialized vertical providers ("SVPs"), such as Amazon and Expedia, pointing out that SVPs are platforms that respond to queries focused on a particular subject matter.[193] Put differently, the Court found that general search engines and SVPs are not in the same antitrust market.[194] But the same logic holds in this case in the reverse direction. Online home search platforms are tools that potential sellers use to list their properties for sale and potential buyers use to find properties of interest for purchase. The use cases for online home search platforms—a specialized platform for which real estate search is the specialty—are not comparable to or reasonably substitutable for generalized search engines, because the latter are used to gather information not only about individual properties but to guide iterative search to other properties that have desired characteristics, similar or different prices, and desirable locations on numerous possible dimensions. General search engines are tools that people use to search the world wide web using queries.[195]

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https://about.instagram.com/blog/spark/announcements/break-down-how-instagram-search-works; "#search," Snapchat, accessed September 10, 2025, https://www.snapchat.com/tag/search.

193 *U.S.A. v. Google Opinion*, pp. 50-51.

194 *U.S.A. v. Google Opinion*, pp. 140–152, especially pp. 147 and 152.

195 *U.S.A. v. Google Opinion*, p. 14.

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126. In sum, the uses and peculiar characteristics of online home search platforms are distinct from other digital platforms and lists, and from non-digital means of buying and selling real estate, supporting the inference that online home search platforms are a distinct antitrust market.

5. Unique Production Facilities

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6. Distinct Customers

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7. The Evidence Supports a Relevant Antitrust Product Market for Online Home Search Platforms

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B. A Relevant Geographic Market for Online Home Search Platforms is the United States

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144. There are at least three reasons to conclude that there is a national geographic market for online home search platforms. First, there is evidence that the search for homes is not local, and consumers often search for real estate outside of the area in which they live. In 2020 Zillow reported that "[a]lmost half of the Zillow page views originate from outside of the metro

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area of the listing being viewed."[226] This matches moving patterns: between 2016 and 2020, 30 percent of people who moved did so across metro areas.[227]

145. Second, even if there are local markets, the union of those markets is also a geographic market. According to the 2023 Merger Guidelines, a geographic area is a relevant antitrust market if a hypothetical monopolist would find it profitable to increase price or decrease quality in at least one location in that geographic area.[228] An example is illustrative here. Consider a geographic area A in which a hypothetical monopolist would find it profitable to increase prices or decrease quality by a small but significant and non-transitory amount. Now consider a geographic area B. Some of the customers that stopped purchasing the product in area A in response to the SSNIPT may have switched to area B. A monopolist over A+B would still be able to make a profit on these switching customers, thus making the price increase or quality decrease in A more profitable than before. Because, by construction of the hypothetical, the increase in price or decrease in quality in area A was already significant and non-transitory, area A+B is a relevant geographic antitrust market, even if a hypothetical monopolist in area B alone would not find it profitable to implement a small but significant non-transitory increase in price or decrease in quality.[229]

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[226] "[S]ix of the 50 biggest metropolitan areas get a majority of their page views from non-residents: Las Vegas (60.7% of listing views come from outside the area), Jacksonville (56.2%), San Antonio (55.2%), Riverside-San Bernardino (54.7%), Raleigh (54.1%) and New Orleans (52.5%)." *See* Jeff Tucker, "Home Searchers: Who is Coming and Going – And Who is Staying Put?" *Zillow*, January 29, 2020, https://www.zillow.com/research/home-searches-2020-26463/. *See also*, Anushna Prakash, "The Comings and Goings of Zillow Home Shoppers," *Zillow*, March 20, 2025, https://www.zillow.com/research/home-search-trends-34985/; Lauren Bretz, "Coming and Going: What Home Views Do, and Don't, Reveal About Our Potential Moves," *Zillow*, September 9, 2016, https://www.zillow.com/research/home-searches-potential-moves-13192/

[227] See my backup calculations and *2020 ACS*.

[228] *2023 Merger Guidelines*, p. 45 ("If the HMT is used to evaluate the geographic scope of the market, it requires that a hypothetical profit-maximizing firm that was the only present or future supplier of the relevant product(s) at supplier locations in the region likely would undertake at least a SSNIPT in at least one location. In this exercise, the terms of sale for products sold to all customers at facilities outside the region are typically held constant.")

[229] A similar argument was also made by Professor Carl Shapiro, in the AT&T/Time Werner merger case in 2018. There, after establishing that a narrow market ("Multichannel Video Distribution") satisfies the HMT, he argued that a broader market ("All Video Distribution") in which the narrow one is included also satisfies the HMT. "Since the candidate All Video Distribution market is broader than the Multichannel Video Distribution market, the recapture rate calculated for the All Video Distribution market is at least as large as the recapture rate calculated for the Multichannel Video Distribution market. Therefore, since the HMT is satisfied for the Multichannel Video Distribution market, the HMT also is satisfied for the All Video Distribution market." *See* Expert Report of Carl Shapiro, *United States v. AT&T Inc., DirectTV Group Holdings, LLC, and Time Warner*

146. The third reason that there exists a national geographic market for online home search platforms is that the purpose of defining a geographic market is to capture the relevant nexus of competition, as I described above and as the courts have articulated as well. That is, it is useful to recall from first economic principles that the purpose of defining markets is to delineate how competition functions and which market participants compete with which.[230] As a matter of economics, if companies operate as if they are responding to or creating comparable competitive conditions in a broad geographic area, it is reasonable and correct to treat that broad geographic area as a market.

147. Hence, relevant evidence that a product market is national in scope could properly include evidence that business decisions are made on a national level, that some or all of the relevant strategic interaction among rivals is fairly characterized as national, and that participants and analysts view the marketplace as national. Consistent with these principles, I understand that courts have credited evidence that a product market is national in geographic scope that has included:

a) Whether the business of providing the relevant service entails national planning;[231]

INC., United States District Court for the District of Columbia, Case No.: 1:17-cv-02511 (RJL), February 2, 2018, p. 33. The court accepted both of these proposed product markets. *See* Memorandum Opinion, *United States v. AT&T Inc., DirectTV Group Holdings, LLC, and Time Warner INC.*, United States District Court for the District of Columbia, June 12, 2018, pp. 62, 63 n.21. ("[D]efendants, for all of their objections to the Government's case, have not meaningfully challenged the Government's proposed product or geographic markets . . . I will thus accept the Government's proposed product and geographic markets.")

230 Professor Carl Shapiro, testifying in the T-Mobile and Sprint merger case in 2019, explained how defining markets at different geographical levels can help capture the dimensions of competition. "Q. So as a matter of antitrust economics, does it make sense to define a national market and also to define local markets that are contained within that same national market? A. It does. I find talking to people, some people find this counter intuitive, but it is correct as a matter of economics and merger analysis . . . [T]he national market will be a good market to analyze dimensions of competition that occur nationally, and by and large, the national plans and the basic plans and pricing by the nationwide carriers are done nationally . . . But at the same time, there are dimensions of competition that take place locally, and if you didn't define local markets, you would not be properly evaluating those dimensions of competition. So since competition with different dimensions occurs with a different geographic scope, it is informative and correct to define the two types of geographic markets." Trial Transcript, *State of New York, et al., v. Deutsche Telekom AG, et al.,* United States District Court Southern District of New York, December 11, 2019, at 636:1–18.

231 "We also agree with the District Court that the geographic market for the accredited central station service is national. The activities of an individual station are in a sense local as it serves, ordinarily, only that area which is within a radius of 25 miles. But the record amply supports the conclusion that the business of providing such a service is operated on a national level. There is national planning." *US v. Grinnell*, p. 575.

b) Whether the business of providing the relevant service entails national agreements covering activities in many states;[232]

c) Whether there is a national schedule of prices;[233] and

d) Participants view their competition as national in scope.[234]

1. Zillow and Compass Both Engage in National Planning and Make Decisions on a National Level

148. Even if it were the case that consumers did not, in significant numbers, seek a product outside the boundaries of a local market (which, as I showed above, is not the case for on Zillow's own platform), when firms make decisions on a national basis it can be persuasive evidence of a national market that coexists with a local market.[235] Compass and Zillow both compete within the market for online home search platforms, and the evidence in the record shows that Compass's 3PM strategy was intended as a national strategy that would enhance Compass's competitive presence in the home search market. The evidence also shows that Zillow views Compass and its competitors within the online home search platforms market on a national level.

149. The 3PM strategy was intended to be adopted across all areas where Compass operates, aiming to drive consumer traffic from across the country to Compass's website to see its inventory of listings. The August 2024 board presentation, discussed above in Section IV.C, emphasized that Compass's "national presence" is "instrumental" to the success of its inventory

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232 "The activities of an individual station are in a sense local . . . But the record amply supports the conclusion that the business of providing such a service is operated on a national level . . . The agreements we have discussed covered activities in many States. The inspection, certification and rate-making is largely by national insurers." *US v. Grinnell*, p. 575.

233 "The activities of an individual station are in a sense local . . . But the record amply supports the conclusion that the business of providing such a service is operated on a national level . . . The appellant ADT has a national schedule of prices, rates, and terms, though the rates may be varied to meet local conditions." *US v. Grinnell*, p. 575.

234 In the Deutsche Telekom Decision, the Court found that both a national market, as well as local markets as defined by "Cellular Market Areas" constituted the relevant geographic markets in this case. When making this determination, it described the "Defendants' contention regarding the national scope of carrier's decision-making processes is both accurate and relevant" in the determination of a relevant market, while also highlighting the role played by "the realistic choices available to consumers." See *Deutsche Telekom Decision,* pp. 47-48, 52.

235 Memorandum Opinion, *Mariam Davitaschvili, et al. v. Grubhub Inc., et al.,* United States District Court, Southern District of New York, 20-cv-3000 (LAK), March 30, 2022, p. 7, referencing the prior precedence in *State of New York, et al. v. Deutsche Telekom AG, et al.*, United States District Court, S.D. New York, 19 Civ. 5434 (VM), p. 47.

strategy.[236] Indeed, Compass agents across markets have shown their support for the 3PM strategy, spending their own marketing budgets on the promotion of Private Exclusives and Coming Soon listings.[237] Furthermore, I understand that the relationship between Compass's 3PM strategy and its online traffic was symbiotic; increased nationwide online traffic to Compass.com benefitted the 3PM strategy by serving as a "core pillar of the Compass 3-Phased Marketing Strategy."[238]

150. Zillow likewise routinely sets competitive strategy at the national level and adopts nationwide initiatives and features to compete with other national online home search platforms. For example, Zillow marketed its "Showcase"[239] offering in preparation for launching a "nationwide seller offering."[240] Indeed, in one of Zillow's marketing scenarios, a component of its marketing strategy was to "garner insight about engaging the national Seller audience."[241]

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[236] CZ_COMP_000111855 at 862–863. The presentation also detailed why some agents were seeing such value in Private Exclusives where one agent stated that a "significant advantage COMPASS has over other firms is that we are nationwide. This give us a much greater reach for Private Exclusive marketing over most other firms which I ALWAYS highlight during listing presentations" (emphasis in original). While Compass may not currently operate in all 50 states, it does operate in a national market. Compass's Senior VP of Strategy and Operations stated that while Compass does not operate in every state, it does in the majority of them and while unsure if Compass's online home search platform currently displays listings in all 50 states, stated that she believed that Compass's "long-term aspirations" would include an online home search platform and "maybe even brokerage operations" in all 50 states. See *8/26/2025 Alexander Deposition*, pp. 245:2–246:4, 247:20–248:22. Further, according to a Zillow internal document, Zillow has described Compass as a national competitor, noting "[b]ecause Compass has a presence in most major U.S. markets, its platform effectively has nationwide MLS coverage (over 300 MLS feeds)" and "Compass's app is competitive with other national real estate apps," underlining the fact that while Compass may not be present in every state, it is present in a national market. See ZG-00031093 at 125–126.

[237] CZ_COMP_000074350 at 355.

[238] Compass's online home search platform drew over 21 million visits between January and March 2025 which it stated surpassed "every other traditional brokerage." A Compass employee stated that "[t]his visibility is a key advantage of the Compass 3-Phased marketing Strategy…The traffic on Compass.com gives our agents a real advantage." See CZ_COMP_000087757.

[239] Amy Clark, Principal Product Manager at Zillow stated "[w]e've built a product called Zillow Showcase for agents to help market their listings. For-Sale listings that have the Zillow Showcase treatment include virtual 3-D tours and an interactive floor plan, which allows buyers to explore a home's layout through a dynamic, clickable interface that links room photos to their corresponding locations on the floor plan. It's the most immersive way for a buyer to search for homes on Zillow. It really gives buyers the ability to understand a home's layout, visualize their lives in it and make informed decisions before an in-person visit." See Brian Carberry, "Behind the Innovation: How Zillow Showcase is Transforming Home Shopping," *Zillow*, March 28, 2025, https://www.zillow.com/tech/zillow-showcase-is-transforming-home-shopping/.

[240] ZG-00023906 at 944–945. It is my understanding that this materials reference to a "nationwide seller offering" is referring to Zillow's program to support sellers in selling their home. See "Sell your home with confidence," *Zillow*, accessed September 12, 2025, https://www.zillow.com/sell/.

[241] ZG-00023906 at 919–920, 932.

