

Exhibit 33

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

SECURITIES AND EXCHANGE
COMMISSION,

Plaintiff,

RIPPLE LABS INC., BRADLEY
GARLINGHOUSE, AND CHRISTIAN A.
LARSEN,

Defendants.

20 Civ. 10832 (AT)

EXPERT REBUTTAL REPORT OF DANIEL R. FISCHER

November 12, 2021

I. QUALIFICATIONS

1. I am President of Compass Lexecon, a consulting firm that specializes in the application of economics to a variety of legal and regulatory issues. I am also the Lee and Brena Freeman Professor of Law and Business Emeritus at The University of Chicago Law School. I have served previously as Dean of The University of Chicago Law School, Director of the Law and Economics Program at The University of Chicago, and as Professor of Law and Business at The University of Chicago Graduate School of Business, the Kellogg School of Management at Northwestern University, and the Northwestern University Law School.

2. Both my research and my teaching have concerned the economics of corporate law and financial markets. I have published approximately fifty articles in leading legal and economics journals and am co-author, with Judge Frank Easterbrook of the Seventh Circuit Court of Appeals, of the book *The Economic Structure of Corporate Law* (Harvard University Press, 1991). Courts of all levels, including the Supreme Court of the United States, have cited my articles as authoritative. I have written and testified extensively about uses of event studies. My curriculum vitae, which contains a list of my publications, is attached hereto as Appendix A.

3. I have served as a consultant or adviser on economic issues to, among others, the United States Department of Justice, the United States Securities and Exchange Commission, the National Association of Securities Dealers, the New York Stock Exchange, the Chicago Board of Trade, the Chicago Mercantile Exchange, the New York Mercantile Exchange, the United States Department of Labor, the Federal Deposit Insurance Corporation, the Resolution Trust Corporation, the Federal Housing Finance Agency, and the Federal Trade Commission.

4. I am a member of the American Economic Association and the American Finance Association. I am also a former Trustee of the Becker Friedman Institute, a former member of the Board of Directors of the Center for the Study of the Economy and the State at The University of Chicago, and former Chairman of the American Association of Law Schools' Section on Law and Economics. I have testified as an expert witness in multiple proceedings in federal and state courts across the country, as detailed in Appendix A.

II. BACKGROUND

5. I understand that the relevant background is as follows. The XRP Ledger is a public blockchain technology that was developed by David Schwartz, Jed McCaleb, and Arthur Britto between 2011 and June 2012.¹ XRP is the native digital asset of the XRP Ledger.² In September 2012, the technology company n/k/a Ripple Labs Inc. ("Ripple" or the "Company"), was founded to "build use cases for the digital asset" XRP.³ Shortly after the formation of the Company, the founders contributed 80 billion units of XRP to the Company, or 80% of the 100 billion units in existence.⁴

¹ See <https://xrpl.org/xrp-ledger-overview.html> and <https://xrpl.org/history.html>.

² See <https://xrpl.org/xrp-overview.html> and <https://xrpl.org/history.html>.

³ See <https://xrpl.org/history.html>. I understand that the Company was initially named NewCoin and then OpenCoin before changing its name to Ripple in 2013. I also understand that the term "Ripple" initially stood for "the open-source project, the unique consensus ledger (Ripple Consensus Ledger), transaction protocol (Ripple Transaction Protocol or RTXP), the network (Ripple network), and the digital asset (known as 'ripples')" and that "[f]or clarity, the community simply started calling the digital asset by its currency code, 'XRP'." *Id.*

⁴ See <https://xrpl.org/xrp-overview.html> and <https://xrpl.org/history.html>. In December 2017, Ripple placed 55 billion units of XRP, or 55% of the 100 billion units in existence, into a series of escrows, which provided an upper limit on the amount of new XRP that could be brought into circulation. See <https://ripple.com/insights/explanation-ripples-xrp-escrow/>.

6. The Securities and Exchange Commission (“SEC”) has brought this action against Ripple, Bradley Garlinghouse, and Chris Larsen (“Defendants”) for alleged violations of Section 5(a) and (c) of the Securities Act of 1933 (the “Securities Act”).⁵ Specifically, the SEC argues that “XRP was an investment contract and therefore a security subject to the registration requirements of the federal securities laws”⁶ and, therefore, Ripple engaged in “a years-long unregistered offering of securities [...] by selling XRP without providing the type of financial and managerial information typically provided in registration statements and subsequent period and current filings.”^{7, 8}

7. In *SEC v. W. J. Howey Co.*, the Supreme Court ruled that “an investment contract for purposes of the Securities Act means a contract, transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of

⁵ See *Securities and Exchange Commission v. Ripple Labs, et al.*, First Amended Complaint filed February 18, 2021 (“Amended Complaint”), p. 1 and ¶ 9.

⁶ Amended Complaint, ¶ 231.

⁷ Amended Complaint, ¶ 5.

⁸ I understand that “security” is defined in Section 2(a)(1) of the Securities Act as follows: “The term ‘security’ means any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, **investment contract**, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a ‘security’, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.” (Emphasis added.)

the promoter or a third party.”⁹ I understand that this decision is commonly referred to as the *Howey* Test.¹⁰

8. The SEC submitted the initial report of Dr. [REDACTED] on October 4, 2021.¹¹ In his report, Dr. [REDACTED] states that he “understand[s] that the XRP token is not a claim on the assets or earnings of Ripple Labs and that Ripple Labs maintains that market participants do not view Ripple Labs’ efforts as relevant to the XRP market price.”¹² He also states that he “[has] been asked by the SEC’s litigation counsel to test whether news about Ripple Labs and its actions is associated with statistically significant XRP price changes.”¹³

9. Dr. [REDACTED] uses an event study methodology to “test whether XRP returns are associated with news about Ripple,”¹⁴ specifically whether news about Ripple coincide with statistically significant price changes in XRP “more frequently than random chance could explain.”¹⁵ Dr. [REDACTED] argues that “[i]f there is a relationship between Ripple’s actions and XRP returns,” then he “would expect that (presumptively positive) news would be significantly associated with positive returns” and “that such news would [not] be significantly associated with negative returns[.]”¹⁶

⁹ *SEC v. W. J. Howey Co.*, 328 U.S. 293 (1946).

