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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

In re Seagate Technology Holdings plc Securities Litigation	Case No. 3:23-cv-03431-RFL <u>CLASS ACTION</u> **DECLARATION OF MATTHEW D. CAIN, PH.D.** **JUDGE:** Hon. Rita F. Lin **DATE:** July 7, 2026 **TIME:** 10:00 a.m. **DEPT.:** Courtroom 4 - 17th Floor

I, Matthew D. Cain, Ph.D., hereby declare as follows:

I. Introduction

1. I am presently a Senior Fellow at the New York University School of Law.

2. During the course of my career, I have been retained as an expert in a wide range of finance and investment-related matters, including securities litigation, corporate disclosures, M&A litigation, private equity, valuation, insider trading, and corporate governance. I have provided economic analysis, consulting, and expert witness testimony on a variety of finance topics for investigations, settlement negotiations, and trials. Of particular relevance to this Action,[1] I have been retained as an expert in over four dozen actions asserting claims under the federal securities laws. The majority of these cases were, as here, securities class actions involving alleged violations of Section 10(b) of the Securities Exchange Act and Rule 10b-5 promulgated thereunder. My work in these matters has included, as here, estimating class-wide damages, conducting event studies, and preparing plans of allocation for distribution of class settlement proceeds. I have served as both a consulting expert and a testifying expert, including in cases in this District, elsewhere in the Ninth Circuit, and nationwide. I have also served as an expert in administrative enforcement actions brought by the U.S. Securities and Exchange Commission ("SEC").

3. Prior to becoming a Senior Fellow at New York University, I worked for several years at the SEC, where I was an advisor to Commissioner Jackson and a financial economist in the Office of Litigation Economics. Prior to joining the SEC, I was an assistant professor of finance at the University of Notre Dame Mendoza College of Business and Purdue University's Krannert School of Management. I obtained my Ph.D. in Finance in August 2007 from Purdue University, and my B.S. in Finance in May 2001 from Grove City College.

[1] Unless otherwise defined in this declaration, capitalized terms have the same definitions as ascribed in the Stipulation and Agreement of Settlement (the "Stipulation").

4. I have published research in numerous journals on topics that include investment banking and fairness opinion valuations, merger contracts and terminations, corporate governance and shareholder activism, hostile takeovers, earnout clauses, merger-related litigation, and management buyouts. My research has been cited in forums such as the U.S. Chamber Institute for Legal Reform, amicus briefs to the U.S. Supreme Court, trial verdicts of the Supreme Court of the State of New York and the Delaware Chancery Court, and The International Comparative Legal Guide to Mergers and Acquisitions. My research has also been highlighted in media outlets such as *The Wall Street Journal*, *The New York Times*, *The Financial Times*, and *Forbes*. Additional details regarding my academic and professional experience are listed in my CV, attached as **Appendix A**.

II. Scope of Engagement

5. In connection with this Action, I was retained by counsel for Lead Plaintiffs ("Co-Lead Counsel") to conduct various economic analyses, including to assess market efficiency and an appropriate damages methodology, to calculate artificial inflation, to create a class-wide damages analysis, and to design a proposed "Plan of Allocation" to fairly and equitably allocate the net Settlement proceeds among eligible Settlement Class Members (i.e., Settlement Class Members who or which submit a valid Claim Form to the Claims Administrator).

6. I have received the Court's Order Requesting Supplemental Filing, dated June 18, 2026. In relation to this order, I have been asked by Co-Lead Counsel to: a) explain how I arrived at the artificial inflation amounts, or the artificial inflation ribbon, in Table A of the Plan of Allocation, which represents an estimate of the amount of inflation in Seagate's share price for each day of the Class Period, and b) explain how I estimated the Settlement Class's likely aggregate trial recovery of "approximately $412 million, after giving effect to certain factors, including disaggregation of confounding information on the corrective disclosure dates and netting." Below, I provide detailed explanations in response to these questions.

III. Calculation of the Artificial Inflation Ribbon

7. Lead Plaintiffs allege that throughout the Class Period, Defendants misled investors by concealing Seagate's illegal exports of hard disk drives ("HDDs") to Huawei. Specifically, Defendants allegedly engaged in a scheme and made false and misleading statements and/or omissions to convince investors that Seagate was compliant with all applicable U.S. export restrictions, including the Foreign Direct Product Rule, when in fact the Company had illegally sold HDDs to Huawei. Lead Plaintiffs also allege that during the Class Period, Defendants engaged in a scheme and made false and misleading statements and/or omissions to mislead investors regarding the extent to which Seagate's revenue was attributable to, or reliant on, HDD sales to Huawei.

8. The per-share artificial inflation ribbon used in the Plan of Allocation is based on and consistent with my assessment of the estimated per-share damages that Settlement Class Members allegedly incurred. In connection with the alleged scheme, misstatements, and omissions, my estimation of artificial inflation is based on an assessment of the inflation caused by both (a) Seagate's quarterly earnings announcements that were allegedly tainted by illegal sales and (b) the impact of the revelation that Seagate had made alleged misrepresentations more broadly concerning its compliance with export regulations covering HDD sales.

9. For the front-end inflation caused by Seagate's quarterly earnings announcements the per-share artificial inflation is calculated as the closing stock price after each of these earnings announcements, multiplied by the percentage of announced quarterly revenues that were comprised of illegal sales to Huawei. **Exhibit 1** reports these calculations. For example, 3.06% of 1Q 2021 revenues were comprised of illegal sales to Huawei when they were announced on October 22, 2020 (after hours). In contrast, 13.42% of 3Q 2021 revenues were comprised of illegal sales to Huawei when they were announced on April 22, 2021 (after hours).