151. Likewise, Zillow's marketing strategies for sellers include options wherein "test markets" are chosen to "learn and optimize" Zillow's strategies "with the intent of going national [with sellers] in 2026."[242] This strategy of executing "regional testing prior to national scaling" in part to "learn what we need for a large national campaign" has been used by Zillow for its rental and for sale listing divisions, and it implies that any regional differences in market conditions do not impede either learning about how to best conduct a national campaign or executing a national product strategy.[243] Similarly, Zillow engages in A/B testing on its website—i.e., showing different users different feature changes in controlled settings to study the impact of feature changes on its audience—at the national level for a national audience.[244]

152. Zillow's strategic plan in response to potential changes in the market surrounding exclusive listings, along with its approach to developing and enforcing the Zillow Standards at issue in this lawsuit, provides evidence of Zillow's national planning and decision-making, which is consistent with Zillow responding to national competitive conditions.

[redacted]

242 ZG-00023906 at 907, 921.

243 ZG-00023906 at 919.

244 ZG-00032723 at 792; "What is A/B testing," *Optimizely*, accessed September 12, 2025, https://www.optimizely.com/optimization-glossary/ab-testing/.

[redacted]

[redacted]

154. When Zillow implemented the Zillow Standards it similarly acted with a national viewpoint. Zillow looked to garner support for the Zillow Standards from brokerages through agreements exclusively on a brokerage-wide scale, notably including any market in which the brokerage operated which may have been "multi-state" and "multi-market."[249] Further, regardless of local MLS differences, Zillow's strategy was to apply the Zillow Standards for public marketing as a nationwide policy that would govern its access to listings and online home search platform.[250]

155. Furthermore, Zillow's strategic planning surrounding enforcement of the Zillow Standards maintained a nationwide focus. Zillow's enforcement strategy identified brokers and competitors to target, but did not identify any specific markets, states, or regions to target.[251] By March 2025, Zillow was implementing its proof-of-concept for its enforcement strategy across four "entire broker sites."[252] Zillow outlined several milestones for the technical implementation of its proof-of-concept for its enforcement strategy that progressed in three phases, the last of which was "National Scale Implementation."[253] The approach and implementation that Zillow undertook to begin enforcement of its Zillow Standards further demonstrates that Zillow is making market evaluations and consequential strategic decisions pertaining directly to the practices at issue in this lawsuit on a national basis.

2. Zillow and Compass Both Engage in National Agreements Covering Activities in Many States

156. On April 28, 2025, executives from Compass and Zillow were negotiating a deal for Compass to post on and receive a feed of for-sale listings from StreetEasy, Zillow's New York

[redacted]

249 *8/26/2025 Wacksman Deposition*, pp. 14:12–17:3, 153:16–154:25.

250 Zillow's CEO stated that "Zillow's standards on public marketing are consistent," in response to being asked if Zillow applies differing rules by MLS. *8/26/2025 Wacksman Deposition*, pp. 159:8–160:8.

251 ZG-00022345 at 357; ZG-00030566 at 567, 576, 611

252 ZG-00022345 at 358.

253 ZG-00030566 at 617–619.

City platform.[254] Compass's CEO indicated that Compass would consider modifying its 3PM strategy in New York City and the Hamptons, but not "globally."[255] In response, Zillow made clear that it did not consider a regional response sufficient. The Zillow executive responding to Compass's CEO regarding the proposed modification wrote that while he appreciated the offer, "for [Zillow] to be comfortable moving forward [Zillow would] need Compass to adopt the revised 3-stage plan nationwide."[256]

157. While Zillow's CEO was reluctant to acknowledge in his deposition that Zillow has national agreements, in fact he acknowledged that Zillow's agreement with, for example, eXp, consists of one agreement that covers all locations in which eXp operates, while emphasizing that eXp does not operate everywhere.[257] The fact that eXp does not operate everywhere in the country does not diminish the inference of a national market, however. eXp operates throughout the country,[258] and has the most transaction sides of any brokerage in the country.[259] The companies did not make separate agreements for different geographic locations. In an email to Compass, a Zillow executive again made clear that the companies needed to "reach agreement on the Listing Access Standards (at a national level)."[260] Zillow's Chief Industry Development Officer, Errol Samuelson also testified that Zillow's agreements are with the brokerage, requiring that the brokerage "adhere to [Zillow's] listing access standards."[261]

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254 ZG-00002301 at 301–302; "StreetEasy Warns Against Becoming a 'Former New Yorker' in Latest Brand Campaign," *StreetEasy*, February 18, 2025, https://streeteasy.com/blog/streeteasy-brand-campaign-warns-against-becoming-former-new-yorker/.

255 ZG-00002301 at 302.

256 ZG-00002301 at 303.

257 *8/26/2025 Wacksman Deposition*, pp. 153:14–155:9. ("Q Was the eXp agreement nationwide? . . . THE WITNESS: I believe the eXp agreement applies in all the places where eXp has agents, I don't know how many markets that is. Q You don't know if it's throughout country? A I know that they are in many markets, but I don't know that-- I don't believe they're in all markets.")

258 eXp World Holdings, Inc., Form 10-K, for the fiscal year ended December 31, 2024, p. 3.

259 Transactions are counted by sides, meaning the buyer side or the seller side; transactions in which eXp agents represented both buyer and seller are counted twice. "RealTrends Verified 2025 Brokerage Rankings: Top Brokerages by Sides, Volume, and Growth," *RealTrends*, April 11, 2025, https://www.realtrends.com/blog/2025/04/11/realtrends-verified-2025-brokerage-rankings-top-brokerages-by-sides-volume-and-growth/.

260 ZG-00002308.

261 *8/28/2025 Samuelson Deposition,* p. 29:3–23.

3. Participants In the Online Home Search Platforms Market Engage In National Pricing Strategies

158. As discussed above in Section V.A.1, none of the online home search platforms charge sellers for posting property listings on their platforms, nor do they charge users to conduct searches on their platforms. This means that online home search platforms have a national pricing strategy—the price is zero everywhere, regardless of local real estate market conditions. My understanding is that courts have found "a national schedule of prices, rates, and terms" to provide support for the conclusion that a firm operates at a national level, and therefore a national market better "reflects the reality of the way in which [it] built and conduct[s]" its business.[262] This approach is also both useful and informative from an economic perspective, since a national market provides a better venue to analyze aspects of competition that occur nationally.[263]

4. Zillow Considers Itself a National Online Home Search Platform Competing Against Other National Online Home Search Platforms

159. The evidence suggests that Zillow considers itself a national online home search platform and considers other home search platforms with national scope to be its primary competitors. For example, Zillow's Chief Executive Officer, Jeremy Wacksman, testified that Zillow's "home search site is nationwide" and identified other national portals as Zillow's competitors, explaining that "Zillow's competition for home search is really the portals, Redfin, Homes.com, Realtor.com."[264] Additionally, Curt Beardsley, Zillow's Vice President of Industry Development, has referred to Zillow as a "national portal site"[265] and investment analysts covering Zillow's stock have likewise acknowledged the traditional listing process begins with

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262 *US v. Grinnell,* pp. 575-576.

263 See, for example, the testimony of Carl Shapiro in the 2019 T-Mobile and Sprint merger case: Trial Transcript, *State of New York, et al., v. Deutsche Telekom AG, et al.,* United States District Court Southern District of New York, December 11, 2019, at 636:1-11 ("Q. So as a matter of antitrust economics, does it make sense to define a national market and also to define local markets that are contained within that same national market? A. It does. I find talking to people, some people find this counter intuitive, but it is correct as a matter of economics and merger analysis. The way to do this is you -- the national market will be a good market to analyze dimensions of competition that occur nationally, and by and large, the national plans and the basic plans and pricing by the nationwide carriers are done nationally, and I think that's agreed by all.")

264 *8/26/2025 Wacksman Deposition*, pp. 12:13–16; 7:4–17; *see also 9/11/2025 Lake Deposition*, pp. 46-47 (testifying that Zillow tries to win consumers from all over the country and that Zillow is available everywhere in the United States).

265 ZG-00009289; *8/28/2025 Samuelson Deposition*, pp. 136:23–25.

MLS submissions and then moves to "national portal displays."[266] Furthermore, when Zillow undertakes competitive analysis, it focuses on other national platforms like Realtor.com and Homes.com.[267] Similarly, Zillow analyzes its market share and audience reach at the national level, telling investors it has 66 percent share of the real estate home search audience in the United States, without regard for its localized presence or the regions in which its users reside.[268] And Zillow has described Compass as a national competitor as well, noting that "[b]ecause Compass has a presence in most major U.S. markets, its platform effectively has nationwide MLS coverage (over 300 MLS feeds)" and "Compass's app is competitive with other national real estate apps, blending search and CRM-like collaboration features in one."[269]

5. The Zillow Standards Are National in Scope

160. As I detail in Section V.B the Zillow Standards specify that any listing that is publicly marketed must be listed on an MLS within one business day, with no geographic exceptions.[270] The Zillow Standards are uniform across the country; that is, there are no stated terms or conditions that differ depending on local market conditions, local market rules, or available competitive alternatives. There are also no stated exceptions that are defined to vary by geographic location or local market differences. While the incremental impact of the Zillow Standards may in fact vary depending on the pre-existing rules adopted and/or enforced by local MLSs or competitive conditions, Zillow did not choose to incorporate any such facts into the statement of its policy. Hence, Zillow's own policy that is at issue in this case exhibits that it adopts national strategies in the context of its competitive interaction with its rivals in the online home search platforms market.

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266 ZG-00015024.

267 ZG-00032723 at 782 (discussing a "Experience Quality Assessment" comparing shoppers experience on Zillow, Homes.com, and Realtor.com).

268 "Zillow Investor Presentation," *Zillow Group*, February 2025, https://s24.q4cdn.com/723050407/files/doc_earnings/2024/q4/presentation/Zillow-4Q24-Investor-Presentation.pdf (hereafter, *2/2025 Zillow Investor Presentation*).

269 ZG-00031093 at 1125-1126.

270 "Zillow's Listing Access Standards: What Agents Need to Know", *Zillow Premier Agent*, May 20, 2025, https://www.zillow.com/premier-agent/agents-know-listing-access-standards/; s*ee also* Deposition of Neda Navab-Boshehri, *Compass, Inc. v. Zillow, Inc., et al*, In the United States District Court for the Southern District of New York, Case No.: 1:25-cv-05201-JAV, August 26, 2025 ("Prior to the the Zillow ban, agents were able to utilize and get the benefits of the Compass three-phased marketing strategy across our markets. The specifics are now actually nationally consistent in terms of the restrictions as a result of the Zillow ban. The Zillow ban has consistently restricted homeowners' premarketing options in every single market in a way that did not exist prior to the Zillow ban.").

VI. ZILLOW HAS MARKET POWER IN THE ONLINE HOME SEARCH PLATFORMS MARKET

A. Assessing Market Power in Zero-Price Markets

[redacted]

[redacted]

[redacted]

[redacted]

164. Because Zillow's business model does not include charging a price to either potential home buyers or sellers who search on its online home search platform, direct evidence that Zillow possesses market power in the relevant market cannot entail a demonstration that Zillow charges a super-competitive price in that market. Courts have recently noted, however, that only a firm with market power can make product changes that degrade the user's experience without concern that its users might go elsewhere, as discussed above.

[redacted]

B. The Zillow Standards Are Direct Evidence of Market Power

167. Zillow's willingness to forego the listings on its platform that do not comply with the Zillow Standards suggests that Zillow may be willing to reduce its inventory (by actively

[redacted]

pulling viable listings out of the MLS feed and blocking listings from brokers who violated the Zillow Standards) without concern for losing traffic. But losing listings would amount to a degradation of the quality of the services provided by Zillow.[278]

[redacted]

169. Instead, Zillow has placed itself in a position in which, if Compass and other brokerages that would like to engage in pre-marketing of their properties did not bend their knee

[278] *8/26/2025 Wacksman Deposition*, pp. 39:8–13 and 39:19–40:1 ("Q: Having the most complete set of listings, including those by agent, for-sale-by-owner, and construction-- having the most complete, that is a strategic advantage, correct? ... A: Having the most complete picture is a requirement to have buyers and sellers trust your home search portal.").

[redacted]

to Zillow, Zillow would lose listings on its platform and would disadvantage itself relative to competitive platforms.

170. Losing listings would be costly to Zillow for several reasons. First, Zillow's monetization strategy is to sell leads to buyers' agents to platform users who have indicated interest in a particular listing, as already discussed. Hence, Zillow's monetization strategy depends on having a robust inventory of listings. The larger the number of listings, the greater the opportunity for Zillow to generate revenues.[280] This is apparent from the evidence. For example, in a strategy planning presentation for 2026 surrounding listing transparency, Zillow wrote that "[l]isting inventory is **critical** to our value proposition, and our business" (emphasis in original).[281] In its own internal communications, Zillow itself acknowledges that listings are "the lifeblood of our company."[282]

171. Second, losing listings has a feedback effect that I discussed earlier. Listings drive interest by buyers, and more buyers increases the value of listing on the platform to sellers because it increases the eyeballs that will see and perhaps make an offer on the property. Hence, losing listings not only has a direct effect on the potential to monetize the platform via selling leads to buyers' agents, but it potentially has a multiplicative effect through the network feedbacks between buyers and sellers on the platform. As listings fall, the value to buyers of using the platform falls, which can reduce the use of the platform by buyers, which in turn

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280 *8/26/2025 Wacksman Deposition*, pp. 13:11-14:10, 194:21-195:17 ("A Zillow's monetization doesn't come from number of listings. It comes from introducing buyers and sellers to agents and having them transact together. Having the majority or as many listings as possible allows us to attract those buyers and sellers."; "A …I mean, Showcase for sure is monetization, but, again, we don't directly monetize listings outside of Showcase content collection, so it's more about making sure our agents have broad listing exposure, and then if we have great listing coverage, we then monetize by driving more transaction share by connecting more buyers and sellers with more agents, so it is an indirect relationship.").