¹⁰ “The test is whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others. If that test be satisfied, it is immaterial whether the enterprise is speculative or non-speculative or whether there is a sale of property with or without intrinsic value.” *SEC v. W. J. Howey Co.*, 328 U.S. 293 (1946).

¹¹ See Expert Report of [REDACTED] Ph.D., October 4, 2021 (“[REDACTED] Report”).

¹² [REDACTED] Report, ¶ 30.

¹³ [REDACTED] Report, ¶ 30.

¹⁴ [REDACTED] Report, ¶ 28.

¹⁵ [REDACTED] Report, ¶ 31.

¹⁶ [REDACTED] Report, ¶ 64.

10. To identify “pertinent” news to test, Dr. [REDACTED] collects “news which Ripple Labs has identified to be important by virtue of (i) having issued a press release about the event, or (ii) having written about it on its Insights/News page, or (iii) having linked to a third-party news outlet in its curated Newsroom page.”¹⁷ He then classifies these announcements into various categories based on his own “judgment.”¹⁸ In total, Dr. [REDACTED] identifies 514 events¹⁹ but focuses his analysis on “news announcements in [] categories related more directly to XRP[.]”^{20, 21}

11. Specifically, Dr. [REDACTED] tests for statistically significant correlation between XRP price increases and the following categories of announcements that he assumes are more directly related to XRP: (1) Milestones (“key event[s] in the history of Ripple Labs not related to products or customers”); (2) Trading Platform Listings (“announcement[s] that XRP is available for trading on a new digital asset trading platform”); (3) Customer & Product Developments (“announcement[s] related to new customer relationship[s] ... or products, including enhancements to the XRP ledger protocol”); (4) Ripple Commercialization Initiatives (“initiative[s] launched by Ripple Labs primarily described as being related to the commercialization or promotion of Ripple’s products or technology in the XRP ecosystem”); and (5) “Select Categories,” which combines announcements in the forgoing categories and

¹⁷ [REDACTED] Report, ¶ 48.a.

¹⁸ See [REDACTED] Report, ¶ 48.b.

¹⁹ See [REDACTED] Report, ¶ 49. See also, [REDACTED] Report, Appendix C.

²⁰ [REDACTED] Report, ¶ 50.

²¹ Dr. [REDACTED] also excludes announcements from his analysis if “the announcement may substantially repeat a previous announcement” or “the nature of the announcement may not have a particular directional implication for XRP prices, even assuming the hypothesis of independence is false.” [REDACTED] Report, ¶ 48.c.

Acquisitions & Investments (“announcement[s] of an acquisition or investment made by Ripple Labs, including through its development arm Xpring”).^{22, 23}

12. To test for significant correlation between XRP price increases and these announcements, Dr. [REDACTED] uses an event study analysis, which has four steps:

- (i) First, Dr. [REDACTED] specifies the regression model of XRP returns. He considers 20 different regression models and estimates each model using 180-day estimation windows.²⁴
- (ii) Second, Dr. [REDACTED] specifies the window over which to measure the changes in XRP prices following a news event, i.e., the “event window.” He considers a 1-day event window (date t), a 2-day event window (dates t and t+1), and a 3-day event window (dates t, t+1, and t+2).²⁵
- (iii) Third, Dr. [REDACTED] estimates the (cumulative) abnormal returns for each trading day over the corresponding event window and then determines which are statistically

²² [REDACTED] Report, ¶ 48.b. See also, [REDACTED] Report, Figure 1 (p. 3) and Appendix E, pp. 1-7, 10.

²³ Dr. [REDACTED] also tests the significance of correlation between XRP price increases and the two other categories of announcements, which he assumes are less related to XRP: (i) Other Initiatives and (ii) Office & Staff Announcement. See [REDACTED] Report, ¶¶ 48.b, 91-97 and Appendix E, pp. 8-9. Additionally, I note that Dr. [REDACTED] identifies but does not analyze announcements in the following categories, presumably because he assumes these announcements are even less related to XRP: (i) Case Study; (ii) Charity; (iii) Corporate Activity & Announcement; (iv) Litigation; (v) Market Commentary & Company Overview; (vi) Markets Report; and (vii) Miscellaneous. See [REDACTED] Report, ¶¶ 48.b, 50. “For certain other categories, such as general market commentary (often written by third parties and which does not break new information), it seems self-evident that there should be no meaningful connection with the XRP market in any case, hence testing such categories is not informative.” *Id.*, ¶ 50.

²⁴ See [REDACTED] Report, ¶ 60. See also, *id.*, Section V.B (¶¶ 39-43) and Figure 7 (p. 19).

²⁵ See [REDACTED] Report, ¶ 61. Dr. [REDACTED] states that he “conservatively limit[s] [his] analysis to a three day window – meaning, [he] associate[s] price reactions to a news event on date t only if [he] find[s] evidence of statistically significant price movements in the first three days.” *Id.*, ¶ 38.

significant using a parametric approach and a nonparametric approach.²⁶ He evaluates the statistical significance of abnormal returns at the 5% significance level in a one-sided test and a two-sided test.²⁷ Dr. [REDACTED] classifies date *t* as “significantly positive” if any of its cumulative returns over the 1-, 2-, or 3-day event windows are statistically significant and positive and none of its cumulative returns over those windows are statistically significant and negative.²⁸

- (iv) Finally, Dr. [REDACTED] examines the interaction between the set of news days he identified and the set of days with significantly positive XRP returns.²⁹

13. In other words, Dr. [REDACTED] analysis “selects different categories of news event, determines how many of those correspond to significantly positive XRP returns according to different regression models [he] consider[s], and then calculates how likely that outcome is.”³⁰ Based on his analysis, Dr. [REDACTED] concludes that “XRP prices react to certain news and public statements about Ripple’s actions,” particularly “important milestones in the history of [Ripple] and [] announcements more directly related to XRP.”³¹

²⁶ See [REDACTED] Report, ¶ 62. Dr. [REDACTED] parametric approach “assesses the abnormal return against the significant thresholds from the t-distribution (approximately 1.64 for a one-sided test and 1.96 for a two-sided test),” while his nonparametric approach “assesses the abnormal return against the distribution of standardized abnormal returns observed over the 180 days used to estimate the regression model.” [REDACTED] Report, ¶¶ 62.a-62.b.