10. In the next step, I calculate artificial inflation in Seagate's common stock prices between quarterly announcements based on these sales figures, by multiplying the percentage of illegal sales in column [7] of **Exhibit 1** with Seagate's closing stock price in column [4] of **Exhibit**

1. This is shown in column [9] of **Exhibit 2**. I then allow for artificial inflation beyond October 22, 2021 to be maintained until the alleged corrective disclosures, which I describe further below.

11. In order to quantify the amount of artificial (i.e., fraud-related) inflation dissipated following the alleged corrective disclosures, I used a technique called an "event study," a statistical technique often relied upon by academics both inside and outside of the litigation context to establish a causal connection between new company-specific news and movements in the market price of a company's securities. An event study is a well-accepted statistical method utilized for over 50 years to isolate the impact of information on the market prices of securities. I understand that courts have routinely accepted the event-study methodology in determining the amount of artificial inflation in a security's price. For example:

> Performing an event study can thus help an expert to determine at least two things. First, assuming that the defendant company fraudulently concealed information, the event study shows how much money the fraud caused shareholders to lose. Identifying residual returns on days when allegedly concealed information reached the market indicates that the supposedly withheld information caused the company's stock price to change. If the release of allegedly withheld information causes a stock price decrease, shareholders who purchased the defendant company's stock after the alleged fraud but before the revelation may have paid a higher price than they would have but for the defendant's fraudulent conduct — known as an "artificial[ly] inflat[ed]" price.
>
> Second, the event study helps the expert "calculat[e] what the price of [the defendant company's] security would have been had the alleged wrongful conduct not occurred," by estimating the amount of artificial inflation in the company's stock price over time. Just as the existence of a residual return on a day when the market discovers allegedly concealed information shows that the company's stock price was artificially inflated, the size of the residual return on such a day provides evidence of the amount by which concealing that particular information inflated the defendant company's stock. As a result, if concealed information reached the market through multiple corrective disclosures, the sum of the residual returns associated with those disclosures provides evidence about the amount of artificial inflation in the company's stock after the fraud but before those corrections. Thus, an expert using an event study can estimate the amount of artificial inflation in the defendant company's stock price when shareholders purchased their shares, which is equivalent

> to estimating the difference between what those investors should have paid for the shares but-for the alleged fraud, and what they actually paid.[2]

12. Lead Plaintiffs allege that the relevant truth concealed by the alleged scheme, false and misleading statements, and/or omissions was revealed to investors on March 8, 2022, July 21, 2022, October 26, 2022 and April 19, 2023.[3] On March 8, 2022, Defendant Mosley stated that Seagate would be "at the lower end" of its financial guidance ranges for the upcoming quarter as a result of "disruption in the Chinese market" for HDDs.[4] My event study results, reflected in **Exhibit 3**, calculate that after controlling for market and industry effects on this date (i.e., disaggregating industry and market confounding information), Seagate's stock price declined by $8.79. Because this amount exceeds the amount of illegal sales-based artificial inflation maintained in the stock price as of March 7, 2022, which was $8.10 per share (as reflected in column [9] of **Exhibit 2**), I do not allow more than $8.10 of artificial inflation tied to the illegal sales allegations to be dissipated on March 8, 2022. For purposes of the Plan of Allocation, I estimate the inflation dissipated on March 8, 2022 as $4.84 per share, and allow the remaining $3.26 of artificial inflation to be dissipated following the next alleged corrective disclosure, on July 21, 2022, based on the relative magnitude of abnormal declines on March 8, 2022 and July 22, 2022.[5]

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[2] *In re Pfizer, Inc. Sec. Litig.*, 819 F.3d 642, 649 (2d Cir. 2016).

[3] Complaint ¶¶ 122-127, 261-270.

[4] *Id*. ¶¶ 112-113.

[5] Specifically, the March 8, 2022 abnormal dollar decline of $8.79 represents 59.7% of the declines across the two dates and the July 22, 2022 decline of $5.93 represents 40.3% of the declines across the two dates. I thus calculate 59.7% * $8.10 = $4.84 of inflation dissipated on March 8, 2022 and 40.3% * $8.10 = $3.26 of inflation dissipated on July 22, 2022. However, for purposes of estimating the likely recoverable damages at trial in the following section, I allow all of the $8.10 of artificial inflation tied to illegal sales to be dissipated on March 8, 2022, which is consistent with a risk-adjusted approach to damages and Defendants' arguments raised in opposition to class certification that the July 22, 2022 disclosure could not have revealed any negative information related to the alleged misstatements. *See* Dkt. No. 56, at 19-20.

13. On July 21, 2022, Seagate reported fourth quarter 2022 financial results, including revenues that fell short of the midpoint of its guidance range and represented a 12.8% year-over-year decline. Lead Plaintiffs allege that the result reflected the continuing impact of the cessation of sales to Huawei.[6] My event study results, reflected in **Exhibit 3**, calculate that after controlling for market and industry effects on this date (i.e., disaggregating industry and market confounding information), Seagate's stock price declined by $5.93 per share. As noted above, I estimate the artificial inflation dissipated on July 22, 2022 as the remaining $3.26 of inflation per share tied to illegal sales on this date.

14. On October 26, 2022, Seagate disclosed that it had received a Proposed Charging Letter from the U.S. Department of Commerce's Bureau of Industry and Security ("BIS") alleging that the Company had violated U.S. export control regulations.[7] My event study results, reflected in **Exhibit 3**, calculate that after controlling for market and industry effects on this date (i.e., disaggregating industry and market confounding information), Seagate's stock price declined by $3.97. Finally, on April 19, 2023, Seagate and BIS announced a settlement of the allegations asserted by BIS in the Proposed Charging Letter, at which point the full extent of Seagate's illegal HDD sales was allegedly revealed, along with the resulting penalty.[8] In the settlement agreement, Seagate admitted to illegally selling more than $1.1 billion worth of HDDs to Huawei, and BIS imposed a $300 million civil penalty.[9] My event study results, reflected in **Exhibit 3**, calculate that after controlling for market and industry effects on this date (i.e., disaggregating industry and market confounding information), Seagate's stock price declined by $5.30.