281 ZG-00030111 at 112–117.

282 *See, e.g.*, ZG-00003232 at 232 ("Listings are the lifeblood of our company. No listings, no eyeballs, no sales. But it's not even a case of 'no-listings'; even a degradation of our listing content will reduce leads and PA revenues" and, in response, "I'm with you on the severity and intent of the threat…"); ZG-00005457 at 457 ("Compass is leveraging listings with a 'coming soon' status to circumvent CCP. A coming soon listing is considered 'off-market' meaning Compass can publicly advertise them on their website without violating the Clear Cooperation requirement to post a listing to the MLS within one day of public marketing...We'd like to convince more MLSs to send us Coming Soon listings so that we can have listing parity with Compass and other brokerages who are advertising these listings on their websites."); ZG-00030111 at 117 ("Our Goal: Maximize timely & accurate listings availability to all consumers on Zillow, by preventing degradation of listing availability."); ZG-00031370 at 377 ("CoStar will be spending big market by market, to erode consumer trust in Zillow, market their exclusives, and promote their brokerage partners…The effect of this on Zillow will be erosion of traffic, and eventually revenue.").

reduces the value of the platform to sellers who, thereby, would be less eager to list on the platform, creating the potential for a negative spiral.

172. Third, losing listings and the potential feedback effect just described reduces the opportunity for Zillow to monetize its traffic via sales of leads but also via the panoply of other monetization strategies that Zillow has developed, as discussed earlier as well.

173. Clearly, putting itself in the position of triggering a negative feedback loop that would diminish the attractiveness of and ability to monetize its platform would be risky and imprudent if Zillow believed that it faced a material risk of material numbers of the listing clients of Compass and other brokerages ignoring or snubbing the Zillow Standards, as would be the case if Zillow did not have market power. Instead, however, Zillow is not seeking to make its platform more attractive for Compass and other companies seeking to differentiate their marketing strategies to list their properties on Zillow; rather, the Zillow Standards can be rational for Zillow only if Zillow is confident that instead of triggering a significant reduction in the robustness of its inventory of listings, it will induce significant numbers of property owners to decline any pre-marketing strategies they would otherwise seek to pursue and will limit the risk of the "contagion" of brokerages adopting similar strategies, as I discussed earlier.[283] While Zillow can undoubtedly tolerate losing some of its listings and still maintain its dominance because of its brand and features,[284] hemorrhaging listings would "severely" harm its business.[285] Because Zillow was demonstrably concerned about a contagion, it launched its Zillow Standards as a deterrent against pre-marketing strategies, leveraging its market power.

174. The Zillow Standards appear to be achieving this objective. As I discuss in more detail in Section VII, adoption of the 3PM strategy was as high as 38 percent in Q1 2025. And Ashton Alexander, Compass's Senior VP of Operations, stated in her declaration filed June 27,

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283 ZG-00030111 at 116.

284 *8/26/2025 Wacksman Deposition*, p. 103:15–20 ("Q Could the existence of PLNs erode traffic to Zillow? A We don't believe that missing some listings would erode traffic or brand trust to Zillow. We would be concerned if the database that all participants use to share all listings were to erode, that it would make it more challenging for buyers and sellers to find those listings.").

285 "Our competitors . . . may engage in exclusionary conduct . . . such as by restricting access to proprietary listing data or by putting homes for sale on a private listing network instead of publicly through the MLS . . . This could markedly decrease the quantity and quality of the for sale and rental listing data and other real estate information that we provide, reduce customer confidence in our products and services and cause customers to go elsewhere for real estate listings and information, which could severely harm our business, results of operations and financial condition." See *2024 Zillow 10-K*, p. 14.

2025, that Compass listings using the 3PM strategy had dropped 23 percent since Zillow announced its listing standards and testified in August that listings utilizing 3PM had dropped to 17-18 percent.[286] These effects are based on a time period during which Zillow is not yet fully enforcing its Zillow Standards, so the effect on Compass has come at very little cost to Zillow: the evidence indicates that Zillow has so far banned only approximately 15 Compass listings.

175. That Zillow is apparently willing to risk its "lifeblood" by executing a strategy that is beneficial to Zillow only if it can rely on its market power in the market for online home search platforms[287] is direct evidence of the existence of Zillow's market power in that market, and the precipitous reduction in Compass's adoption rate of its 3PM is further direct evidence of that market power. By the metric of direct evidence of market power, this fact supports an inference that Zillow wields market power in the online home search platforms market.[288]

C. Indirect Evidence of Zillow's Market Power

1. Zillow's Market Share and the Market's Concentration

176. The courts and antitrust agencies generally consider market share to be an indirect indicator of whether a firm does or does not possess market power. The higher is a firm's share of the relevant antitrust market, all else equal, the stronger is the inference that the firm possesses

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[286] Declaration of E. Ashton Alexander In Support of Plaintiff's Motion for a Preliminary Injunction, *Compass, Inc, v. Zillow, Inc., et al.*, United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, September 12, 2025, ¶ 15; *8/26/2025 Alexander Deposition*, p. 193:7-18.

[287] Zillow itself acknowledged that listings are "the lifeblood of our company" and that implementing the Zillow rule may result in "degradation of [its] listing content." See ZG-00003232 at 232.

[288] Zillow's profitability or lack of profitability is not an indicator of market power. Firms can have market power and have high, low, or negative profitability, which depends on the demand for the product and the costs of production. Market power means that profits are higher than they would be without it, all else equal. In this case, Zillow's Continuing Operations (excluding losses from its Zillow Offers business, which it discontinued in 2021) was profitable in 2020 and 2021 (*see* Zillow Group, Inc., Form 10-K, for the fiscal year ended December 31, 2022 (hereafter, *2022 Zillow 10-K*), pp. 77, 81). In 2022, Zillow's Continuing Operations started incurring losses (see *2022 Zillow 10-K*, p. 77), due to macroeconomic factors (see "Zillow Group, Inc. NasdaqGS:ZG, FY 2022 Earnings Call Transcripts," *S&P Global*, February 15, 2023, p. 4, "the unprecedented housing macro volatility continued, this time to the downside. The scenario we had feared could happen. 30-year mortgage interest rates nearly doubled over the course of the first 6 months of 2022, meaningfully slowing turnover and home price appreciation in the housing market."). Zillow continued incurring losses in 2023 and 2024, but its performance has improved significantly in the first half of 2025 (*see* Zillow Group, Inc., Form 10-Q, for the quarterly period ended June 30, 2025, p. 5). Financial analysts predict that Zillow's results from operations will turn positive and continue to grow in profitability over the next few years. The median financial analyst forecast of Zillow earnings before interest and taxes is a profit of $106 million in 2026, $272 million in 2027, and $484 million in 2028 (see S&P Capital IQ).

market power.[289] Moreover, some commentators have argued that, rather than serving as a proxy for market power, the market share itself can allow firms to perform "foreclosure" practices aimed at cutting "rivals off from sources of supply, distribution outlets and the like," which are only plausible because the firm occupies a large fraction of the market.[290]

177. There are several ways that, in principle and depending on data availability, one may estimate market share for the online home search platforms market, including by a platform's share of total visits, searches, or page views; share of unique visitors, share of time spent by users on the platform; and share estimates that attempt to control for whether users visit multiple home search platforms or only one (practices sometimes referred to as "multi-homing" versus "single-homing"). One primary way of measuring market shares that appears to be common in the industry is the number or share of unique visitors; indeed, this appears to be Zillow's preferred measure.[291] The evidence using this measure supports Zillow's market power in the online home search platforms market. The available data and associated commentary are unambiguous that Zillow holds a predominant position in the online home search platforms market.

178. Zillow itself has self-reported on its predominance among real estate searchers. In its earnings call from the first quarter of 2025, Zillow CEO reported that "[a]bout 2/3 of the real estate audience uses Zillow somewhere along their journey, more than twice any other company in our category."[292] A presentation by Zillow to the investment community at around the same time reflects similar figures.[293] According to that presentation, in the last quarter of 2024, the Zillow Group was more than two times larger than Realtor.com, its nearest competitor, as measured by average monthly unique visitors. The data showed that the Zillow Group accounted

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289 See *2015 Carlton & Perloff*, p. 668. *See also*, Peter Davis and Eliana Garcés, QUANTITATIVE TECHNIQUES FOR COMPETITION AND ANTITRUST ANALYSIS, (Princeton: Princeton University Press, 2010), pp. 286-287.

290 See *2025 Hovenkamp*, p. 66-67.

291 Zillow's Chief Industry Development Officer, Errol Samuelson, testified that Zillow uses Google Analytics to measure its own traffic and relies on data from Comscore on "unique users visiting each property, number of visits, and so on" when making comparisons with other websites in the real estate sector. Although he stated that "Comscore tends to undercount traffic," he asserted that "when doing comparisons between Zillow traffic and third-party sites, Comscore is the best source that we have for it." *8/28/2025 Samuelson Deposition*, 97:3-98:8. In the presentations in the record that I have reviewed, Zillow always reports the share of unique visitors (see, for example, ZG-00027801 at p. 18-21; ZG-00031713 at 717; ZG-00033142 at 185).

292 "Zillow Group, Inc. NasdaqGS:ZG FQ1 2025 Earnings Call Transcripts," *S&P Global*, May 7, 2025 (hereafter, *2025 Q1 Zillow Earnings Transcript*), p. 4.

293 *2/2025 Zillow Investor Presentation*, p. 6.

for 66 percent of the "Real Estate Audience," while companies not in the Zillow Group accounted for the remaining 34 percent. (The exact period for the latter comparison was not specified.[294]) Indeed, in measuring its audience share, as measured by total unique visitors, Zillow reported its share was at least 60 percent in nearly every quarter from at least December 2020 through June 2025, and more than 20 percentage points ahead of its nearest reported competitor.[295]

179. Mobile apps are another means by which users can view and interact with Zillow's home search platform. While the relevant metric to assess market power in the market for online home search platforms is total platform users or views, it is notable that, in addition to the traffic advantage enjoyed by Zillow that I have already documented, Zillow has a particular advantage in mobile app search. According to Zillow's CEO, Zillow has four times the mobile application engagement of the next closest company with which it competes.[296] A Zillow investor presentation from February 2025 also provided usage statistics pertaining to daily active app users among real estate marketplaces. These data revealed that, at the end of 2024, the Zillow Group was more than four times larger than its nearest competitor (Realtor.com) in daily active (mobile) app users. Furthermore, the data showed that the Zillow Group accounted for 64 percent of average daily active app users among real estate marketplaces (the precise time period was not specified).[297]

180. Hence, by all of Zillow's measures, Zillow has attracted 60 percent or more of the traffic among what the analysts and Zillow itself consider to be the competitors of note in the relevant market, according to multiple measures. Notably, Zillow's internal documents depict the highest shares, well above 60% and closer to two-thirds of the market.

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294 *2/2025 Zillow Investor Presentation*, p. 6. The cited figures relied on Comscore's monthly unique-visitor data to compare Zillow with its nearest competitor. See *About Comscore*.

295 ZG-00027801 at 827; ZG-00033142 at 185; ZG-00031713 at 717. The figures rely on Comscore's real estate audience share data in which the metric is total unique visitors. Comscore is a U.S.-based media-measurement and analytics company. It measures digital and TV audience engagement. See "About," *Comscore,* accessed September 10, 2025, https://www.comscore.com/About (hereafter, *About Comscore*).

296 *2025 Q1 Zillow Earnings Transcript*, p. 4. Zillow reported similar results in a recent presentation by Zillow to the investment community. See *2/2025 Zillow Investor Presentation*, p. 7.

297 *2/2025 Zillow Investor Presentation*, p. 7. The data on app usage relied on data supplied by data.ai, a provider of data on mobile apps. *See* Oliver Yeh, "Sensor Tower acquires market intelligence platform data.ai," *Sensor Tower*, March 2024, https://sensortower.com/blog/data-ai-joins-sensor-tower.

181. Market shares of this magnitude are at or above the level typically associated with monopoly power.[298] Numerous courts have found shares above 60 percent sufficient to establish a dominant share and I understand that some have found so for shares as low as 54 percent.[299] This dominant share can serve as indirect evidence for market power, especially in markets with barriers to entry, which I will discuss in the next subsection.