²⁷ “The ‘one-sided’ test classifies a return as significant if there is only a 5% probability of drawing a greater (more positive) return. The ‘two-sided’ test classifies a return as significant if there is only a 5% probability of drawing a more extreme (whether positive or negative) return. When using the ‘two-sided’ standard, I continue to restrict myself only to positive returns, unless otherwise noted.” [REDACTED] Report, note 65.

²⁸ See [REDACTED] Report, ¶ 63.

²⁹ See [REDACTED] Report, ¶ 64.

³⁰ [REDACTED] Report, ¶ 58.

³¹ [REDACTED] Report, ¶ 12.a.

III. ASSIGNMENT AND SUMMARY OF CONCLUSIONS

14. I have been asked by counsel for Ripple to review, evaluate, and respond to Dr. [REDACTED] event study methodology from an economics perspective. Based on my review of the economic evidence, I have concluded that Dr. [REDACTED] analysis is fundamentally flawed for multiple reasons and provides no support for the SEC's claim that XRP is a security:

- (i) First, the findings of Dr. [REDACTED] event study methodology do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.
- (ii) Second, Dr. [REDACTED] misinterprets his own findings by failing to recognize that many of the announcements that he finds to be statistically significant are confounded.
- (iii) Third, Dr. [REDACTED] fails to appreciate the significance of his own admission that XRP did not trade in an efficient market.
- (iv) Fourth, Dr. [REDACTED] fails to provide any explanation as to why his event study methodology would shed any light on whether XRP holders are engaged in a "common enterprise" with Ripple.

15. I elaborate upon and provide the bases for my opinions in Section IV of this report. In performing this work, I have received assistance from Compass Lexecon personnel working under my supervision. Compass Lexecon is being compensated for the time spent by Compass Lexecon personnel at their customary hourly rates. My current hourly rate is \$1,750. My compensation is not contingent on the analyses we conducted or the opinions I offer in this report. A list of materials we have relied upon in connection with the preparation of this report is attached as Appendix B.

IV. DR. [REDACTED] ANALYSIS IS FUNDAMENTALLY FLAWED AND PROVIDES NO SUPPORT FOR THE SEC’S CLAIM THAT XRP IS A SECURITY

16. From an economics perspective, holders of a security issued by a company have a claim on some of the cash flows generated by a set of assets or, in certain states of the world, a claim on the assets themselves.³² For example, stock and bond holders have a claim on the cash flows and assets of the underlying company. However, as Dr. [REDACTED] acknowledges, and the SEC has admitted,³³ holders of XRP do not have a claim on any of Ripple’s cash flows or assets in any state of the world.³⁴ Instead, Dr. [REDACTED] uses an event study methodology to “test whether XRP returns are associated with news about Ripple,”³⁵ and, based on his analysis, concludes that XRP had statistically significant returns following some (but not all) announcements³⁶ made by Ripple.³⁷ For the reasons discussed below, I have concluded that Dr. [REDACTED] analysis is

³² See e.g., Aswath Damodaran, “Approaches to Valuation,” in *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* (3rd Ed., John Wiley & Sons, 1996), Chapter 2, pp. 11-26. “[D]iscounted cash flow valuation ... is the foundation on which all other valuation approaches are built This approach has its foundation in the present value rule, where the value of any asset is the present value of expected future cash flows on it.” *Id.*, p. 11.

³³ See Plaintiff’s Answers and Objections to Defendants’ First Set of Requests for Admission, dated July 16, 2021, pp. 19-20: “[T]he Commission admits that holders of XRP are not entitled to receive any return of principal, dividend, interest, rent, royalties, license payments, lease payments, or any other payment or consideration from Ripple, based solely on their status as a holder of XRP [T]he Commission admits that Ripple is not obligated to share any return of principal, dividend, rent, royalties, license payments, lease payments, or any other payment or consideration to any holder of XRP, based solely on his or her status as a holder of XRP.”

³⁴ See [REDACTED] Report, ¶ 30: “I understand that the XRP token is not a claim on the assets or earnings of Ripple Labs.”

³⁵ [REDACTED] Report, ¶ 28.

³⁶ See *infra*, Section IV.A.

³⁷ [REDACTED] Report, ¶ 12.a.

fundamentally flawed and provides no support for the SEC’s claim that XRP is a security under the *Howey* Test.

A. The Findings of Dr. [REDACTED] Event Study Methodology Do Not Demonstrate that XRP Holders Profit Solely or Primarily from the Efforts of Ripple

17. Dr. [REDACTED] claims that “across major milestones in the history of Ripple Labs and across those categories of news more directly related to XRP’s proposed use cases, there is statistically significant evidence that the price of XRP reacts to news of Ripple’s actions.”³⁸ While I do not agree with Dr. [REDACTED] identification and categorization of event days, for brevity’s sake, in this section, I refer to the event days with announcements analyzed in Dr. [REDACTED] “Select Categories” test as “days with news about Ripple’s efforts” and to all other days as “days with no news about Ripple’s efforts.”³⁹

18. Even if one were to assume that the event days analyzed in Dr. [REDACTED] “Select Categories” test were solely or primarily related to the efforts of Ripple—which, as I discuss in Section IV.B *infra*, they are not—the findings of his event study methodology do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple. In fact, taken at face value, Dr. [REDACTED] analysis finds that (i) most days with significantly positive XRP returns

³⁸ [REDACTED] Report, ¶ 65.