15. I value the compliance-based inflation using the $300 million civil penalty imposed by the BIS. I calculate a per share valuation as $300 million divided by 206,454,363 shares outstanding, or $1.45 per share. Seagate's stock price dropped by roughly $1 per share after the

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[6] Complaint ¶¶ 117-118, 264.

[7] *Id*. ¶¶ 122, 266.

[8] *Id*. ¶¶ 126, 268.

[9] *Id*. ¶ 126.

penalty was announced at 4:44pm ET on April 19, 2023, but before the disappointing earnings (confounding information) announced at 8:05am ET on April 20, 2023. I assume that the remainder of the $0.45 per share price impact was dissipated following the prior disclosure of the October 26, 2022 BIS charging letter. Thus, **Exhibit 2** reflects that the compliance-based artificial inflation was $1.45 per share from September 14, 2020 through October 25, 2022, $1.00 per share from October 26, 2022 through April 19, 2023, and $0 after April 19, 2023.

16. Column [11] of **Exhibit 2** adds together the illegal sales-based inflation and the compliance-based inflation. This artificial inflation ribbon represents my calculation of the artificial inflation present in Seagate common stock throughout the Class Period based on the analyses described above. Table A of the Plan of Allocation presents this artificial inflation as the input to the out-of-pocket damages.

IV. Estimating the Settlement Class's Aggregate Common Stock Damages

17. Investors who purchased Seagate common stock while the alleged misinformation was in the market suffered a loss that otherwise would have occurred prior to their purchase, and therefore the Defendants' alleged scheme, misrepresentations, and/or omissions represent the but-for cause of the Settlement Class's alleged economic losses.

18. I used the standard and well-established formula for assessing class members' individual damages, the "out-of-pocket" method, which relies on the event study's estimate of artificial inflation and measures damages as the artificial inflation per share at the time of purchase less the artificial inflation per share at the time of sale, provided class members held the security through at least one of the alleged corrective disclosures. This approach ensures that only investors who were damaged by the dissipation of artificial inflation are included in the estimation of common stock damages.

19. For example, if an investor purchased Seagate common stock on October 22, 2021 when there was $9.55 per share of artificial inflation embedded in the stock price, but sold those shares before the March 8, 2022 alleged corrective disclosure dissipated some of this artificial inflation, then that investor would have zero damages. In other words, in calculating damages,

only investors who held their shares through at least one of the alleged fraud-related disclosures and therefore suffered an alleged fraud-related investment loss and suffered damages under application of the standard formula are eligible for compensation.

20. By comparison, if another investor purchased Seagate common stock on October 22, 2021 when there was $9.55 of artificial inflation, but sold on July 22, 2022, after two fraud related disclosures, when the artificial inflation had dissipated down to $1.45 per share, then that investor would have $8.10 per share in damages ($9.55 of inflation at time of purchase minus $1.45 per share of inflation at the time of sale).

21. The calculation of damages also incorporates the application of a statutory cap on recovery in federal securities cases brought under Rule 10b-5 (the 90-day lookback provision of the Private Securities Litigation Reform Act of 1995). The limitation is that damages calculated on Seagate's common stock purchased during the Class Period and sold during the 90-day lookback period cannot exceed the difference between the purchase price paid during the Class Period and average closing price from the last corrective disclosure to the date of sale, and damages calculated on shares purchased during the Class Period and held until the end of the 90-day lookback period cannot exceed the difference between the purchase price and the average closing price for the full 90-day period.

22. Ideally, if I had access to the actual trading records of all Seagate investors, I could calculate aggregate damages and damaged shares precisely. However, typically, as in this case, experts calculating aggregate damages do not have access to the detailed trading records of class members. In order to estimate the Settlement Class's likely aggregate trial recovery in the absence of actual trading records, I needed to utilize a model to estimate the trading behavior of investors during the Class Period. To do so, I used the widely accepted institutional and proportional two-trader model, which I describe herein.

23. **Institutional Model:** Each calendar quarter, institutional investment managers that exercise discretion over $100 million or more in publicly traded equity securities are required to report their holdings to the SEC on Schedule 13-F. I have obtained a summary of this holdings

data for Seagate from S&P Capital IQ. During the Class Period, reporting institutions held on average 84.91% of the public float of Seagate common stock. From this data, I constructed a trading model for institutions. Using this quarterly data to pro-rate each institution's holdings between quarter ends (weighted by total trading volume of the stock on each day), and using the well-known first-in, first out ("FIFO") inventory assumption to match purchases and acquisitions of shares with sales, I modeled the timing of each Class Period purchase and its corresponding sale (if the purchased shares were sold during the relevant time period). In my experience, this is the most widely utilized method for modeling institutional trading and has often been used by experts retained by defendants in other securities class actions. Based on the implied daily trading activity, I can calculate damages for each institution applying the methodology described above.

24. **Proportional Two-Trader Model:** I also estimated damages for the remaining shares that are not reflected in the quarterly holdings discussed above. This group is made up of non-reporting institutions and individual investors. To estimate damages for this group of Class Period purchasers, experts in cases such as this often apply a standard methodology commonly referred to as the 80/20 Proportional Two-Trader Model. Because no investor-specific holdings information is available for non-institutions, the only observable trading input for non-institutional holders is the total trading volume. For the volume of shares available to trade not held by reporting institutions, this non-institutional model assumes that 80% of the volume is accounted for by "fast" traders who hold 20% of the non-institutional shares. The remaining 20% of volume is accounted for by "slow" traders who hold 80% of the non-institutional shares. Within each group of "fast" and "slow" traders, each share is equally likely to trade on any given day, regardless of how long it was held. Based on these assumptions, the algorithm identifies the number of shares purchased on each day and when those shares were ultimately sold (if at all).