182. Commentary by industry analysts is consistent with the inferences from the market share statistics. For example, analysts assert that "Zillow's level and quality of traffic is a huge competitive advantage, and it is likely to hold a leading position in this category for at least the next few years (it would be tough for anyone else to catch up with it, at least over the short term)."[300] Similarly, analysts at Wells Fargo Securities recently stated that an early mover advantage had given Zillow "a deep moat" as they viewed "Zillow.com's material lead in organic traffic as largely driven by its early-mover advantage in the residential for-sale marketplace and to some extent network effects, as Zillow links are commonly shared between clients and their agents, as well as with friends and family."[301]

2. Barriers to Entry

183. A firm's possession of a high market share in a relevant market is indirect evidence that the firm possesses market power in that market, as already discussed. A high market share is not a definitive indication of market power, however. It is well understood as a matter of economics that a company with a high market share may nevertheless lack market power in the relevant market if entry into the market by non-participants could be accomplished in a timely manner, and is likely to occur in response to an incumbent's exercise of market power to the

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298 *See* Memorandum in Opposition, *Federal Trade Commission v. Meta Platforms, Inc.*, United States District Court for the District of Columbia, 1:20-cv-03590, April 7, 2021, p. 17. "Facebook does not dispute that a market share 'in excess of 60%' is high enough to allege monopoly power— nor could it, as numerous courts have held that such a share, or even a lower share, is sufficient for monopoly power."

299 See Memorandum of Law in Opposition, *Federal Trade Commission v. Meta Platforms, Inc.*, United States District Court for the District of Columbia, 1:20-cv-03590-JEB, November 17, 2021, p. 4; Findings of Fact and Conclusions of Law, *Federal Trade Commission v. AbbVie Inc., et al.,* United States District Court for the Eastern District of Pennsylvania, June 29, 2018, pp. 72-73 (shares above 60%); Memorandum Opinion, *2301 M Cinema LLC, et al., v. Silver Cinemas Acquisition Co., et al.,* United States District Court for the District of Columbia, September 28, 2018, pp. 28-29 (shares as low as 54% being considered sufficient to infer monopoly power); Opinion & Order, *CollegeNet, Inc., v. The Common Application, Inc.,* United States District Court for the District of Oregon, No. 3:14-cv-00771-HZ, pp. 25-26 (shares above 60%).

300 See *4/21/2025 William Blair-Zillow*, p. 5.

301 See *2/5/2025 Wells Fargo CoStar* at p. 4.

detriment of customers, and is likely to occur at a level sufficient to defeat the profitability of the incumbent's (or incumbents') exercise of market power.[302] Hence, indirect evidence that a firm possesses market power typically entails an analysis of the presence, absence, and height of barriers to entry by non-participants in the market. The presence of material barriers to timely and significant entry into the relevant market is evidence that an incumbent with a dominant market share possesses market power in that market.[303]

184. A number of factors can act as barriers to entry into a market. These may include the need to make large capital investments in order to operate in a market at a competitive scale; brand recognition enjoyed by the incumbent(s) in the market; costs faced by customers if they switch from their current supplier to another supplier or use the products of another supplier, that they do not incur with their current supplier (known as customer "lock-in" or "switching costs"); and a feedback effect in which the more customers a company has, the greater is the value of the company's product to all customers, a phenomenon known as a "network effect."[304]

a. Capital investments

185. If it is necessary to make very large capital investments to compete effectively with an established incumbent, and if the prospect for success is risky (as is the case in most real-world markets), the necessity of obtaining the required capital can form a barrier to entry.[305]

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[302] See, "Market shares are imperfect indicators of market power, so additional analysis of the economic conditions is necessary before one can reach a conclusion about market power. For example, if entry is easy, then the industry pricing is severely constrained regardless of whether an existing firm has a large market share." *2015 Carlton & Perloff*, p. 668. *See also*, Robert H. Lande, "Market Power Without a Large Market Share: The Role of Imperfect Information and Other "Consumer Protection" Market Failures," American Antitrust Institute Working Paper No. 07-06, March 14, 2007, pp. 3-4. ("Even if some critical market share is reached, of course, the firm has the power to raise prices only if entry is difficult and other conditions are met [references excluded]."). *See also*, *2023 Merger Guidelines*, pp. 12, 31-32. ("When evaluating a potentially unlawful merger of current competitors, the Agencies will assess whether entry by other firms would be timely, likely, and sufficient to replace the lost competition.")

[303] "[C]ourts examine market structure in search of circumstantial evidence of monopoly power . . . Under this indirect, structural approach, monopoly power may be inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers." [internal quotes omitted]. See *Memorandum and Order,* United States District Court for the District of Columbia, *United States of America et al. v. Google,* August 5, 2024 p. 153, citing Opinion for the Court, United States Court of Appeals, District of Columbia Circuit*, United States of America et al. v. Microsoft Corporation*, June 28, 2021 p. 51.

[304] For a discussion of barriers to entry and switching costs, *see, among others*, *2015 Carlton & Perloff*, pp. 100-104 and pp. 395-397 and Joseph Farrell and Paul Klemperer, "Coordination and lock-in: Competition with switching costs and network effects," *Handbook of Industrial Organization* volume 3 (2007) at pp. 1967-2072.

[305] See *2015 Carlton & Perloff*, pp. 103-104 for a discussion of large-scale investments involving large sunk costs as a potential barrier to entry.

186. An indicator of the magnitude of the capital investment necessary for an entrant to compete effectively in a market is the capital that the incumbent(s) have had to spend to obtain and maintain their position in the market. Available evidence suggests that Zillow has invested billions of dollars in various forms of marketing and advertising to distinguish itself from competitors and build its powerful market position that I documented in the previous subsection.

187. It has been estimated that, between 2022 and 2024 alone, Zillow invested a total of about $2.11 billion in sales and marketing and about $1.64 billion in technology and development.[306] These investments, combined ($3.75 billion), amounted to about 78 percent of Zillow's gross profits ($4.82 billion) over the same period.[307] These figures indicate that massive investments would be necessary for a newcomer to enter the market for online home search platforms and develop a platform and brand name capable of competing effectively. Indeed, even a company with an existing presence in the real estate market would require substantial capital investment to become competitive.

188. The recent experience of the CoStar Group with the Homes.com site is illustrative. According to a Wells Fargo Equity Research report, The CoStar Group bought the Homes.com site in 2021. CoStar invested about $900 million in Homes.com in 2024, largely spent on advertising. The same report pointed out that CoStar would invest an additional $900 million in 2025, with the main goal of building a permanent sales force.[308] CoStar reported that Homes.com grew at a rapid pace in 2024, but the CoStar growth figures for Homes.com have been challenged as false advertising.[309] In February 2025, the Wells Fargo analysts wrote: "We haven't seen the heavy advertising translate to meaningfully higher organic traffic yet," and added: "we don't see enough differentiation to draw users away from Zillow which has a strong first-mover advantage and network effects."[310] Hence, despite its massive investments in

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306 *2024 Zillow 10-K*, p. 60.

307 *2024 Zillow 10-K*, p. 60.

308 *2/5/2025 Wells Fargo CoStar* at p. 1.

309 "Homes.com Residential Network Reaches All-Time High of 149 Million+ Unique Monthly Visitors in February 2024," CoStar Group Press Release, March 14, 2024, accessed September 10, 2025, https://investors.costargroup.com/news-releases/news-release-details/homescom-residential-network-reaches-all-time-high-149-million. *See also*, Harvey Hancock, "Homes.com Agrees To Change Advertising Claims After Realtor.com "Smoke And Mirrors" Pushback," *OnlineMarketplaces*, July 10, 2024, accessed September 12, 2025, https://www.onlinemarketplaces.com/articles/homes-com-agrees-to-change-advertising-claims-after-realtor-com-pushback/.

310 *2/5/2025 Wells Fargo CoStar* at p. 1.

Homes.com, CoStar does not appear to have succeeded at making Homes.com a true challenger for Zillow or Realtor.com. Zillow concluded similarly, explaining that Homes.com has less quality traffic than Zillow.[311]

189. Indeed, perhaps the best evidence that even well-capitalized entities with powerful brand names may not be able to successfully enter and compete in the online home search platforms market is that both Yahoo and Google made forays into the online home search platforms market by giving users access to real-estate listings. Both ultimately ceased their efforts to compete in the market for online home search platforms.

190. Yahoo made a foray into the online home search platforms market with Yahoo! Real Estate (later renamed Yahoo! Homes). Yahoo! Homes partnered with Zillow in 2006 and later "handed over" real-estate listings and advertising to Zillow.[312]

191. Google attempted to offer a real estate search competitor by leveraging its Google Maps application and the information in Google Base, a database into which any user could add almost all types of content, including text, images, and structured information in a variety of formats. For example, it added real estate listings from Google Baseto Google Maps.[313] Google received real estate listings in its Google Base database from various sources, including For-Sale-By-Owner sites and Homes and Land, a real estate site.[314] Many of the listings came directly from real estate agents and brokerages.[315]

192. In late 2010, however, Google stopped displaying real-estate listings on Google Maps. Google gave three reasons for this decision: "low usage, the proliferation of excellent

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311 *9/11/2025 Lake Deposition*, pp. 29:20-30:4.

312 *See* Hugh Collins, "Yahoo Hands Over Real Estate Listings to Zillow.com," *Yahoo*, July 9, 2020, accessed September 10, 2025, https://sports.yahoo.com/2010-07-09-yahoo-zillow-com.html. *See also*, Matt Jones, "Welcome to Yahoo! Homes," *Yahoo*, July 30, 2012, accessed September 10, 2025, https://www.yahoo.com/news/blogs/spaces/welcome-yahoo-homes-020532210.html.

313 Richard Trenholm, "Google Maps adds property listings: Google your dream home," *CNET*, June 16, 2010, accessed September 10, 2025, https://www.cnet.com/tech/services-and-software/google-maps-adds-property-listings-google-your-dream-home/.

314 *See, for example*, Janis Mara, "Google moves further into real estate," *American Land Title Association*, April 7, 2006, accessed September 10, 2025, https://alta.org/news-and-publications/news/20060407-Google-moves-further-into-real-estate.

315 *See* "Land Grab: Google Expands Real Estate Listings," *Search Engine Land*, July 6, 2009, accessed September 10, 2025, https://searchengineland.com/google-expands-real-estate-listings-21999#:~:text=The%20results%20are%20coming%20directly,part%20of%20their%20online%20marketing.

property-search tools on real-estate sites, and the infrastructure challenge posed by the impending retirement of the Google Base API."[316]

193. Hence, even large general search engines with well-known brand names such as Yahoo and Google chose not to invest the resources necessary to challenge the websites that focused on real estate search at the time, including Zillow. This was an implicit acknowledgment that developing tools such as the user interfaces and search functionality, as well as the industry expertise necessary to compete in the online home search platforms market would have involved higher upfront investments with a lower prospect of being able to successfully and profitably compete than they were willing to make.

194. Zillow, for all its market share success, is still not profitable on a net basis, as discussed above. This is also an entry barrier because potential entrants, seeing this, would be discouraged from entry and their investors discouraged from investing.

195. Thus, evidence from the marketplace and Zillow's own documents suggest that capital investment is a substantial barrier to entry in the online home search platforms market.

b. Brand recognition

196. When incumbents in a market have strong brand recognition, that fact alone can impede the ability of entrants without similar brand recognition—at least, those without brand recognition in the market at issue—to make headway in competition with the established incumbent(s).[317]

197. Zillow's investments in brand recognition have been successful. As the figures I cited in earlier sections indicate, Zillow has become a clear leader in home search platform traffic, which, according to at least one investment analyst, gives Zillow a "Massive Competitive Advantage."[318] As the statistics presented earlier demonstrate, Zillow "has consistently had more monthly visits than its next three biggest portal competitors in the United States combined (Realtor.com, Redfin, and Homes.com)." Zillow also claims that 80 percent of its traffic comes

316 *See Retiring Real Estate 2011*. *See also*, *Union Street Media 2011*.

317 *See, for example*, Carl Shapiro, "Advertising as a barrier to entry," FTC Working Paper No. 74, July 1982. Shapiro argues that the true entry barrier is not advertising but rather brand loyalty, which is associated with brand recognition.

318 See *4/21/2025 William Blair-Zillow*, p. 5.

either from "organic sources" or is "direct" traffic (that is, comes from people typing Zillow.com directly into their browsers), which reveals strong customer awareness of the Zillow brand.[319]

198. Perhaps the strongest evidence of Zillow's brand recognition is that in March 2016, consumers were, for the first time, more likely to search "Zillow" on Google than to search "real estate." In that month, Google gave Zillow a "search interest" score of 52, compared with 49 for "real estate," a nine for Trulia, and a five for Realtor.com.[320] At the time, a real estate industry journalist commented that "the fact that searches of 'zillow' have eclipsed searches of the word that describes Zillow's focus reflects formidable brand recognition, and may partly explain why agents sometimes have trouble persuading consumers to trust their opinion and data over Zillow's data."[321]

199. I also analyzed "search interest" with respect to other potential real estate search terms. I entered four real estate related terms into Google Trends: "zillow," "real estate," "homes for sale," and "houses for sale." Exhibit 2 shows the trend over time of the "search interest" for these four terms.[322] The Exhibit shows that soon after the launch of the Zillow brand (in 2006), "zillow" was slightly less popular as a search term as "houses for sale." The popularity of the term "zillow" increased rapidly starting in 2011, surpassing "homes for sale" in 2015 and "real estate" in early 2017 and, with the exception of a temporary spike in popularity of "homes for sale" in 2021, "zillow" has remained the most popular of these four search terms since 2017.[323] Finally, I analyzed "search interest" with respect to other online home-search platforms, see Exhibit 3. The search interest for "zillow" surpassed that of "redfin" immediately after Zillow's launch, and it surpassed "realtor.com" in late 2011.[324]

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319 See *4/21/2025 William Blair-Zillow*, p. 5.