³⁹ As discussed above, Dr. [REDACTED] identifies other categories of announcements but does not analyze those announcements in his “Select Categories” test—presumably because Dr. [REDACTED] assumes those categories of announcements are not directly related to XRP and/or do not disclose new information about Ripple’s efforts. *See supra*, note 20. Moreover, as I discuss in Section IV.B *infra*, even the announcements that Dr. [REDACTED] analyzes in his “Select Categories” test confound information about Ripple’s efforts with information about market conditions for XRP.

had no news about Ripple's efforts and (ii) most days with news about Ripple's efforts did not have significantly positive XRP returns.

19. In his "Select Categories" test, Dr. [REDACTED] analyzes 105 event days⁴⁰ with announcements in any of the following categories: (1) Milestones, (2) Trading Platform Listings, (3) Customer & Product Developments, (4) Ripple Commercialization Initiatives, and (5) Acquisitions & Investments.⁴¹ Between May 5, 2014 (the first event day tested by Dr. [REDACTED] and October 28, 2020 (the last event day tested by Dr. [REDACTED] there were 2,369 total trading days.⁴² Dr. [REDACTED] estimates abnormal returns for each of these 2,369 trading days using 20 regression models and then evaluates the abnormal returns at the 5% significance level using a parametric and nonparametric approach.^{43, 44}

20. Using his event study methodology, Dr. [REDACTED] "Select Categories" test identifies 76 to 267 days with significantly positive XRP returns and 15 to 31 event days where news about Ripple's efforts corresponded with significantly positive XRP returns. See Exhibit 1. As the exhibit shows, these findings demonstrate that (i) 76.3% to 89.5% of days with significantly positive XRP returns had no news about Ripple's efforts analyzed by Dr. [REDACTED] and (ii) 70.5% to 84.8% of days with news about Ripple's efforts analyzed by Dr. [REDACTED] did not have significantly

⁴⁰ See *infra*, note 44.

⁴¹ See [REDACTED] Report, Figure 1 (p. 3) and ¶ 98. See also [REDACTED] Report, Appendix E, p. 10.

⁴² See *infra*, note 44.

⁴³ See [REDACTED] Report, ¶¶ 42, 54, 60-63. For both the parametric and nonparametric approach, Dr. [REDACTED] uses a one-sided test and two-sided test.

⁴⁴ In eight out of 20 regression models, Dr. [REDACTED] controls for the returns of Ether (ETH), which only has pricing data beginning on August 7, 2015. For these models, Dr. [REDACTED] cannot estimate abnormal returns for earlier trading days and, therefore, he cannot test some of the earlier event days. See [REDACTED] Report, note 46. Using these models, Dr. [REDACTED] estimated abnormal returns for 1,725 to 1,726 trading days (depending on the model specification) and tested 90 event days. See Exhibit 1.

positive XRP returns. See Exhibit 1. In other words, taken at face value, the findings of Dr.

■■■■■ event study methodology do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.

B. Dr. ■■■■■ Misinterprets His Own Findings by Failing to Recognize That Many of the Announcements That He Finds to Be Statistically Significant are Confounded

21. Dr. ■■■■■ claims that his “results indicate that the price of XRP reacts to the news about actions of Ripple Labs” and, therefore, he “reject[s] the hypothesis that XRP prices are independent of Ripple Labs.”^{45, 46} However, the announcements that Dr. ■■■■■ analyzed confound information about Ripple’s efforts with information about market conditions for XRP. Such confounding information include information related to the expected supply and demand for XRP and information about the decisions and expectations of market participants other than Ripple, none of which is solely or primarily related to Ripple’s efforts or under Ripple’s direct or indirect control. In other words, Dr. ■■■■■ analysis erroneously assumes that statistically significant XRP returns following these announcements are always (and only) related to information about Ripple’s efforts and never related to information about market conditions for XRP.

22. The fact that statistically significant XRP returns are correlated with announcements relating to the expected supply and demand for XRP or other market conditions does not establish that XRP is a security. Companies can and routinely do make announcements

⁴⁵ ■■■■■ Report, ¶ 67.

⁴⁶ Specifically, Dr. ■■■■■ concludes that significantly positive XRP returns are correlated with the following categories of announcements: (1) Milestones, (2) Trading Platform Listings, (3) Customer & Product, (4) Ripple Commercialization Initiatives, and (5) “Select Categories,” which combines announcements in the forgoing categories and Acquisitions & Investments. See e.g., ■■■■■ Report, Figure 1 (p. 3) and Sections VI.A-VI.D, VI.F.

that relate to the supply and demand for a commodity or good that then affect the price of the commodity or good. For example, if an oil producer announces a new oil pipeline, one could imagine that the local oil prices would be affected at the start of the pipeline (due to increased demand) and at the end of the pipeline (due to increased supply). These announcements contain information about the company's efforts as well as information about market conditions for a commodity or good, but this correlation does not make the commodity or good a security. While Ripple (because it holds a substantial amount of XRP) and holders of XRP can both simultaneously gain or lose from XRP price changes, an oil producer and oil investors (both of which hold oil) could likewise gain or lose at the same time due to oil price movements. But it is clear that an oil producer and oil investors are not in a common enterprise and oil is not a security.

23. It is evident that the “news announcements in [] categories related more directly to XRP”⁴⁷ that Dr. [REDACTED] analyzes provide information relating to the expected supply and demand for XRP and/or information about the decisions and expectations of market participants unaffiliated with Ripple, neither of which is solely nor primarily related to Ripple's efforts.

- (i) “Milestones,” such as early financing rounds for equity investments in Ripple, provide information about the expectations of Ripple's sophisticated institutional investors about the state of the market for XRP, since Ripple holds a large quantity of XRP. They also provide information about the expected supply of XRP, to the extent that market participants would expect Ripple to sell fewer XRP tokens to fund its business operations after completing an equity financing round. Similarly, announcements relating to Ripple's decision to escrow 55 billion XRP tokens, which Dr. [REDACTED] categorizes as milestone events, provide information

⁴⁷ [REDACTED] Report, ¶ 50.

about the expected supply of XRP.⁴⁸ Ripple's receiving a "New York's First BitLicense for an Institutional Use Case of Digital Assets" provides information about the expected demand for XRP and about the decisions and expectations of cryptocurrency regulators.