25. As described in the preceding section, the artificial inflation and thus damages estimates are conducted after disaggregating non-fraud components of any stock price declines around the alleged corrective disclosures. In addition to the assumptions described above, the estimate provided for in connection with the proposed Settlement also reduced a modeled

investor's calculated damages by "netting," or offsetting gains on shares sold at artificial inflation amounts that exceeded the artificial inflation at the time of purchase.

26. Using the models for when shares traded and the amount of artificial inflation embedded in those shares on each day of the Class Period (as described in the preceding section), I estimated the Settlement Class's likely aggregate trial recovery. Based on the foregoing assumptions, I estimate the Settlement Class's likely aggregate trial recovery to be approximately $412 million. The main factors in the damages analysis that drive the $412 million estimated damages are giving effect to netting of pre-class period gains, giving effect to confounding information unrelated to the fraud, and not backcasting the stock price declines around the alleged corrective disclosures to the beginning of the Class Period but rather giving effect to portions of artificial inflation entering the stock price around earnings announcements during the Class Period. The effects of confounding information are similar to the substance of arguments Defendants raised in opposition to class certification that would have applied to loss causation and the magnitude of damages, including that there was a lack of "price impact" in connection with each of the four corrective disclosure dates.

27. If I were to ignore the relevant economic factors described above and instead measure artificial inflation as the total amount of the stock price declines following the alleged corrective disclosures, backcasting those amounts to the start of the Class Period, then the trading model would estimate maximum possible damages of approximately $1.5 billion. In my opinion, this amount does not represent the most reasonable estimate of likely recoverable damages in this matter for several reasons. First, a non-trivial portion of the stock price declines following each of the alleged corrective disclosures represents non-fraud-related, or confounding, information. Allowing class members to recover these amounts would constitute a windfall that is untethered from the alleged fraud. Second, as explained above, I calculate a smaller amount of artificial inflation at the start of the Class Period than the stock price declines following the alleged corrective disclosures. This represents a departure from an assumption of constant dollar backcasting, and is driven by the fraud-related components of Seagate's earnings announcements

tainted by illegal sales to Huawei. My analysis thus ties artificial inflation to Seagate's public reporting of financial results that were tainted by the alleged fraud. Third, in accordance with the Plan of Allocation, I offset, or net, pre-Class Period gains from damages. The maximum possible damages estimate of approximately $1.5 billion does not offset these gains accruing to class members who benefited from the sale of Seagate common stock at artificially inflated stock prices during the Class Period.

28. If I were to apply netting of pre-Class Period gains, the aggregate estimate would decline from $1.5 billion to $859 million. If I were then to give consideration to the disaggregation of confounding information and the appropriate measure of daily artificial inflation throughout the Class Period as reflected in **Exhibit 2**, then the aggregate estimate would decline from $859 million to $412 million.

29. After accounting for the evolution of artificial inflation throughout the Class Period based on reliable economic analyses, controlling for confounding information, and netting of pre-Class gains, I estimate the Settlement Class's likely aggregate trial recovery to be approximately $412 million.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Respectfully Submitted,

Matthew D. Cain

Exhibit 1

Seagate Quarterly Results and Illegal Sales to Huawei

Quarter	Date and Time of 8-K Filing	Price Impact Date	Next Closing Stock Price	Consolidated Revenue	Illegal Sales to Huawei	% Illegal
[1]	[2]	[3]	[4]	[5]	[6]	[7] = [6] / [5]
1Q2021	10/22/20 4:11pm	10/23/20	$50.74	$2,314mm	$71mm	3.06%
2Q2021	1/21/21 4:07pm	1/22/21	$60.00	$2,623mm	$147mm	5.61%
3Q2021	4/22/21 4:06pm	4/23/21	$89.15	$2,731mm	$366mm	13.42%
4Q2021	7/21/21 8:09am	7/21/21	$82.60	$3,013mm	$231mm	7.67%
1Q2022	10/22/21 8:21am	10/22/21	$87.23	$3,115mm	$289mm	9.28%

Sources: Complaint; BIS Settlement dated April 19, 2023.

Exhibit 2

Seagate Common Stock Artificial Inflation Calculations

Date Range	Illegal Sales $ Inflation	Compliance $ Inflation	Total $ Inflation
[8]	**[9] = [4] * [7] (through 3/7/22)**	**[10]**	**[11] = [9] + [10]**
9/14/20 – 10/22/20	$0.00	$1.45	**$1.45**
10/23/20 - 1/21/21	$1.55	$1.45	**$3.01**
1/22/21 - 4/22/21	$3.37	$1.45	**$4.82**
4/23/21 - 7/20/21	$11.96	$1.45	**$13.41**
7/21/21 - 10/21/21	$6.33	$1.45	**$7.79**
10/22/21 - 3/7/22	$8.10	$1.45	**$9.55**
3/8/22 - 7/21/22	$4.72	$1.45	**$4.72**
7/22/22 - 10/25/22	$0.00	$1.45	**$1.45**
10/26/22 - 4/19/23	$0.00	$1.00	**$1.00**

Exhibit 3

Event Study Results for the Alleged Corrective Disclosures

Date	Market Impact Date	Raw Return	Abnormal Return	Abnormal Return ($)	p-Value	Significance Level
Mar 08, 2022	Mar 08, 2022	-9.51%	-8.78%	-$8.79	<0.01	***
Jul 21, 2022	Jul 22, 2022	-8.11%	-7.09%	-$5.93	<0.01	***
Oct 26, 2022	Oct 26, 2022	-7.95%	-6.84%	-$3.97	<0.01	***
Apr 19, 2023	Apr 20, 2023	-9.20%	-8.43%	-$5.30	<0.01	***

Notes: "**," and "***" denote statistical significance at the 90%, 95%, and 99% confidence levels, respectively.