320 *See* Teke Wiggin, "Does Zillow overshadow 'real estate'? Google search traffic gives credence to theory," *Inman*, April 26, 2016, https://www.inman.com/2016/04/26/zillow-overshadow-real-estate/ (hereafter, *2016 Wiggin-Zillow*); *2024 Zillow 10-K*, p. 3.

321 See *2016 Wiggin-Zillow*.

322 I normalize the data so that the popularity of "real estate" in February 2006, the month when Zillow.com launched, equals 100.

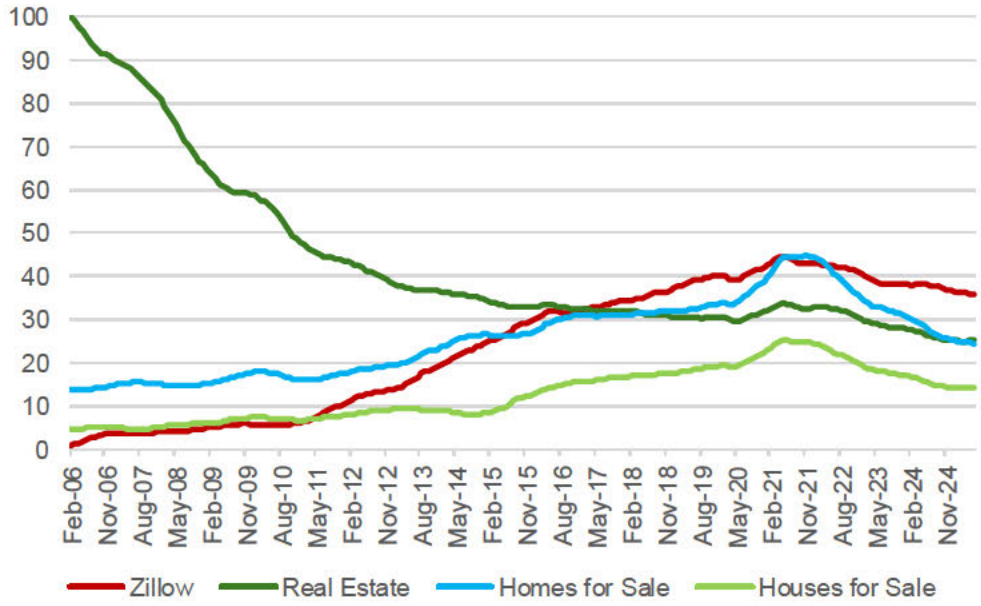
323 Because the data are highly seasonal, I smooth each time series using a 12-month moving average. As a result, the search popularity of "zillow" does not surpass that of "real estate" until January 2017. Without controlling for seasonality, "zillow" tied "real estate" in April 2016, passed it briefly during May to June, was slightly below it for the rest of 2016, and passed it for good in January 2017.

324 I do not include results for Homes.com nor Compass.com since their search interest cannot be readily disentangled from that of the nouns "homes" and "compass." The search popularity for "zillow" has been over 45 times that of "homes.com" and "compass.com" since as far back as 2016. See my backup materials.

Exhibit 2

Google Trends Search Interest Over Time for Selected Terms, February 2006-June 2025

"Real Estate" in February 2006 = 100

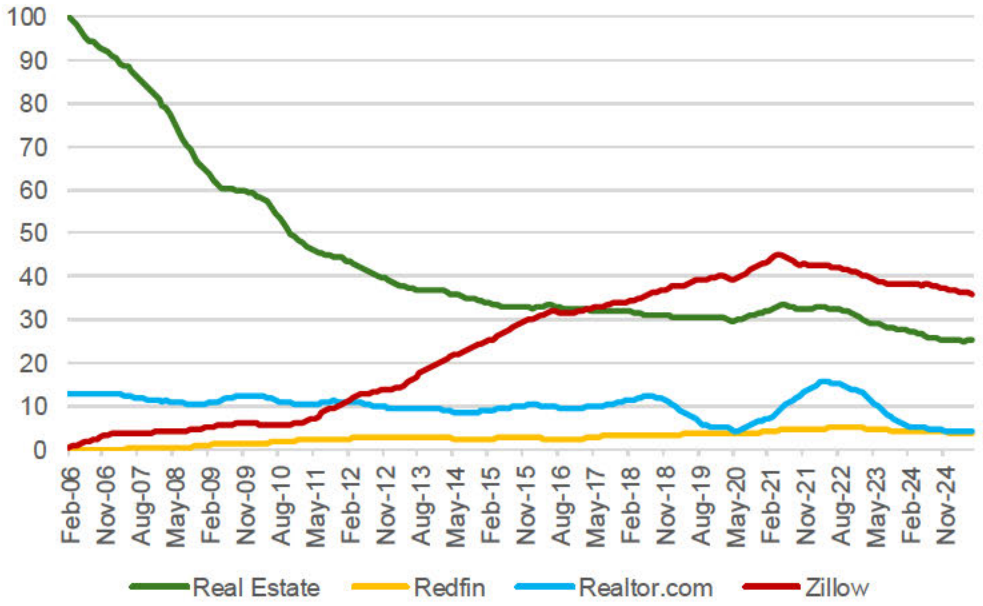


Source: Google Trends

Note: Because the data are highly seasonal, I smooth each time series using a 12-month moving average.

Exhibit 3

Google Trends Search Interest Over Time for Selected Terms,
February 2006-June 2025
"Real Estate" in February 2006 = 100



Source: Google Trends
Note: Because the data are highly seasonal, I smooth each time series using a 12-month moving average.

c. Network effects

200. The concept of network effects in economics generally refers to the phenomenon that a product or service becomes more valuable to each user as more people use it.[325] Economists and antitrust authorities alike recognize that the chicken-and-egg nature of network effects in certain markets can create significant barriers to entry for companies seeking to enter or expand in competition with an incumbent in such a market who has already secured a large market share.[326] The most recent merger guidelines from the Department of Justice and Federal Trade Commission, for example, have recognized the role of network effects as a barrier to entry

[325] See *2019 Franck and Peitz,* pp. 13-15.

[326] For an economic model of network effects as barriers to entry, *see, for example*, Bruno Jullien, Allessandro Pavan, and Marc Rysman, "Two-sided Markets, Pricing, and Network Effects," *Handbook of Industrial Organization* 4, iss. 1 (Amsterdam: Elsevier, 2021) (hereafter, *2021 Jullien et al.*), pp. 485-592, especially Section 3.4.

and competition.[327] A textbook example of a network effect is a telephone network: if only one person had a telephone, the telephone would have no value to that person at all, because there would be no one to call. With two people, the value is greater because they can call each other, but as each new person joins the network, they not only gain the benefit to themselves of being able to call the others already on the network (and be called by them), but the new person enhances the value to each of the existing members. Once a telephone network is in place and has been joined by many customers, it would be difficult for a new and separate telephone network (i.e., a telephone network that was not interconnected with the incumbent) to enter and compete, because the initial customers on the new, small network would be provided few potential opportunities to call and be called, while joining the incumbent network would immediately present the opportunity to call and be called by many people.

201. As the example illustrates, network effects generate a competitive advantage from greater scale or greater market share. For the same reason, they generate a competitive disadvantage to being a small participant, and therefore network effects can constitute a barrier to entry for potential entrants seeking to challenge the incumbent(s) or even to just coexist. In markets that do not exhibit network effects, entrants must nevertheless overcome the advantages that incumbents may enjoy, such as brand recognition, an established customer base, and product know-how. Entrants normally seek to do this by offering a better product, better price (perhaps by adopting more efficient means of production), or better customer service, as examples. But in a market with network effects, entrants or small competitors must also overcome the incumbent's scale advantages due to the network effects, and therefore must have a product whose value proposition to customers is even more superior to that of the incumbent than it would otherwise be required to offer.

202. A 1989 paper by economist Brian Arthur established that in an industry with network effects and switching costs (costs incurred by customers to switch from one supplier to another), an incumbent with a large installed base of customers can prevent entry from an equally or more efficient potential competitor.[328] Extensive theoretical and empirical literature followed, delineating the circumstances in which an incumbent firm can use its "incumbency

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[327] *2023 Merger Guidelines*, Section 2.6.A.

[328] W. Brian Arthur, "Competing Technologies, Increasing Returns, and Lock-In by Historical Events," *The Economic Journal* 99, no 394 (March 1989) (hereafter, *1989 Arthur*), pp. 106–131.

advantage" to prevent entry by a more efficient potential competitor;[329] recent scholarly research has highlighted how the incumbency advantage can be especially significant in industries in which vast amounts of data are generated as a byproduct of users interacting in a platform.[330] As a consequence, in the presence of network effects, as discussed earlier, the entrant must offer a product that is not just better, but sufficiently better than the incumbent's that the challenger can overcome the incumbency advantage.

203. Online home search platforms experience a type of network effect. First, the more sellers list on a platform, the more valuable the platform is to other sellers. This is because more comprehensive listings allow online home search platforms to improve the quality of the search results, therefore increasing the probability that potential buyers find a good match. The improved quality of the search results (and increased probability of finding a better match) attracts more potential buyers to the platform. Finally, more potential buyers using the platform, and more agents affiliating with the platform, attracts more listings, further increasing the scale of the platform. As the platform with by-far the most traffic, Zillow is the prime beneficiary of those network effects.

204. Indeed, analysts argue that Zillow's lead in organic traffic is driven by a combination of first-mover advantages and network effects.[331] Analysts have also noted the entry barriers erected by Zillow's sheer scale in the market.[332]

205. Zillow's significant advantage in mobile search documented in Section VI.C.1 above buttresses the entry barriers erected around Zillow's search engine. To threaten Zillow's dominant position in app downloads, a competitor would have to have a sufficient competitive advantage that it would encourage users who have already downloaded the Zillow app to download and use an additional app. The competitor's differentiating features would also have to be sufficiently attractive for users who are new to the online home search platforms market (and have therefore not already downloaded the Zillow app) to download an app other than Zillow or in addition to it.

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329 See *2021 Jullien et al.*, pp. 485-592, especially Section 3, for a summary of the theoretical literature.

330 Gary Biglaiser, Emilio Calvano, and Jacques Crémer, "Incumbency advantage and its value," *Journal of Economics & Management Strategy* 28, iss. 1 (Spring 2019), pp. 41-48.

331 See *4/21/2025 William Blair-Zillow* at pp. 1, 5. *See also, 2/5/2025 Wells Fargo CoStar* at p. 4.

332 See *4/21/2025 William Blair-Zillow* at p. 5.

206. Analysts have concluded that "early-mover advantage has given Zillow a deep moat."[333] Analysts have tested the Homes.com app and found that it has the same functionality as Zillow, and even better and more easily accessible neighborhood information. They question, however, "whether that'll be enough to convert existing Zillow users."[334] These facts all suggest that Zillow's significant lead in market share itself, and the network effects associated with market share, acts as a barrier to entry for potential new entrants or barrier to growth for existing competitors. The lead in Zillow's market share is sustainable despite the presence of (at least) equally attractive competitors because of the network effects that reinforce the benefits to Zillow of its predominant market share.

207. Zillow's undisputed dominance in driving traffic to its site, the network effects that serve to sustain that dominance by creating, as one analyst put it, a "deep moat" around its strong market position, and the other barriers to entry—support a conclusion that Zillow has market power in the online home search platforms market.

VII. THE ZILLOW STANDARDS ARE ANTICOMPETITIVE

[redacted]

[333] *2/5/2025 Wells Fargo CoStar* at p. 5.

[334] *2/5/2025 Wells Fargo CoStar* at p. 5.

[redacted]

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[redacted]

223. In the real estate marketplace, agents are independent contractors who have fiduciary duties to their sellers and thus make their own decisions, in connection with their sellers, as to the best strategies to use in listing and selling the clients' properties.[346] I expect that no brokerage would be able to successfully, and on a significant scale, employ pre-marketing strategies that violate the Zillow Standards because clients would not choose to accept it and agents who pressed it would find doing so too costly in the form of lost clients and lost agents and, therefore, ultimately, lost revenues in the brokerage services market. It is telling that, as I explained earlier, a seller could obtain forgiveness under the Zillow Standards and be granted access for her listing to be placed on Zillow, but only by firing her brokerage and agent. The risk to the seller of seeking a pre-listing marketing strategy for her property is losing the chance to be on Zillow if the property does not sell in the pre-marketing phase; the risk to the brokerage and agent of adopting a pre-marketing strategy for the property is losing the client, and the resulting network effects of that lost client.

[redacted]

[346] *8/26/2025 Alexander Deposition,* 47:6-17, explaining that Compass's agents, as independent contractors and not employees, are not beholden to Compass's selling strategies and use "their judgment as a fiduciary or a potential fiduciary" when proposing and executing listing strategies for sellers.

[redacted]

[redacted]

[redacted]

VIII. THE HARM TO REAL ESTATE SELLERS AND BUYERS FROM THE ZILLOW STANDARDS IS IRREPARABLE

228.