- (ii) "Trading Platform Listings" often occurred without any involvement by Ripple, as Dr. [REDACTED] acknowledges,⁴⁹ and provide information about the expected supply and demand for XRP from cryptocurrency market participants currently active on those platforms and those that will be active on those platforms in the future. Moreover, the fact that a platform decides to list XRP provides positive signals about the platform's expectation of future market conditions for XRP and is not solely or primarily due to Ripple's efforts. Indeed, other cryptocurrencies such as bitcoin are listed on platforms without the effort of a company like Ripple.⁵⁰
- (iii) "Customers & Product Developments" are announcements about banks and other financial companies intending to use Ripple software.⁵¹ These events again provide information about the decisions and expectations of market participants, as well as information about the expected supply and demand for XRP from users of the XRP Ledger. Indeed, Dr. [REDACTED] admits that "it is not always clear if Ripple is an active participant or not"⁵² regarding these announcements, let alone whether the action is solely or primarily due to Ripple's efforts.
- (iv) "Ripple Commercialization Initiatives" are announcements about Ripple launching initiatives "described as commercializing or promoting its technology and payment solutions, including some described as creating use-cases for XRP."⁵³ As with customers and product developments, these events provide information about the market conditions for XRP and, when these announcements

⁴⁸ [REDACTED] Report, Figure 13 (p. 30).

⁴⁹ Of the 11 announcements identified by Dr. [REDACTED] he acknowledges that only six announcements involved Ripple actions. See [REDACTED] Report, Figure 16 (p. 34).

⁵⁰ [REDACTED] Report, Figure 16 (p. 34).

⁵¹ See [REDACTED] Report, ¶¶ 48.b, 83-85.

⁵² [REDACTED] Report, ¶ 83.

⁵³ [REDACTED] Report, ¶ 88.

relate to partnerships with other market participants, provide information about the decisions and expectations of those market participants.⁵⁴

24. In contrast, when Dr. [REDACTED] analyzes categories of announcements that are less likely to confound information about supply and demand for XRP and/or market conditions for XRP, his event study methodology does not find a statistically significant correlation between XRP price increases and those announcements. As discussed above, Dr. [REDACTED] tests the significance of correlation between XRP price increases and two categories of announcements that he assumes are less related to XRP: (i) Other Initiatives (“initiative[s] not primarily described as being related to the commercialization or promotion of Ripple’s products or technology in the XRP ecosystem”⁵⁵) and Office & Staff Announcements (“announcement[s] of executive staff changes or the opening of a new office”⁵⁶).⁵⁷ Unsurprisingly, Dr. [REDACTED] finds that XRP prices do not react significantly to these announcements, because these announcements are unlikely to provide information about market conditions for XRP and Ripple is not engaged in a common enterprise to share cash flows or assets with holders of XRP.

25. The announcements that Dr. [REDACTED] analyzes and finds to be correlated with significantly positive XRP returns may be further confounded by other announcements that fall on or near the event day, which may not be related to Ripple’s efforts. As shown in Exhibit 2, for the 105 event days that Dr. [REDACTED] analyzes in his “Select Categories” test, on average,

⁵⁴ For example, announcement about banks launching a “Global Payments Steering Group.”

[REDACTED] Report, ¶ 88 and note 80.

⁵⁵ [REDACTED] Report, ¶ 48.b.

⁵⁶ [REDACTED] Report, ¶ 48.b.

⁵⁷ See *supra*, note 22. See also, [REDACTED] Report, ¶¶ 91-97.

Dr. [REDACTED] has identified 5 other announcements within 10 days of the event day,⁵⁸ 4 other announcements within 7 days of the event day, and 2 other announcements within 3 days of the event day. In other words, Dr. [REDACTED] event study methodology cannot disentangle the impact of contemporaneous announcements on XRP prices, especially since, as Dr. [REDACTED] acknowledges, XRP did not trade in an efficient market.⁵⁹

26. In summary, Dr. [REDACTED] analysis cannot establish that XRP prices reacted solely or primarily to information about Ripple's efforts⁶⁰ because the announcements that Dr. [REDACTED] analyzed (i) confound information about Ripple's efforts with information about market conditions for XRP and/or (ii) may be confounded by other contemporaneous announcements.

C. Dr. [REDACTED] Fails to Appreciate the Significance of His Own Admission That XRP Did Not Trade in an Efficient Market

27. In financial economics, capital markets are called "efficient" if market prices fully reflect available information.⁶¹ When an event study is used to measure the impact of certain events on market prices, it is explicitly assumed that the market is efficient, at least with respect to publicly available information.⁶² In other words, it is assumed that market prices adjust to

⁵⁸ One of the articles Dr. [REDACTED] cites regarding event studies in cryptocurrency markets use a 20-day event window. See [REDACTED] Report, note 42.

⁵⁹ As discussed in more detail below, Dr. [REDACTED] fails to appreciate the significance of his own admission that XRP did not trade in an efficient market. See infra, Section IV.C.

⁶⁰ As discussed above, the *Howey* Test's definition of an investment contract is "a contract, transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party." See supra, ¶ 7.

⁶¹ See e.g., Eugene Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 *The Journal of Finance Economic Literature* (May 1970), pp. 383-417.

⁶² This assumption is widely discussed in academic literature on event studies, including the literature cited by Dr. [REDACTED] See [REDACTED] Report, note 31, citing John J. Binder, *The Event Study Methodology Since 1969*, 11 *Review of Quantitative Finance and Accounting* (1995),

new information quickly and without bias. However, as Dr. [REDACTED] acknowledges, cryptocurrency markets, including the XRP market, are less efficient than many capital markets and incorporate new information into prices more slowly;⁶³ therefore, his event study methodology is unreliable. Indeed, Dr. [REDACTED] fails to establish over what time period, if ever, information is fully incorporated into XRP prices without bias.