Appendix A

Matthew D. Cain, Ph.D. June 2026

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Education

Ph.D., Finance, August 2007 — Purdue University, West Lafayette, IN
B.S., Finance, May 2001 — Grove City College, Grove City, PA

Professional and Academic Experience

Senior Fellow, New York University School of Law, 2024-Present

Senior Fellow, Berkeley Center for Law and Business, 2019-2024

Visiting Scholar, Vanderbilt Law School, 2021-2022

Senior Visiting Scholar, Berkeley Law School, University of California, 2019-2021

Visiting Research Fellow, Harvard Law School Program on Corporate Governance, 2018-2019

Advisor to Commissioner Robert J. Jackson, Jr., U.S. Securities and Exchange Commission, 2018

Economic Fellow / Financial Economist, Office of Litigation Economics, Division of Economic and Risk Analysis, U.S. Securities and Exchange Commission, 2014-2018

Assistant Professor of Finance, Mendoza College of Business, University of Notre Dame, Notre Dame, IN, 2008-2014

Visiting Faculty, Krannert School of Management, Purdue University, West Lafayette, IN, 2007-2008

Analyst, Debt Capital Markets, National City Bank, Cleveland, OH, 2001-2003

Publications

What is Price Impact? How the *Goldman* Decisions are Reshaping Shareholder Class Actions (with Per Axelson), *Berkeley Business Law Journal* 22:2, 441-465 (2025).

Does Voluntary Financial Disclosure Matter? The Case of Fairness Opinions in M&A (with Adam B. Badawi and Steven Davidoff Solomon), *Journal of Law and Economics* 66, 535-555 (2023).

Retail Shareholder Participation in the Proxy Process: Monitoring, Engagement and Voting (with Alon Brav and Jonathon Zytnick), *Journal of Financial Economics* 144, 492-522 (2022).

Does *Revlon* Matter? An Empirical and Theoretical Study (with Sean J. Griffith, Robert J. Jackson, Jr., and Steven Davidoff Solomon), *California Law Review* 108, 1683-1731 (2020).

Intermediation in Private Equity: The Role of Placement Agents (with Stephen B. McKeon and Steven Davidoff Solomon), *Journal of Financial and Quantitative Analysis* 55, 1095-1116 (2020).

Mootness Fees (with Jill E. Fisch, Steven Davidoff Solomon, and Randall S. Thomas), *Vanderbilt Law Review* 72, 1777-1816 (2019).

The Myth of Morrison: Securities Fraud Litigation Against Foreign Issuers (with Robert Bartlett, Jill E. Fisch, and Steven Davidoff Solomon), *The Business Lawyer* 74, 967-1013 (2019).

The Shifting Tides of Merger Litigation (with Jill E. Fisch, Steven Davidoff Solomon, and Randall S. Thomas), *Vanderbilt Law Review* 71, 603-640 (2018).

Do Takeover Laws Matter? Evidence from Five Decades of Hostile Takeovers (with Stephen B. McKeon and Steven Davidoff Solomon), *Journal of Financial Economics* 124, 464-485 (2017).

CEO Personal Risk-Taking and Corporate Policies (with Stephen B. McKeon), *Journal of Financial and Quantitative Analysis* 51, 139-164 (2016).

How Corporate Governance Is Made: The Case of the Golden Leash (with Jill E. Fisch, Sean J. Griffith, and Steven Davidoff Solomon), *University of Pennsylvania Law Review* 164, 649-702 (2016).

A Great Game: The Dynamics of State Competition and Litigation (with Steven Davidoff Solomon), *Iowa Law Review* 100, 465-500 (2015).

Broken Promises: Private Equity Bidding Behavior and the Value of Reputation (with Antonio J. Macias and Steven Davidoff Solomon), *Journal of Corporation Law* 40, 565-598 (2015).

Information Production by Investment Banks: Evidence from Fairness Opinions (with David J. Denis), *Journal of Law and Economics* 56, 245-280 (2013).

Delaware's Competitive Reach (with Steven Davidoff Solomon), *Journal of Empirical Legal Studies* 9, 92-128 (2012).

Form Over Substance? Management Buy-outs and the Value of Corporate Process (with Steven Davidoff Solomon), *Delaware Journal of Corporate Law* 36, 1-54 (2011).

Earnouts: A Study of Financial Contracting in Acquisition Agreements (with David J. Denis and Diane K. Denis), *Journal of Accounting and Economics* 51, 151-170 (2011).

<u>Presentations</u>

- All Indiana Conference
- American Bar Association, Business Law, Private Equity M&A Subcommittee meeting
- American Finance Association, annual meetings
- American Law and Economics Association, Stanford Law School
- American Law and Economics Association, University of Chicago
- Argentum Centre for Private Equity Symposium, Bergen, Norway

- Argentum Conference and Symposium on "Private Equity: The Road Ahead," Stockholm, Sweden
- Arizona State University College of Law
- Berkeley Center for Law and Business
- The Brattle Group
- Conference on Empirical Legal Studies, Yale Law School
- Cornell University, finance class guest lectures
- Cornerstone Research
- Financial Management Association, annual meeting
- George Washington University Law School
- Indiana University
- Institute for Law and Economics, University of Pennsylvania; Napa
- Ohio State
- Ohio University
- Oxera, London
- Penn State
- Peregrine Economics
- Purdue Alumni Conference
- Purdue University
- U.C. Berkeley M&A Roundtable, New York
- U.C. Berkeley School of Law
- U.S. Securities and Exchange Commission
- University of Arizona
- University of Colorado
- University of Florida
- University of Georgia
- University of Kentucky
- University of North Carolina at Chapel Hill
- University of Notre Dame
- University of Oregon
- University of Pittsburgh
- Vanderbilt University Law School
- Virginia Commonwealth University
- Virginia Tech
- Western Finance Association, annual meeting