229. The opportunity for home sellers to engage in Private Exclusive and/or Coming Soon marketing before their listing is (if still unsold) posted on Zillow is valuable to home sellers with certain kinds of properties or certain preferences, as I have described at length in this report. Those benefits include the opportunity for the seller to delay exposing her property to the Zestimate and any misleading implications it may have for the property. The benefits also include the ability to delay exposing the property to negative inferences based on the days on market metric and the price drop statistics. And, moreover, the benefits of Compass's 3PM and other premarketing strategies include the opportunity for the seller and agent to collect information from buyers' and other agents' early reactions to the property that can provide guidance on a sound asking price given the seller's urgency and the condition of the property.

[redacted]

As I also explained, these benefits to sellers can also engender benefits to buyers, because they can facilitate better and faster matches between buyers' preferences and available properties.

230. Certainly, because the decision of how to market her property is always ultimately that of the client, and the client can choose conventional marketing even if the client engages a Compass agent, the opportunity to opt instead for Compass's 3PM or a premarketing strategy of another brokerage is a benefit to customers. Being deprived of that opportunity is, conversely, a harm.

231. These harms that I have described to sellers and buyers of real estate from the enactment of the Zillow Standards is inherently irreparable. The irreparability is for several reasons.

232. First, home sellers who would have benefited from the 3PM approach to marketing their properties could not know if the 3PM, if it were available unimpeded by the Zillow Standards, would have improved the outcome for their specific property. Each property is idiosyncratic; there is no uniform "market price" that applies to all properties, and therefore one cannot estimate on a market basis the effect on such a price of an alternative marketing approach. The effect would be different for each property.

233. Indeed, it is not possible for any seller to know with reasonable certainty whether the outcome for any specific property would have been better had it been pre-marketed. As I have discussed, harm to sellers can occur in the form of a lower price than would otherwise have been received, and/or in the form of the sales process taking a longer time, which imposes costs of maintaining the property, possibly mortgage payments, delayed receipt of the sales proceeds, and possibly delay in the ability of the seller to purchase another property (or even missed opportunities to bid on desired properties). Hence, it is not possible to know which home sellers were in fact harmed and which were unaffected. Moreover, estimating whether a sale of any given property would have occurred earlier would necessarily require speculation about the presence of buyers who would be interested in that property and whether such buyers would be in a position to make an acceptable offer. Hence, estimating whether any seller was harmed at all, let alone the magnitude of that seller's harm, could not be estimated without speculation.

234. Second, it is not possible to know with reasonable certainty which buyers were harmed as a result of depriving sellers of 3PM and similar marketing strategies. As already

discussed, buyers may be harmed if the sale price of the property they purchased was higher than it would have been had the property been pre-marketed, but determining which properties were so affected and by how much would require speculation for the reasons just discussed. In addition, determining whether the buyer would have found and successfully purchased a property that better suited the buyer at an acceptable price or more quickly is not a problem that is readily amenable to standard techniques of analysis. Attempting to estimate for each property whether the buyer was harmed by being deprived of the opportunity to purchase a property better suited to the buyer's preferences or of finding a suitable property more quickly would be a speculative endeavor.



Debra J. Aron, Ph.D.

September 12, 2025

APPENDIX A

Curriculum Vitae

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Dr. Debra J. Aron is a Vice President in the Competition Practice. Debra applies her expertise in economic and policy matters, including competition and antitrust analysis, intellectual property, class certification, and damages analysis, in both regulatory and litigation disputes. She has provided expert testimony for over 25 years in a variety of high-stakes federal, state, regulatory, and arbitration cases relating to competition and antitrust including market definition, antitrust liability, and price fixing damages, intellectual property damages including patents and trade secrets; class action damages and class certification including consumer fraud matters and TCPA; pricing; unjust enrichment; and economic cost analyses. She also has conducted competition analyses in several high-profile mergers and macroeconomic analyses of pricing and investment changes.

Publications

"On the Use of Conjoint Surveys with Market Simulation Analysis for Damages Estimation in Consumer Protection Class Action Litigation," with Jarrod Welch, June 6, 2025. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5283633.

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"Lessons from the Experience of Telecommunications Regulation for Regulation in the EU Package Delivery Industry, with Focus on Access Regulation," with Geoff A. Edwards, in POSTAL STRATEGIES: LOGISTICS, ACCESS, AND THE ENVIRONMENT, eds. Pier Luigi Parcu, Timothy J. Brennan, Victor Glass (Cham, Switzerland: Springer, 2023).

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"Access Regulation in Postal Delivery in the EU: Lessons from the History of Telecommunications Regulation," with Geoff A. Edwards, July 6, 2022. Available at SSRN: https://ssrn.com/abstract=4168393.

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"Modifications at HHIs for Vertical Supply Relationships" with Wenqing Li and James Langenfeld, White Paper submitted to European Commission, February 2000.

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"Bonus and Penalty Schemes as Equilibrium Incentive Devices, With Application to Manufacturing Systems," with Pau Olivella, *Journal of Law, Economics, and Organization* 10 (Spring 1994), pp. 1-34.

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"The Introduction of New Products," with Edward P. Lazear, *American Economic Review* 80, no. 2 (May 1990), pp. 421-426.

"Ability, Moral Hazard, Firm Size, and Diversification," *RAND Journal of Economics* 19 (Spring 1988), pp. 72-87.

"Worker Reputation and Productivity Incentives," *Journal of Labor Economics* 5, no. 4 (October 1987), part 2, pp. S87-S106.

"The Role of Managerial Ability and Moral Hazard in the Determination of Firm Size, Growth and Diversification," Ph.D. Dissertation, University of Chicago, August 1985.

Presentations

Panelist, "Structural and Functional Separation to Remedy Abuse of Dominance," 34th Annual International Bar Association Communications and Competition Law Conference, Paris, France, April 29, 2025.

Panelist, "Tuna Ahoy! Economic Analyses of Class Certification," 71st ABA Antitrust Law Spring Meeting, Washington, DC, March 2023.

"Lessons from the Experience of Telecommunications Regulation for Regulation in the EU Package Delivery Industry, with Focus on Access Regulation," with Geoff Edwards, 30th Conference on Postal and Delivery Economics, Rimini, Italy, May 2022.

Panelist, "Competition Within the Canadian Telecommunications Landscape," The Conference Board of Canada Virtual Leadership Roundtable, February 2022.

Panelist, Platform Antitrust, "On the Intersection Between Antitrust Enforcement and Other Regulatory Spheres as it Relates to Digital Platforms," Global Competition Review Live 9th Annual Antitrust Law Leaders Forum, Miami Beach, Florida, February 2020.

"Balancing Unquantified Benefits and Harms Under the Consumer Welfare Standard," The New York State Bar Association Antitrust Law Section, 2019 William Howard Taft Lecture, Commenter to the remarks of The Honorable Douglas H. Ginsburg, New York, New York, September 2019.

"The Impact on the U.S. Economy of Excluding Huawei from Participation in the U.S. Market for Wireless Network Equipment," Presentation at the Fiscal Year 2019 National Defense Authorization Act, Section 889, Public Meeting of Department of Defense, General Services Administration, and NASA, Washington, D.C., July 19, 2019.

Moderator, "Your Expert Is Your Friend: How to Effectively Deliver Expert Testimony," ABA: The Woman Advocate Committee Regional CLE Program: Raising the Bar, Chicago, Illinois, October 2018.

"Lessons from the Deregulation of the Airline and Telecommunications Industries," ABA Infrastructure and Regulated Industries Section, Dallas, Texas, August 2018.

"Economic Fundamentals: Vertical and Coordinated Effects in Mergers," ABA Section of Antitrust Law, Fundamentals of Antitrust Economics Series, Chicago, Illinois, July 2018.

Panelist, "Considerations for the Economists' Analysis in Opt-Out Relative to Class Action Litigation," ABA 5th Annual Western Regional CLE Program on Class Actions and Mass Torts, San Francisco, California, June 2018.

"Lessons from the Deregulation of the Airline and Telecommunications Industries," ABA Infrastructure and Regulated Industries Section, Fall Council Meeting, Palm Beach, Florida, October 2017.

"Economic Fundamentals: Vertical and Coordinated Effects in Mergers," ABA Section of Antitrust Law, Fundamentals of Antitrust Economics Series, Washington, D.C., May 2016.

Panelist, "Economic Fundamentals: Market Power," ABA Spring Meeting, Washington, D.C., April 2016.

"The Economic Impact of Electricity Price Increases in Puerto Rico," ABA Section of Public Utility, Communications and Transportation Law, Spring Council Meeting, Naples, Florida, March 2016.

Moderator, "Effective Cross-Examination of the Expert Witness: Practical Tips and Video Clips," ABA Annual Meeting, Chicago, Illinois, July 2015.

Moderator, "The Science of Persuasion: Practical Insights from Research on Expert Witness Effectiveness and Jury Decision-Making," ABA Section of Litigation Annual Conference, New Orleans, Louisiana, April 2015.

Panelist, "How to Manage Conversations with Expert Witnesses," ABA Section of Litigation, Environmental, Mass Torts, & Products Liability Litigation Committees' Joint CLE Seminar, Avon, Colorado, January 30, 2014.

"The Effects of Legacy Pricing Regulation on Adoption of Broadband Service in the United States," Federal Communications Commission, Washington, D.C., June 11, 2013.

Panelist, "A Primer: Getting the Most Out of Your Experts — Do's and Don'ts in the Use of Expert Witnesses: Learning from the Experts," ABA Section of Litigation Annual Conference, Chicago, Illinois, April 26, 2013.

"An Empirical Analysis of Regulator Mandates on the Pass Through of Switched Access Fees for In-State Long-Distance Telecommunications in the U.S.," with David E. Burnstein, Ana Danies, and Gerry Keith, Wesleyan University, Middletown, Connecticut, March 27, 2013.

"The Effects of Legacy Pricing Regulation on Adoption of Broadband Service in the United States," with Allan Ingraham, The 40th Research Conference on Communication, Information and Internet Policy (TPRC), September 22, 2012.

Panelist, “Two Decades of Daubert: Junk Science Replaced by Junk Rulings?” ABA Section of Litigation Annual Conference, Washington, DC, April 20, 2012.

“The Effects of Legacy Pricing Regulation on Adoption of Broadband Service in the United States,” with Allan Ingraham, New America Foundation, workshop on Defining and Measuring Meaningful Broadband Adoption, April 11, 2012, Washington, DC.

“Social Welfare Implications of Liability Rules in Major Environmental Damages Cases,” with Francis X. Pampush, American Bar Association Sections of Litigation and Criminal Justice Joint Annual Conference, April 15, 2011, Miami, Florida.

“Consumer Benefits of Intrastate Access Rate Reform in Minnesota,” Center for Science, Technology and Public Policy, Humphrey School of Public Affairs, University of Minnesota, January 26, 2011.

“An Empirical Analysis of Regulator Mandates on the Pass Through of Switched Access Fees for In-State Long-Distance Telecommunications in the U.S.,” with David E. Burnstein, Ana Danies, and Gerry Keith, The 38th Research Conference on Communication, Information and Internet Policy (Telecommunications Policy Research Conference), October 3, 2010, George Mason University Law School, Arlington, Virginia.

“Pricing Principles and Pricing Methodologies for Essential Facilities,” The 36th Research Conference on Communication, Information and Internet Policy (TPRC), September 27, 2008.

“Regulatory Policy and the Reverse Cellophane Fallacy,” with David E. Burnstein, 17th Biennial International Telecommunications Society Conference, Montréal, Québec, Canada, June 24-27, 2008.

“The Use of Economic Analysis in ‘Industry Expert’ Testimony,” CLE course, XPRT Forum, March 7, 2008.

Presentations to the New Jersey Board of Public Utilities and to the New Jersey Legislature’s Telecommunications Utilities Committee regarding the economic principles for a forward-looking regulatory agenda in light of the facts of competition nationwide and in New Jersey, and the costs of regulation, October – November 2006.

“The Interaction of Regulation with Economics and Financial Analysis in Litigation, Policy, and Strategy Consulting,” CLE course, XPRT Forum, October 7, 2006.

“Comments on ‘Economic Analysis in FCC Merger Proceedings,’” Conference on Economic Analysis and FCC Decisionmaking, presented by the Federal Communications Bar Association (FCBA) and Stanford Institute for Economic Policy Research (SIEPR), Washington, D.C., March 15, 2006.

“Economic Principles for Consumer Protection Rules,” Pri Telecom / Tech Briefing, Santa Clara, California, October 11, 2005.

"The Proper Treatment of Spare Network Capacity in Regulatory Cost Models," Presentation at the Advanced Workshop in Regulation and Competition, Center for Research in Regulated Industries, Skytop, Pennsylvania, May 2005.

"Telecommunications Regulation: What's Obsolete? What Will Become Obsolete?" Presentation at the State and City Telecom Reform Conference, Heartland Institute, Chicago, Illinois, December 2004.

"Trends in Telecommunications Demand & Supply," Presentation at the 46th Annual NARUC Regulatory Studies Program, Michigan State University, August 2004.

"The Economic Costs of Proposed Wireless Regulations in California," Presentation to Commissioners Brown and Kennedy, California Public Utilities Commission, San Francisco, California, April 2004.

"The Economics of UNE Pricing: Presentation to Staff," Ex parte presentation to the staff of the FCC, in FCC WC Docket No. 03-173: Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, March 2004.Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, March 2004.