28. Dr. [REDACTED] acknowledges that “[a]cademic researchers have found that the digital token markets, including the XRP market, are generally less informationally efficient than the stock market” and that his own analysis “is consistent with the academic literature in that, by one common measure of efficiency (serial correlation), the XRP market is not fully efficient during the period of interest.”⁶⁴ He further acknowledges that, to account for the lack of market efficiency, academic researchers often use multi-day event windows when conducting event studies on cryptocurrency prices.⁶⁵

29. Although the use of longer event windows allows more time for new information to be fully incorporated into XRP prices, it also introduces the potential impact from other new information, as well as noise. Different types of information may take different amounts of time to be fully incorporated into prices. For example, if price reactions to certain announcements overshoot during the first few days before ultimately correcting, an event window that is too

pp. 111-137 at p. 111. “In practice, event studies have been used for two major reasons: 1) to test the null hypothesis that the market efficiently incorporates information ... and 2) under the maintained hypothesis of market efficiency, at least with respect to publicly available information, to examine the impact of some event on the wealth of the firm’s security holders.” *Id.*, p. 111. (Emphasis added.)

⁶³ See [REDACTED] Report, ¶ 35.

⁶⁴ [REDACTED] Report, ¶ 35.

⁶⁵ See [REDACTED] Report, ¶ 37. The academic literature that Dr. [REDACTED] cites uses event windows as long as 20 days (ten before and after the event being analyzed). See *id.*, note 42.

short and only includes the overshooting but not the correction will result in a biased estimate of price reaction.

30. For his analysis, Dr. [REDACTED] uses a 3-day window, with 1-day and 7-day window sensitivities. Dr. [REDACTED] does not, however, establish over what time period, if ever, information is fully incorporated into XRP prices without bias. As a result, his entire event study methodology is unreliable.

D. Dr. [REDACTED] Fails to Provide Any Explanation As to Why His Event Study Methodology Would Shed Any Light On Whether XRP Holders are Engaged in a “Common Enterprise” with Ripple

31. Dr. [REDACTED] has not explained the relationship between his conclusion that “XRP prices react to certain news and public statements about Ripple’s actions”⁶⁶ and the SEC’s claim that XRP is a security under the *Howey* Test. That is not surprising because the event study methodology used by Dr. [REDACTED] cannot and does not establish whether XRP holders are engaged in a “common enterprise” with Ripple, much less whether those holders were led to expect profits or returns generated solely or primarily from the entrepreneurial or managerial efforts of Ripple.

32. An event study is simply a statistical method that identifies when information about an asset is released and measures the contemporaneous market price response.⁶⁷ There are two primary reasons to use an event study: 1) to test the null hypothesis that a market is

⁶⁶ [REDACTED] Report, ¶ 12.a.

⁶⁷ See e.g., Eugene Fama, Lawrence Fisher, Michael Jensen, and Richard Roll, *The Adjustment of Stock Prices to New Information*, 10 *International Economic Review* (1969), pp. 1-21; A. Craig MacKinlay, *Event Studies in Economics and Finance*, 35 *Journal of Economic Literature* (1997), pp. 13-39.

semi-strong efficient (i.e., to test whether market prices efficiently incorporate publicly available information); and 2) under the hypothesis of a semi-strong efficiency, to measure the impact of certain events on market prices.⁶⁸ However, an event study cannot establish whether an asset is a security because, in an efficient market, asset prices will react to publicly available information about the asset—regardless of whether or not the asset is a security.⁶⁹ Although Dr. [REDACTED] claims that “[a]cademic researchers have applied the event study methodology to digital token markets,”⁷⁰ none of the literature that he cites to attempts to use an event study methodology to establish whether or not digital tokens are securities.⁷¹

⁶⁸ See e.g., John J. Binder, *The Event Study Methodology Since 1969*, 11 *Review of Quantitative Finance and Accounting* (1995), pp. 111-137 at p. 111: “In practice, event studies have been used for two major reasons: 1) to test the null hypothesis that the market efficiently incorporates information ... and 2) under the maintained hypothesis of market efficiency, at least with respect to publicly available information, to examine the impact of some event on the wealth of the firm’s security holders.” See also, Ronald J. Gilson and Bernard S. Black, “Event Studies: Measuring the Impact of Information,” in *The Law and Finance of Corporate Acquisitions* (2nd Ed., The Foundation Press, 1995), Chapter 6, pp. 185-187.

⁶⁹ See e.g., Eugene Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 *Journal of Finance* (1970), pp. 383-417. In my academic publications, I have discussed how all available information about a firm will be reflected in the firm’s stock price in efficient capital markets. See e.g., Daniel R. Fischel, *Use of Modern Finance Theory in Securities Fraud Cases Involving Actively Traded Securities*, 38 *The Business Lawyer* (1982), pp. 1-20 at p. 4: “In an efficient capital market, such as American stock markets, [...] the market price of a firm’s stock will reflect all available information about the firm’s prospects.”

⁷⁰ [REDACTED] Report, ¶ 36.