Journal Referee: *Review of Financial Studies*, *Journal of Financial and Quantitative Analysis*, *Journal of Corporate Finance*, *Journal of Banking and Finance*, *European Financial Management, Journal of Empirical Legal Studies, Financial Management, North American Journal of Economics and Finance, International Review of Law & Economics, Managerial and Decision Economics*, *Annals of Finance, Journal of Economics and Business*

Teaching Experience

UC Berkeley School of Law

LAW 246.31: Economic Expert Witnesses: Depositions and Testimony, Spring 2022-2026

LAW 251.52: Economics of Corporate and Securities Litigation, Fall: 2020-2023

University of Notre Dame, Mendoza College of Business

FIN 70400: Corporate Restructuring, Mergers & Acquisitions (MBA Elective), Fall: 2008-2013

FIN 40410: Mergers and Acquisitions, Fall: 2008-2013

Purdue University, Krannert School of Management

MGMT 412: Financial Markets and Institutions, Spring: 2006 & 2008

MGMT 610: Financial Management I (MBA Core), Fall: 2007

Expert Witness Experience

- *AI Amped I, LLC, et al. v. Amy Hanson, et al.*, Index No. 653261/2024 (Sup. Ct., N.Y. Co.). Report May 2026.

- *In re Abbott Laboratories Infant Formula Shareholder Derivative Litigation*, Case No. 1:22-cv-5513 (N.D. Il.). Declaration May 2026.

- *Steamfitters Local 449 Pension & Retirement Security Funds, et al. v. Extreme Networks, Inc., et al.*, Case No. 3:24-cv-05102-TLT (N.D. Ca.). Report April 2026. Deposition May 2026. Rebuttal Report June 2026.

- *In re Agilon Health, Inc. Securities Litigation*, Case No. 1:24-CV-297-DAE (W.D. Tx.). Report April 2026.

- *United Association National Pension Fund, et al., v. Carvana Company, et al.*, Case No. CV-22-02126-PHX-MTL (D. Az.). Report April 2026. Deposition May 2026.

- *Local 272 Labor-Management Pension Fund, et al. v. The Walt Disney Company, et al.*, Case No. 2:23-cv-03661-CBM (C.D. Ca.). Report March 2026. Deposition April 2026. Rebuttal Report June 2026.

- *Bucks County Employees Retirement System, et al. v. Norfolk Southern Corporation, et al.*, Case No. 1:23-cv-04175-SDG (N.D. Ga.). Report February 2026. Deposition April 2026. Report June 2026.

- *Michael Farzad and Gregory Perri, et al. v. Trasimene Capital FT, LP II, Trasimene Capital Management, LLC, William P. Foley, II, Richard N. Massey, Erika Meinhardt, Mark D. Linehan, C. Malcolm*, C.A. No. 2023-0193-JTL (Del. Chancery). Report February 2026. Rebuttal Report March 2026. Deposition May 2026.

- *City of Fort Lauderdale General Employees' Retirement System, et al. v. Holley Inc., et al.*, Case No. 1:23-cv-00148-GNS (W.D. Ky.). Report January 2026. Deposition April 2026.

- *Securities and Exchange Commission v. Anthem Hayek Blanchard and Anthem Holdings Company*, Case No. 2:24-cv-02437-KHV-GEB (D. Kan.). Report January 2026.

- *In re SVB Financial Group Securities Litigation*, Case No. 3:23-cv-01097-NW (N.D. Ca.). Report January 2026. Rebuttal Report March 2026. Deposition April 2026.

- *In re Seagate Technology Holdings plc Securities Litigation*, Case No. 3:23-cv-03431-RFL (N.D. Ca.). Report December 2025. Deposition January 2026. Report March 2026.

- *United States of America v. Andrew Left*, CR No. 2:24-cr-00456-TJH (C.D. Ca.). Declaration December 2025. Declaration February 2026. Trial May 2026.

- *Glazing Employers and Glaziers' Union Local #27 Pension and Retirement Fund, et al. v. iRhythm Technologies, Inc., et al*., Case No. 3:24-cv-706 (N.D. Ca.). Report November 2025. Deposition December 2025. Rebuttal Report February 2026. Declaration June 2026.

- *In re Virtu Financial, Inc. Securities Litigation*, Case No. 1:23-cv-03770 (E.D. N.Y.). Report October 2025. Deposition December 2025. Rebuttal Report March 2026.

- *In re SolarEdge Technologies, Inc. Securities Litigation*, Case No. 1:23-cv-09748 (S.D. N.Y.). Report October 2025. Deposition January 2026. Rebuttal Report February 2026.

- *Joe Fasano, et al. v. Dangdang Holding Company, Ltd., et al*., Case No. 01-22-0003-8285 (AAA). Report September 2025. Rebuttal Report October 2025.

- *KAYNE MICHAEL MIDDLETON v. TELUS INTERNATIONAL (CDA) INC., et al*., Case No. S-248620 (Supreme Court of British Columbia, Vancouver Registry). Report August 2025.

- *In re Doximity, Inc., Securities Litigation*, Case No. 5:24-cv-02281 (N.D. Ca.). Report August 2025. Rebuttal Report October 2025. Deposition November 2025.

- *In re The Estee Lauder Co., Inc. Securities Litigation*, Case No. 1:23-cv-10669 (S.D. N.Y.). Report July 2025. Deposition December 2025.

- *Genesee County Employees' Retirement System, et al., v. DocGo Inc., et al*., Case No. 1:23-cv-09476 (S.D. N.Y.). Report July 2025.

- *YVONNE DOLBEC c. BANK OF MONTREAL, et al*., Case No. 500-06-001335-245 (Province of Quebec, District of Montreal). Report May 2025.