"The High Cost of Proposed New Wireless Regulations," Presentation to the Pacific Research Institute conference "Regulating Wireless in California: Bill of Rights... or Wrongs?," San Francisco, California, April 2003.

"The TELRIC Showdown," Panelist, NARUC Staff Subcommittee on Telecommunications, 2002 Annual Convention, Chicago, Illinois, November 2002.

"Economic Principles for Efficient Pricing of Municipal Rights-of-Way," National Association of Telecommunications Officers and Advisors (NATOA), Chicago, Illinois, September 2002.

"Trends in Voice and Broadband Competition in Telecommunications Markets: Markets, Strategies, and Regulation," 82nd Annual Convention of the Indiana Telecommunications Association, Lexington, Kentucky, June 2002.

"Broadband Deployment in the United States," Emerging Opportunities in Broadband Symposium, Northwestern University, Evanston, Illinois, December 2001.

"Local Competition in Illinois," Illinois Telecommunications Symposium, Northwestern University, Evanston, Illinois, December 2000.

"Licensing and Access to Innovations in Telecommunications and Information Services," Telecommunications Policy Research Conference, Alexandria, Virginia, September 2000.

"Effecting a Price Squeeze Through Bundled Pricing," Federal Communications Commission, Washington, D.C., May 1999.

"Competitive and Strategic Use of Optional Calling Plans and Volume Pricing Plans," The Institute for International Research Conference for Competitive Pricing of Telecommunications Services, Chicago, Illinois, July 1998.

"Effecting a Price Squeeze Through Bundled Pricing," Consortium for Research in Telecommunications Policy Conference, University of Michigan, Ann Arbor, Michigan, June 1998.

"The Pricing of Customer Access in Telecommunications," Conference on Public Policy and Corporate Strategy for the Information Economy, Evanston, Illinois, May 1996.

"Diversification as a Strategic Preemptive Weapon," University of Iowa, Iowa City, Iowa, February 1994.

"Diversification as a Strategic Preemptive Weapon, "University of Buffalo, Buffalo, New York, February 1994.

"Diversification as a Strategic Preemptive Weapon," University of Southern California, Los Angeles, California, December 1993.

"Strategic Pricing," Winter Meetings of the Econometric Society, Discussant, Anaheim, California, December 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Michigan State University, Lansing, Michigan, November 1993.

"Diversification as a Strategic Preemptive Weapon," Rutgers University, New Brunswick, New Jersey, November 1993.

"Diversification as a Strategic Preemptive Weapon," University of California at Santa Cruz, Santa Cruz, California, November 1993.

"Diversification as a Strategic Preemptive Weapon," Graduate School of Business, Stanford University, Stanford, California, November 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Purdue University, West Lafayette, Indiana, September 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Summer Meetings of the Econometric Society, Boston University, Boston, Massachusetts, June 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," University of California, Department of Economics, Berkeley, California, May 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Stanford University, Graduate School of Business, Stanford, California, May 1993.

"Diversification as a Strategic Preemptive Weapon," Stanford University, Graduate School of Business, Stanford, California, April 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Hoover Institution, Stanford, California, April 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," University of California, Graduate School of Business, Berkeley, California, February 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Stanford University, Department of Economics, Stanford, California, February 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Hoover Institution, Stanford, California, January 1993.

"Pricing Strategies," Session Discussant, 1992 North American Winter Meeting of The Econometric Society, Anaheim, California, January 1992.

"Diversification as a Strategic Preemptive Weapon," University of Toronto, Toronto, Canada, November 1991.

"Diversification as a Strategic Preemptive Weapon," Queen's University, Kingston, Ontario, Canada, November 1991.

"Bonuses and Penalties as Equilibrium Incentive Devices, with Application to Manufacturing Systems," University of Chicago, Chicago, Illinois, June 1991.

"The Timing of Entry into New Markets," Summer Meetings of the Econometric Society, University of Pennsylvania, Philadelphia, Pennsylvania, June 1991.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," University of Chicago, Chicago, Illinois, April 1991.

"Bonuses and Penalties as Equilibrium Incentive Devices, with Application to Manufacturing Systems," Winter Meetings of the Econometric Society, Washington, D.C., December 1990.

"Corporate Spin-offs in an Agency Framework," University of Washington, Seattle, Washington, October 1990.

"The Timing of Entry Into New Markets," University of British Columbia, Vancouver, British Columbia, October 1990.

"Corporate Spin-offs in an Agency Framework," Texas A&M University, College Station, Texas, April 1990.

"Firm Organization and the Economic Approach to Personnel Management," Winter Meetings of the American Economic Association, New York, New York, December 1989.

"Corporate Spin-offs in an Agency Framework," Western Finance Association Meetings, Seattle, Washington, June 1989.

"Corporate Spin-offs in an Agency Framework," University of Rochester, Rochester, New York, May 1989.

"Corporate Spin-offs in an Agency Framework," North American Summer Meetings of the Econometric Society, Minneapolis, Minnesota, June 1988.

"Competition, Relativism, and Market Choice," North American Summer Meetings of the Econometric Society, Berkeley, California, June 1987.

"Competition, Relativism, and Market Choice," University of Chicago, Chicago, Illinois, April 1987.

"Rate Reform and Competition in Electric Power," Discussant, Conference on Competitive Issues in Electric Power, Northwestern University, Evanston, Illinois, March 1987.

"Worker Reputation and Productivity Incentives," New Economics of Personnel Conference, Arizona State University, Tempe, Arizona, April 1986.

"Ability, Moral Hazard, and Firm Diversification," Various Universities, 1985, 1994, including Yale University, University of Rochester, Stanford University, University of Minnesota, California Institute of Technology, Duke University, Northwestern University, Brown University, Harvard University, University of California - Los Angeles, University of Pennsylvania.

Academic Journal Refereeing

Dr. Aron has served as a referee for The Rand Journal of Economics, the Journal of Political Economy, the Journal of Finance, the American Economic Review, the Quarterly Journal of Economics, the Journal of Industrial Economics, the Journal of Economics and Business, the Journal of Economic Theory, the Journal of Labor Economics, the Review of Industrial Organization, the European Economic Review, the Journal of Economics and Management Strategy, the International Review of Economics and Business, the Quarterly Review of Economics and Business, Management Science, the Journal of Public Economics, the Journal of Institutional and Theoretical Economics, and the National Science Foundation.

Testimony (2011-2025)

Prefiled Written Rebuttal Testimony of Dr. Debra J. Aron in In the Matter of the Joint Application of Verizon Communications Inc., Frontier Communications Parent, Inc., Frontier California Inc., Citizens Telecommunications Company of California Inc., Frontier Communications of the Southwest Inc., Frontier Communications Online and Long Distance Inc., and Frontier Communications of America, Inc. For Approval of the Transfer of Control of Frontier California Inc. (U1002C), Citizens Telecommunications Company of California (U1024C), Frontier Communications of the Southwest Inc. (U1026C), Frontier Communications Online and Long Distance Inc. (U7167C), and Frontier Communications of America, Inc. (U5429C), to Verizon Communications Inc. Pursuant to California Public Utilities Code Section 854., Before the Public Utilities Commission of the State of California, Application No.: A.24-10-006, May 15, 2025.

Prefiled Written Testimony of Dr. Debra J. Aron in In the Matter of the Joint Application of Verizon Communications Inc., Frontier Communications Parent, Inc., Frontier California Inc., Citizens Telecommunications Company of California Inc., Frontier Communications of the Southwest Inc., Frontier Communications Online and Long Distance Inc., and Frontier Communications of America, Inc. For Approval of the Transfer of Control of Frontier California Inc. (U1002C), Citizens Telecommunications Company of California (U1024C), Frontier Communications of the Southwest Inc. (U1026C), Frontier Communications Online and Long Distance Inc. (U7167C), and Frontier Communications of America, Inc. (U5429C), to Verizon Communications Inc. Pursuant to California Public Utilities Code Section 854., Before the Public Utilities Commission of the State of California, Application No.: A.24-10-006, January 24, 2025.

Deposition of Debra J. Aron in ERIS Information Inc, et al., v. The Sanborn Library LLC, et al., United States District Court for the Southern District of New York, No. 1:19-cv-02049-JHR-OTW, February 29, 2024 and March 1, 2024.

Prefiled Written Testimony of Dr. Debra J. Aron in Thomas Fire and Debris Flow Cost Recovery Application – Economic Policy Testimony, Before the Public Utilities Commission of the State of California, Application No.: A.23-08-013, August 22, 2023.

Deposition of Debra J. Aron in Dominique Freeman, et al., v. Mam USA Corporation, United States District Court for the Northern District of Illinois, Eastern Division, No. 1:20-cv-01834, July 26, 2023.

Deposition of Debra J. Aron in Mary Bilek, et al., v. National Congress of Employers, Inc., et al., United States District Court for the Northern District of Illinois, No. 1:16-cv-08637, November 16, 2022.

Deposition of Debra J. Aron In Re Broiler Chicken Antitrust Litigation, United States District Court for the Northern District of Illinois, No. 1:16-cv-08637, June 22, 2022.

Testimony of Debra J. Aron regarding Reciprocal Switching, Before the Surface Transportation Board, STB Ex Parte No. 711 (Sub-No. 1), March 15, 2022.

Deposition of Debra J. Aron in Jenny Brown, et al. v. DirecTV, LLC, United States District Court Central District of California, Western Division, No. 2:13-cv-01170-DMG-E, June 18, 2021.

Deposition of Debra J. Aron in Robin Breda, et al. v. Cellco Partnership d/b/a Verizon Wireless, United States District Court for the District of Massachusetts, Civil Action No. 1:16-cv-11512-DJC, June 3, 2021.

Deposition of Debra J. Aron in Naomi Gonzales v. Agway Energy Services, LLC, United States District Court for the Northern District of New York, Case No. 5:18-CV-235 (MAD/ATB), October 22, 2020.

Trial Testimony of Debra J. Aron in Sumotext Corp. v. Zoove, Inc. et al., United States District Court, Northern District of California, San Jose Division, Case No. 5:16-cv-01370-BLF-NMCx, March 3, 2020.

Trial Testimony of Debra J. Aron in Motorola Solutions, Inc. et al. v. Hytera Communications Corporation Ltd. et al., United States District Court for the Northern District of Illinois, Eastern Division, Case No. 1:17-cv-01973, February 3-4, 2020.

Hearing Testimony of Debra J. Aron in Order Instituting Rulemaking into the Review of California High Cost Fund-A Program, Before the Public Utilities Commission of the State of California, Rulemaking 11-11-007, January 29-30, 2020.

Prefiled Written Testimony of Debra J. Aron in Order Instituting Rulemaking into the Review of California High Cost Fund-A Program, Before the Public Utilities Commission of the State of California, Rulemaking 11-11-007, November 15, 2019.

Trial Testimony of Debra J. Aron in Hewlett-Packard Co. v. Quanta Storage Inc. et al., United States District Court for the Southern District of Texas, Houston Division, Case No. 4:18-cv-00762, October 21, 2019.

Deposition of Debra J. Aron in Motorola Solutions, Inc. et al. v. Hytera Communications Corporation Ltd. et al., United States District Court for the Northern District of Illinois, Eastern Division, Case No. 1:17-cv-01973, September 20, 2019.

Deposition of Debra J. Aron in Jonathan Coffey et al. v. WCW & Air, Inc. et al., United States District Court, for the Northern District of Florida, Pensacola Division, Case No. 3:17-cv-90-TKW-HTC, September 13, 2019.

Deposition of Debra J. Aron in Sumotext Corp. v. Zoove, Inc. et al., United States District Court, Northern District of California, San Jose Division, Case No. 5:16-cv-01370-BLF-NMCx, August 1, 2019.

Deposition of Debra J. Aron in Waddell Williams, et al. v. Bluestem Brands, Inc., United States District Court, Middle District of Florida, Tampa Division, Case No. 8:17-CV-1971-T-27AAS, September 21, 2018.

Deposition of Debra J. Aron in Robert Hossfeld, et al. v. Compass Bank, N.A., et al., United States District Court, Northern District of Alabama, Southern Division, Case No. 2:16-CV-2017-ACA, September 7, 2018.

Deposition of Debra J. Aron in Ventures Edge legal, PLLC, et al. v. GoDaddy.com, LLC, et al., United States District Court, District of Arizona, Case No. 2:15-cv-02291-GMS, January 30, 2018.

Deposition of Debra J. Aron in Rajesh Verma, et al. v. Memorial Healthcare Group Inc., et al., United States District Court, Middle District of Florida, Jacksonville Division, Case No. 3:16-CV-00427-HLA-JRK, June 27, 2017.

Trial Testimony of Debra J. Aron in T-Mobile USA, Inc. v. Huawei Device, USA, Inc., et al., In the United States District Court for the Western District of Washington at Seattle, Case No. C14-1351-RAJ, May 12, 2017.

Deposition of Debra J. Aron in Re Optical Disk Drive Antitrust Litigation, Hewlett-Packard Company v. Toshiba Corp., et al., United States District Court, Northern District of California, MDL Docket No. 3:10-MD-02143-RS, Case No. 3:13-cv-05370-RS, March 23, 2017.