⁷¹ In fact, the literature that Dr. [REDACTED] cites is primarily concerned with testing whether digital token markets are efficient. See e.g., Wenjun Feng, Yiming Wang, and Zhengjun Zhang, “Informed Trading in the Bitcoin Market,” *Finance Research Letters* Vol. 26, 2018, pp. 63-70 at p. 68: “In this study, we use transaction-level data to investigate informed trading prior to Bitcoin events ... we find evidence of informed trading in the Bitcoin market ahead of cryptocurrency-related negative Bitcoin market events, and ahead of large positive events.” See also, Mohammad Hashemi Joo, Yuka Nishikawa, and Krishnan Dandapani,

33. From an economics perspective, the reasons why an event study cannot establish whether an asset is a security are easily demonstrated via simple thought experiments:

- (i) Companies can issue multiple types of securities, e.g., stocks and bonds. Numerous event studies have been conducted on stocks and bonds, and it is well established that (in most states of the world) stocks are more sensitive to new information about their issuers than bonds, given their position in the capital structure of a firm.⁷² It is completely possible to conduct an event study where certain news about a company is significantly correlated with stock price changes but is not significantly correlated with bond price changes. However, if one were to follow the flawed logic of Dr. [REDACTED] event study methodology and the SEC's position that XRP is a security, the company's bonds would be misclassified as non-securities.
- (ii) Companies can make announcements about their activities that provide

"Announcement effects in the cryptocurrency market," *Applied Economics* Vol. 52, No. 44, 2020, pp. 4794-4808 at p. 4794: "The aims of this study are twofold. First, we examine market reactions during major event announcement periods using event study methodology. Second, we further investigate if the information diffusion allows arbitragers to have an opportunity to make positive profits even after the event announcement."

⁷² See e.g., Larry Y. Dann, "Common Stock Repurchases: An Analysis of Returns to Bondholders and Stockholders," *J. Financial Economics* Vol. 9 (1981), pp. 113-138 ("In contrast with the returns to common stock and convertible senior securities, no significant announcement date returns are experienced by owners of straight debt and straight preferred stock."); Paul Asquith and E. Han Kim, "The Impact of Merger Bids on the Participating Firms' Security Holders," *J. Finance* Vol. 37, No. 5 (December 1982), pp. 1209-1228 ("The results show that while the stockholders of target firms gain from a merger bid, no other securityholders either gain or lose."); Narayanan Jayaraman and Kuldeep Shastri, "The Valuation Impacts of Specially Designated Dividends," *J. Financial and Quantitative Analysis* Vol. 23, No. 3 (September 1988), pp. 301-312 ("[W]e find that stock prices react positively to the announcements of specially designated dividends. In addition, our empirical evidence indicates that bond prices are not affected by SDD announcements."); Chris Veld and Yulia V. Veld-Merkoulova, "An Empirical Analysis of the Stockholder-Bondholder Conflict in Corporate Spin-Offs," *Financial Managements* (Spring 2008), pp. 103-124 ("Over a three-day event window, we find statistically significant abnormal returns of 3.07% for stocks and 0.11% for straight bonds.").

information about other companies.⁷³ Consider a hypothetical scenario where Company A and Company B generally have correlated earnings and where Company A typically releases earnings announcements before Company B. In such a scenario, an event study might find that Company A's earnings announcements are significantly correlated with price changes in Company B's stock. It might even show that Company B's stock price changes are more correlated with Company A's earnings announcements than its own earnings announcements. However, that event study would not prove that investors in Company B stock are engaged in a common enterprise to share profits from the efforts of Company A.

- (iii) Companies routinely make announcements about their activities that provide information about overall market conditions. Such information may lead to statistically significant changes in the prices of assets held by third-party investors even though those investors have no claims on the cash flows or assets of the company. In other words, even though both the company and investors are affected by the change in asset prices, the parties are not engaged in a common enterprise to share profits or returns, so the asset is not a security. For example:

⁷³ See e.g., Michael Firth, "The Impact of Earnings Announcements on the Share Price Behavior of Similar Type Firms," *The Economic Journal* 86 (June 1976), pp. 296-306 ("[I]nvestors use the information contained in the announcement of financial results to re-evaluate the share prices not only of the company whose results are being announced, but also of the closely competing companies.") and Stephen P. Baginski, "Intraindustry Information Transfers Associated with Management Forecasts of Earnings," *J Accounting Research* Vol. 25, No. 2 (Autumn 1987), pp. 196-216 ("[T]he management forecast of one firm (discloser) generates unexpected price reactions for firms (nondisclosers) similar to the forecaster.").

- o Suppose that DeBeers announces a new advertising campaign promoting diamonds and, following this announcement, the price of diamonds on the secondary market increases by a statistically significant amount. That price reaction would not establish that diamonds are a security issued by DeBeers because DeBeers is not engaged in a common enterprise to share profits or returns with holders of diamonds.
 - o Suppose that Exxon announces a new oil pipeline, which leads to statistically significant changes in the price of oil at each end of the pipeline. That price reaction would not demonstrate that oil is a security issued by Exxon because Exxon is not engaged in a common enterprise with third-party holders of oil.
- (iv) Consumer goods are not securities and yet, it is possible for news about a producer to result in price changes in the secondary market for its consumer goods. In such instances, those price reactions do not demonstrate that the owners of consumer goods are in a common enterprise to share profits from the efforts of producers.
- o For example, when professional sports teams win games, there is often an increase in the price of tickets to future games on the secondary market.⁷⁴
 - o Similarly, news about financial distress at an automobile manufacturer can impact the secondary market price for that manufacturer's used cars.⁷⁵

⁷⁴ See e.g., Joris Drayer, Daniel A. Rascher & Chad D. McEvoy, "An examination of underlying consumer demand and sport pricing using secondary market data," *Sport Management Review* 15:4, pp. 448-460.

⁷⁵ See e.g., Ali Hortaçsu, Gregor Matvos, Chad Syverson, and Sriram Venkataraman, "Indirect Costs of Financial Distress in Durable Goods Industries: The Case of Auto Manufacturers," *The Review of Financial Studies* Vol. 26, No. 5, May 2013, pp. 1248-1290.

34. In summary, even if Dr. [REDACTED] analysis demonstrates that XRP prices reacted around the time of certain announcements made by Ripple,⁷⁶ such a finding cannot and does not establish whether XRP holders are engaged in a “common enterprise” to share profits or returns generated solely or primarily by the entrepreneurial or managerial efforts of Ripple.

⁷⁶ As discussed above, Dr. [REDACTED] analysis cannot establish that XRP prices reacted solely or primarily to information about Ripple’s efforts because the announcements that Dr. [REDACTED] analyzed are confounded. See supra, Section IV.B.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 12, 2021.