- *In re National Instruments Corporation Securities Litigation*, Case No. 1:23-cv-10488 (S.D. N.Y.). Report May 2025. Deposition June 2025. Report July 2025. Rebuttal Report November 2025. Deposition November 2025.

- *MOUVEMENT D'ÉDUCATION ET DE DÉFENSE DES ACTIONNAIRES c. CAE INC., MARC PARENT, and SONYA BRANCO*, Case No. 500-06-001312-244, (Province of Quebec, District of Montreal). Report April 2025.

- *In re StoneCo Ltd. Securities Litigation*, Case No. 1:21-cv-09620 (S.D. N.Y.). Report April 2025. Declaration November 2025.

- *In re UiPath, Inc. Securities Litigation*, Case No. 1:23-cv-07908 (S.D. N.Y.). Report February 2025.
- *Ali Diabat, et al., v. Credit Suisse Group AG, et al.*, Case No. 1:23-cv-5874 (S.D. N.Y.). Report December 2024. Rebuttal Report January 2025.
- *San Antonio Fire and Police Pension Fund, et al., v. Dentsply Sirona Inc., et al.*, Case No. 1:22-cv-06339 (S.D. N.Y.). Report November 2024. Rebuttal Report February 2025. Report September 2025. Deposition October 2025.
- *Steven Leventhal, et al. v. Chegg, Inc., et al.*, Case No. 5:21-cv-09953 (N.D. Ca.). Declaration November 2024.
- *Miami Firefighters' Relief & Pension Fund v. Carl C. Icahn et al.*, Index No. 657447/2019 (N.Y. Sup. Ct.). Declaration September 2024. Rebuttal Report October 2024.
- *Securities and Exchange Commission v. American Renal Associates Holdings, Inc., et al.*, Case No. 22-cv-10651-NMG (D. Mass.). Report June 2024. Deposition September 2024.
- *Securities and Exchange Commission v. Kevin A. Van de Grift and Gil Friedman*, Case No. 1:23-cv-01491 (S.D. N.Y.). Report June 2024. Declaration November 2024.
- *El Paso Firemen & Policemen's Pension Fund, et al. v. InnovAge Holding Corp., et al.*, Case No. 21-cv-02770-WJM-SKC (D. Co.). Report May 2024. Rebuttal Report October 2024.
- *In re Bed Bath & Beyond Corporate Securities Litigation*, Case No. 1:22-cv-02541-TNM (D.D.C.). Report February 2024. Deposition April 2024. Rebuttal Report June 2024. Report July 2024. Hearing August 2024. Rebuttal Report October 2024.
- *In the Matter of Joshua Abrahams*, File No. 3-21214, (SEC Admin. Proc.). Rebuttal Report February 2024.
- *In re Emergent Biosolutions Inc. Securities Litigation*, Case No. 8:21-cv-00955-PWG (D. Md.). Report February 2024.
- *In re Upstart Holdings, Inc. Securities Litigation*, Case No. 2:22-cv-02935-ALM-EPD (S.D. Oh.). Report January 2024. Deposition April 2024. Rebuttal Report December 2024.
- *Jed Lemen, et al. v. Redwire Corporation, et al.*, Case No. 3:21-cv-01254-TJC-PDB (M.D. Fl.). Report January 2024. Deposition March 2024. Rebuttal Report July 2024. Declaration September 2024.
- *In re Exxon Mobil Corp. Securities Litigation*, Case No. 3:21-cv-00194-N (N.D. Tx.). Report January 2024. Report February 2025. Rebuttal Report August 2025. Deposition August 2025.
- *In re Grand Canyon Education, Inc. Securities Litigation*, Case No. 1:20-cv-00639-MN-CJB (D. Del.). Report January 2024.
- *In re Vaxart, Inc. Securities Litigation*, Case No. 3:20-cv-05949-VC (N.D. Ca.). Report November 2023. Deposition January 2024. Rebuttal Report March 2024. Report July 2024. Deposition August 2024. Rebuttal Report September 2024. Declaration January 2026. Trial April 2026.

- *William C. Theodore, et al. v. PureCycle Technologies, Inc., et al.*, Case No. 6:21-cv-809-PGB-GJK (M.D. Fl.). Report November 2023. Deposition January 2024. Rebuttal Report February 2024.

- *Robert Lematta et al. v. Casper Sleep, Inc., et al.*, Case No. 1:20-cv-02744 (E.D. N.Y.). Report November 2023.

- *In re Turquoise Hill Resources Ltd. Securities Litigation*, Case No. 1:20-cv-8585-LJL (S.D. N.Y.). Report October 2023. Report December 2024. Deposition March 2025.

- *Jonnie Homyk, et al. v. ChemoCentryx, Inc. and Thomas J. Schall*, Case No. 4:21-cv-03343 (N.D. Ca.). Report August 2023. Deposition October 2023. Rebuttal Report January 2024. Report September 2024. Rebuttal Report November 2024. Deposition January 2025.

- *In re Vale S.A. Securities Litigation*, Case No. 19-cv-526-RJD-SJB (E.D. N.Y.). Rebuttal Report April 2023. Deposition September 2023.

- *In re Romeo Power Inc. Securities Litigation*, Case No. 1:21-cv-03362-LGS (S.D. N.Y.). Report March 2023. Deposition April 2023.

- *Luis Torres, et al. v. Berry Corporation, et al.*, Case No. 3:20-cv-3464-S (N.D. Tx.). Report February 2023. Rebuttal Report May 2023.

- *In re Lyft, Inc. Securities Litigation*, Case No. 4:19-cv-02690-HSG (N.D. Ca.). Report February 2023.

- *Thomas S. Swanson, et al. v. Interface, Inc., et al.*, Case No. 1:20-cv-05518-BMC (E.D. N.Y.). Report January 2023.