Deposition of Debra J. Aron in Peerless Network, Inc., et al. v. AT&T Corp., In the United States District Court for the Southern District of New York, Case No. 15 CV 870, February 17, 2017.

Trial Testimony of Debra J. Aron in Thomas H. Krakauer, et al. v. Dish Network, L.L.C., In the United States District Court for the Middle District of North Carolina, Durham Division, Case No. 1:14-CV-333, January 17, 2017.

Deposition of Debra J. Aron in T-Mobile USA, Inc. v. Huawei Device, USA, Inc., et al., In the United States District Court for the Western District of Washington at Seattle, Case No. C14-1351-RAJ, September 29, 2016.

Deposition of Debra J. Aron in Southwestern Bell Telephone Co., et al. v. V247 Telecom, LLC, et al., In the United States District Court for the Northern District of Texas, Dallas Division, Case No. 3:14-CV-01409-M, August 31, 2016.

Hearing Testimony of Dr. Debra J. Aron in Order Instituting Investigation into the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Questions raised in the Limited Rehearing of Decision 08-09-042, Before the Public Utilities Commission of the State of California, Investigation 15-11-007, July 20, 2016.

Prefiled Written Rebuttal Testimony of Dr. Debra J. Aron in Order Instituting Investigation into the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Questions raised in the Limited Rehearing of Decision 08-09-042, Before the Public Utilities Commission of the State of California, Investigation 15-11-007, July 15, 2016.

Prefiled Written Testimony of Dr. Debra J. Aron in Order Instituting Investigation into the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Questions raised in the Limited Rehearing of Decision 08-09-042, Before the Public Utilities Commission of the State of California, Investigation 15-11-007, June 1, 2016 and March 5, 2016.

Deposition of Debra J. Aron in Ramzy Ayyad, et al. v. Sprint Spectrum, L.P., In the Superior Court of the State of California for the County of Alameda, Case No.: RG03-121510, March 29, 2016.

Deposition of Debra J. Aron in Avnet, Inc. and BSP Software, LLC v. Motio, Inc., In the United States District Court for the Northern District of Illinois, Eastern Division, Case No.: 1:12-cv-2100, March 9, 2016.

Deposition of Debra J. Aron in Lena K. Thodos and David Miller, et al. v. Nicor, Inc., et al., In the Circuit Court of Cook County, Illinois County Department, Chancery Division, Case No.: 1:12-cv-2100, February 22, 2016.

Deposition of Debra J. Aron in Henry Espejo, et al. v. Santander Consumer USA, Inc., In the United States District Court for the Northern District of Illinois, Eastern Division, Case No.: 1:11-cv-08987, January 12, 2016.

Deposition of Debra J. Aron in Rachel Johnson, et al., v. Yahoo!, Inc. and Zenaida Calderin, et al. v. Yahoo!, Inc., in the United States District Court for the Northern District of Illinois, Eastern Division, Case Nos.: 14-cv-2028 and 14-cv-2753 and Rafael David Sherman, et al., v. Yahoo!, Inc., In the United States District Court for the Southern District of California, Case No.: 13-CV-00041-GPC-WVG (Combined), June 23, 2015.

Trial Testimony of Debra J. Aron in Salsgiver Communications, Inc., et al., v. Consolidated Communications Holdings, Inc., et al., In the Court of Common Pleas, Allegheny County, Pennsylvania, Case No. No. GD 08-7616, May 2015.

Trial Testimony of Debra J. Aron in Sprint Communications Company L.P. v. Comcast Cable Communications, LLC, et al., In the United States District Court for the District of Delaware, Case No. 1:12-cv-01013-RGA, February 3-4, 2015.

Deposition of Debra J. Aron in Herbert Chen et al. v. Robert Howard-Anderson et al., In the Court of Chancery of the State of Delaware, Case No. C.A. 5878-VCL, December 16, 2014.

Deposition of Debra J. Aron in Sprint Communications Company L.P. v. Comcast Cable Communications, LLC, et al., In the United States District Court for the District of Delaware, Case No. 1:12-cv-01013-RGA, November 20, 2014.

Testimony of Debra J. Aron in Bayer CropScience LP v. Albaugh, Inc., et al., Before the American Arbitration Association, Case No. 16-171-Y-00511-12, October 20-21, 2014.

Trial Testimony of Debra J. Aron in Comcast IP Holdings I, LLC v. Sprint Communications Company L.P., et al., In the United States District Court for the District of Delaware, Case No. 12-205-RGA (CJB), October 9, 2014.

Prefiled Written Reply Testimony of Debra J. Aron in The Utility Reform Network v. Pacific Bell Telephone Company, Before the Public Utilities Commission of the State of California, Case No. 13-12-005, October 3, 2014.

Deposition of Debra J. Aron in Amanda Balschmiter, et al., v. TD Auto Finance, LLC, In the United States District Court, Northern District of Illinois, Eastern Division, Case No. 13cv1186, September 10, 2014.

Prefiled Written Testimony of Debra J. Aron in The Utility Reform Network v. Pacific Bell Telephone Company, Before the Public Utilities Commission of the State of California, Case No. 13-12-005, August 22, 2014.

Deposition of Debra J. Aron in Grant Birchmeier, et al., v. Caribbean Cruise Line, Inc., et al., In the United States District Court, Northern District of Illinois, Eastern Division, Case No. 12 CV 4069, July 19, 2014.

Deposition of Debra J. Aron in Comcast IP Holdings I, LLC v. Sprint Communications Company L.P., et al., United States District Court for the District of Delaware, Case No. 12-205-RGA(CJB), July 11, 2014.

Deposition of Debra J. Aron in In re: Methyl Tertiary Butyl Ether Products Liability Litigation, Commonwealth of Puerto Rico, et al., v. Shell Oil Co., et al., In the United States District Court, Southern District of New York, Case No. 07 Civ. 10470, May 27, 2014.

Depositions of Debra J. Aron in In re: Polyurethane Foam Antitrust Litigation, General Motors, L.L.C. v. Carpenter Co., et al., In the United States District Court for the Northern District of Ohio, Western Division, Case No. 3:12-pf-10027-JZ, April 30, 2014 and September 8, 2014.

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Deposition of Debra J. Aron in Seth Warnick, et al., v. Dish Network, L.L.C., In the United States District Court, District of Colorado, Civil Action No. 12-cv-01952-WYD, September 25, 2013.

Deposition of Debra J. Aron in In re: Methyl Tertiary Butyl Ether ("MTBE") Product Liability Litigation, New Jersey Department of Environmental Protection, et al. v. Atlantic Richfield Co., et al., In the United States District Court, Southern District of New York, No. 08 Civ. 312, May 29, 2013.

Prefiled Written Testimony and Reply Testimony of Debra J. Aron in In the Matter of the Petition Filed by ALASCOM, INC. d/b/a AT&T ALASKA to be Relieved of its Carrier of Last Resort Responsibilities in Certain Locations in Southwest Alaska, Before the Regulatory Commission of Alaska, Docket No. U-12-127, April 1, 2013 and January 17, 2013.

Deposition of Debra J. Aron in William Douglas Fulghum, et al., v. Embarq Corporation, et al., In the United States District Court for the District of Kansas, Civil Action No.: 07-CV-2602 (EFM/JPO), November 29, 2011.

Deposition of Debra J. Aron in Southwestern Bell Telephone Company, et al., v. IDT Telecom, Inc., et al., In the United States District Court, Northern District of Texas, Dallas Division, Civil Action No. 3-09-CV-1268-P, November 10, 2011.

Direct and Rebuttal Testimony of Debra J. Aron in the Matter of Petition of Sprint to Reduce Intrastate Switched Access Rates of Incumbent Local Exchange Carriers in North Carolina, Before the North Carolina Utilities Commission, Docket No. P-100, Sub 167, August 18, 2011 and September 27, 2011.

Prefiled Written Testimony and Rebuttal Testimony of Debra J. Aron in the Matter of: An Investigation Into the Intrastate Switched Access Rates of All Kentucky Incumbent and Competitive Local Exchange Carriers, Commonwealth of Kentucky, Before the Public Service Commission, Docket No. 2010-00398, September 30, 2011, and July 8, 2011.

Testimony of Debra J. Aron before the Utilities Committee of the Kansas Legislature regarding the status of competition in telecommunications markets in Kansas, February 2011.

Testimony of Debra J. Aron before the Telecommunications Committee of the Legislature of the state of Washington regarding the consumer benefits and competitive effects of switched access reform, February 2011.

Professional organizations

Member, American Economic Association

Member, Econometric Society

Associate Member, American Bar Association

Past Member, Telecommunications Policy Research Conference Program Committee

Honors and awards

Guthman Research Chair, Kellogg Graduate School of Management, Northwestern University, Summer 1994.

Hoover National Fellowship, Hoover Institution, 1992-1993.

Faculty Research Fellow, National Bureau of Economic Research, 1987-1990.

PepsiCo Research Chair, Northwestern University, 1990.

Kellogg Research Professorship, Northwestern University, 1989.

National Science Foundation Research Grant, 1987-1988.

Buchanan Chair, Kellogg Graduate School of Management, Northwestern University, 1987-1988.

IBM Chair, Kellogg Graduate School of Management, Northwestern University, 1986-1987.

Teaching

Courses taught: Pricing Strategy; Information, Communication, and Competition (economics of strategy and competition); Intermediate Microeconomic Theory; Managerial Economics (microeconomic theory as applied to business strategy and decision making) at the M.B.A. level, The Economics of Information at the Ph.D. level.

Also qualified to teach: graduate Microeconomic Theory; Industrial Organization and Labor Economics; the Economics of Personnel; Public Finance; Project Evaluation; Applied Game Theory.

Professional history

2019–Present	*Vice President*, Charles River Associates, Chicago, IL
2018–2019	*Principal and Senior Managing Director*, Ankura Consulting Group, Chicago, IL
2010-2018	*Principal and Managing Director*, Navigant Economics, Chicago, IL
2000-2016	*Adjunct Associate Professor*, Northwestern University, Evanston, IL
1995-2010	*Managing Director*, LECG, LLC, Evanston, IL
1993-1995	*Visiting Assistant Professor of Managerial Economics and Decision Sciences*, Northwestern University, Evanston, IL
1985-1992	*Assistant Professor of Managerial Economics and Decision Sciences*, Northwestern University, Evanston, IL
1992-1993	*National Fellow*, Hoover Institution at Stanford University, Stanford, CA
1983-1984	*Instructor*, University of Chicago Department of Economics, Chicago, IL
1979-1980	*Staff Economist*, Civil Aeronautics Board, Office of Economic Analysis, Washington, D.C.

APPENDIX B

List of Materials Relied Upon

List of Materials Relied Upon

Court Documents

Complaint, *Compass, Inc. v. Zillow, Inc., et al.*, United States District Court, Southern District of New York, Case No.: 1:25-cv-05201, June 23, 2025.

Defendants' Opposition to Plaintiff's Motion for Preliminary Injunction, *Compass, Inc. v Zillow, Inc, et al.,* United States District Court for the Southern District of New York, Case No.: 1:25-cv-05201-JAV, July 17, 2025.

Notice of Motion for Preliminary Injunction, *Compass, Inc. v. Zillow, Inc., et al.*, United States District Court, Southern District of New York, Case No.: 1:25-cv-05201-JAV, June 27, 2025.

Depositions

Deposition of Elizabeth Ashton Alexander, *Compass, Inc. v. Zillow, Inc., et al*, In the United States District Court for the Southern District of New York, Case No.: 1:25-cv-05201-JAV, August 26, 2025.

Deposition of Errol Samuelson, *Compass, Inc., vs. Zillow, Inc., et al.*, United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, August 28, 2025.

Deposition of Jeremy Hofmann, *Compass, Inc. v. Zillow, Inc., et al,* United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, August 29, 2025.

Deposition of Jeremy Wacksman, *Compass, Inc., vs. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, August 26, 2025.

Deposition of Kathleen Berroth, *Compass, Inc., vs. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, September 9, 2025.

Deposition of Neda Navab-Boshehri, *Compass, Inc., vs. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, September 3, 2025.

Deposition of Robert Reffkin, *Compass, Inc., vs. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, September 5, 2025.

Deposition of Rory Golod, *Compass, Inc., vs. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, August 29, 2025.

Deposition of Soham Bhonsle, *Compass, Inc. v. Zillow, Inc., et al.*, United States District Court, Southern District of New York, Case No.: 1:25-cv-05201, August 19, 2025.

Deposition of Steve Lake (Rough), *Compass, Inc. v. Zillow, Inc., et al.*, United States District Court, Southern District of New York, Case No.: 1:25-cv-05201, September 11, 2025.

Deposition of William Hardy, *Compass, Inc., vs. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, September 4, 2025.

Declarations

Declaration of E. Ashton Alexander in Support of Plaintiff's Motion for a Preliminary Injunction, *Compass, Inc, v. Zillow, Inc., et al.*, United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, September 12, 2025.

Declaration of Kristy Hairston in Support of Plaintiff's Motion for a Preliminary Injunction, *Compass, Inc, v. Zillow, Inc., et al.*, United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, June 26, 2025.

Declaration of Will Hardy in Support of Plaintiff's Motion for a Preliminary Injunction, *Compass, Inc, v. Zillow, Inc., et al*., United States District Court Southern District of New York, Case No. 1:25-cv-05201-JAV, June 26, 2025.

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