- *Seafarers Pension Plan, derivatively on behalf of The Boeing Company v. Robert A. Bradway, et al. and The Boeing Company*, Case No. 1:19-cv-08095 (N.D. Ill.). Declaration November 2022.

- *In re: CBL & Associates Properties, Inc. Securities Litigation*, Case No. 1:19-cv-00181-JRG-CHS (E.D. Tenn.). Report August 2022. Deposition October 2022. Rebuttal Report December 2022.

- *Delaware County Employees Retirement System, et al. v. AdaptHealth Corp. f/k/a DFB Healthcare Acquisitions Corp., et al.*, Case No. 2:21-cv-03382-HB (E.D. Pa.). Report July 2022. Deposition February 2023. Rebuttal Report May 2023.

- *In re: QuantumScape Securities Class Action Litigation*, Case No. 3:21-cv-00058-WHO (N.D. Ca.). Report July 2022. Deposition September 2022. Rebuttal Report November 2022. Report March 2024.

- *Bond v. Clover Health Investments, Corp., et al.*, Case No. 3:21-cv-00096 (M.D. Tenn.). Report July 2022. Deposition August 2022.

- *In re: 2U, Inc. Securities Class Action*, Case Nos. 19-3455 and TDC-20-10006 (D. Md.). Report December 2021.

- *Zachary E. Gerut, v. Biospecifics Technologies Corp. and Endo International PLC*, Case No. 01-21-0002-2009 (Amer. Arb. Assoc.). Report December 2021. Arbitration March 2022.

- *In re: Under Armour Securities Litigation*, Case No. RDB-17-388 (D. Md.). Report November 2021. Deposition December 2021. Report April 2023. Rebuttal Report June 2023. Deposition July 2023.

- *Bar Mandalevy, et al. v. BofI Holding, Inc., et al.*, Case No. 17-cv-00667-GPC-KSC (S.D. Ca). Report November 2021.

- *Securities and Exchange Commission v. Anatoly Hurgin, et al.*, Case No. 1:19-cv-05705 (S.D. N.Y.). Report November 2021. Deposition December 2021. Declaration February 2022.

- *In re: Oracle Corporation Derivative Litigation*, Case No. 2017-0337-SG (Del. Chancery). Rebuttal Report October 2021. Deposition November 2021. Trial July-August 2022.

- *John Alberici, et al. v. Recro Pharma, Inc., et al.*, Case No. 2:18-cv-02279-MMB (E.D. Pa.). Report September 2021. Deposition October 2021. Report January 2022.

- *Securities and Exchange Commission v. Christopher Clark and William Wright*, Case No. 1:20-cv-01529 (E.D. Va.). Report August 2021. Trial December 2021.

- *Honey Baked Ham Inc. v. Honey Baked Ham Company, LLC and HBH Licensing, LLC*, Case No. 8:19-cv-01528-JVS (DFMx) (C.D. Ca.). Rebuttal Report August 2021.

- *In re: Purdue Pharma L.P., et al., Debtors* (Chapter 11), Case No. 19-23649 (RDD) (U.S. Bankruptcy Court, S.D. N.Y.). Rebuttal Report July 2021. Confirmation Hearing August 2021.

- *Abu Dhabi Investment Authority v. Mylan N.V. and Mylan Inc.*, Case No. 1:20-cv-01342 (S.D. N.Y.). Report May 2021. Deposition August 2021.

- *International Brotherhood of Electrical Workers Local 98 Pension Fund, et al. v. Deloitte & Touche, LLP and Deloitte LLP*, Case No. 3:19-cv-3304 (D. Sc.). Report April 2021. Deposition September 2021. Rebuttal Report March 2024. Report September 2024. Deposition November 2024. Rebuttal Report January 2025.

- *Securities and Exchange Commission v. James Wallace Nall, III, et al.*, Case No. 2:19-cv-702-TFM-C (S.D. Al.). Report April 2021. Rebuttal Report June 2021. Deposition June 2021.

- *Mark Stoyas, et al., v. Toshiba Corporation*, Case No. 2:15-cv-04194-DDP(JCx) (C.D. Ca.). Report February 2021. Deposition May 2021. Rebuttal Report August 2021.

- *Plymouth County Retirement System, et al. v. Patterson Companies, Inc., et al.*, Case No. 0:18-cv-00871-MJD-HB (D. Mn.). Report January 2021. Deposition March 2021.

- *In re Novo Nordisk Securities Litigation*, Case No. 3:17-cv-00209-BRM-LHG (D. Nj.). Rebuttal Report December 2020. Deposition February 2021.

- *In re Facebook, Inc. Securities Litigation*, Case No. 5:18-cv-01725-EJD (N.D. Ca). Declaration October 2020.

- *In re Qualcomm/Broadcom Merger Securities Litigation*, Case No. 3:18-cv-01208-CAB-AHG (S.D. Ca.). Declaration May 2020.

- *In re Banc of California Securities Litigation*, Case No. 8:17-cv-00118-AG-DFM (C.D. Ca.). Report April 2019.

- *Tharp v. Acacia Communications, Inc.*, Case No. 17-cv-11504 (D. Mass.). Declaration November 2018.

- *Securities and Exchange Commission v. Avent*, Case No. 1:16-cv-02459-WMR (N.D. Ga.). Report March 2017. Deposition May 2017. Jury Trial August 2019.

- *In the Matter of Lawrence I. Balter d/b/a Oracle Investment Research*, File No. 3-17614 (SEC Admin. Proc.). Report March 2017.

- *Securities and Exchange Commission v. Huang*, Case No. 2:15-cv-00269-MAK (E.D. Pa.). Report September 2015. Declaration October 2015. Jury Trial January 2016.

- *Securities and Exchange Commission v. Alyasin*, Case No. 4:15-cv-00566 (S.D. Tex.). Declaration March 2015.