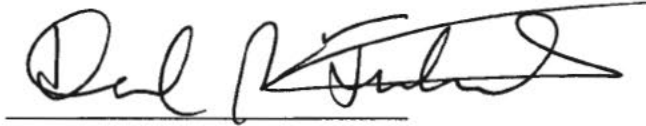
A handwritten signature in black ink, appearing to read "Paul R. Johnson", is written over a horizontal line.

Exhibit 1**The Findings of Dr. [REDACTED] "Select Categories" Test Do Not Imply that XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

	# of Trading Days			# of Event Days			# of Non-Event Days			% of Trading Days w/ Significant Returns		% of Event Days	
	With Significant		Without Significant	With Significant		Without Significant	With Significant		Without Significant	Event Days	Non-Event Days	With Significant Returns	Without Significant Returns
	Total	Returns	Returns	Total	Returns	Returns	Total	Returns	Returns	[J]	[K]	[L]	[M]
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]				
<u>Range for All 20 Models Used by Dr. [REDACTED]</u>													
Minimum	1,725	76	1,540	90	15	64	1,635	61	1,474	10.5%	76.3%	15.2%	70.5%
Maximum	2,369	267	2,259	105	31	89	2,264	236	2,171	23.8%	89.5%	29.5%	84.8%
<u>Range for 12 Models Without ETH Returns</u>													
Minimum	2,369	110	2,102	105	16	74	2,264	93	2,028	10.5%	84.5%	15.2%	70.5%
Maximum	2,369	267	2,259	105	31	89	2,264	236	2,171	15.5%	89.5%	29.5%	84.8%
<u>Range for 8 Models With ETH Returns</u>													
Minimum	1,725	76	1,540	90	15	64	1,635	61	1,474	12.9%	76.3%	16.7%	71.1%
Maximum	1,726	185	1,650	90	26	75	1,636	161	1,575	23.8%	87.1%	28.9%	83.3%

Exhibit 1**The Findings of Dr. [REDACTED] "Select Categories" Test Do Not Imply that XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

	# of Trading Days			# of Event Days			# of Non-Event Days			% of Trading Days w/ Significant Returns		% of Event Days	
	With		Without	With		Without	With		Without	Event Days [J]	Non- Event Days [K]	With Significant Returns [L]	Without Significant Returns [M]
	Significant	Significant	Significant	Significant	Significant	Significant	Significant						
	Total	Returns	Returns	Total	Returns	Returns	Total	Returns	Returns				
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]				
<u>Model 1: Constant Mean Return</u>													
1-Sided Parametric	2,369	199	2,170	105	24	81	2,264	175	2,089	12.1%	87.9%	22.9%	77.1%
1-Sided Nonparametric	2,369	236	2,133	105	28	77	2,264	208	2,056	11.9%	88.1%	26.7%	73.3%
2-Sided Parametric	2,369	147	2,222	105	19	86	2,264	128	2,136	12.9%	87.1%	18.1%	81.9%
2-Sided Nonparametric	2,369	120	2,249	105	16	89	2,264	104	2,160	13.3%	86.7%	15.2%	84.8%
<u>Model 2: Account Growth</u>													
1-Sided Parametric	2,369	181	2,188	105	24	81	2,264	157	2,107	13.3%	86.7%	22.9%	77.1%
1-Sided Nonparametric	2,369	228	2,141	105	27	78	2,264	201	2,063	11.8%	88.2%	25.7%	74.3%
2-Sided Parametric	2,369	133	2,236	105	17	88	2,264	116	2,148	12.8%	87.2%	16.2%	83.8%
2-Sided Nonparametric	2,369	110	2,259	105	17	88	2,264	93	2,171	15.5%	84.5%	16.2%	83.8%
<u>Model 3: BTC Returns</u>													
1-Sided Parametric	2,369	209	2,160	105	25	80	2,264	184	2,080	12.0%	88.0%	23.8%	76.2%
1-Sided Nonparametric	2,369	258	2,111	105	31	74	2,264	227	2,037	12.0%	88.0%	29.5%	70.5%
2-Sided Parametric	2,369	167	2,202	105	22	83	2,264	145	2,119	13.2%	86.8%	21.0%	79.0%
2-Sided Nonparametric	2,369	127	2,242	105	18	87	2,264	109	2,155	14.2%	85.8%	17.1%	82.9%
<u>Model 4: BTC Returns + Account Growth</u>													
1-Sided Parametric	2,369	191	2,178	105	21	84	2,264	170	2,094	11.0%	89.0%	20.0%	80.0%
1-Sided Nonparametric	2,369	238	2,131	105	26	79	2,264	212	2,052	10.9%	89.1%	24.8%	75.2%
2-Sided Parametric	2,369	150	2,219	105	21	84	2,264	129	2,135	14.0%	86.0%	20.0%	80.0%
2-Sided Nonparametric	2,369	124	2,245	105	18	87	2,264	106	2,158	14.5%	85.5%	17.1%	82.9%
<u>Model 5: BTC Returns + ETH Returns</u>													
1-Sided Parametric	1,726	151	1,575	90	24	66	1,636	127	1,509	15.9%	84.1%	26.7%	73.3%
1-Sided Nonparametric	1,726	182	1,544	90	25	65	1,636	157	1,479	13.7%	86.3%	27.8%	72.2%
2-Sided Parametric	1,726	120	1,606	90	20	70	1,636	100	1,536	16.7%	83.3%	22.2%	77.8%
2-Sided Nonparametric	1,726	100	1,626	90	20	70	1,636	80	1,556	20.0%	80.0%	22.2%	77.8%

Exhibit 1**The Findings of Dr. [REDACTED] "Select Categories" Test Do Not Imply that XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

	# of Trading Days			# of Event Days			# of Non-Event Days			% of Trading Days w/ Significant Returns		% of Event Days	
	With		Without	With		Without	With		Without	Event Days [J]	Non- Event Days [K]	With Significant Returns [L]	Without Significant Returns [M]
	Significant		Significant	Significant		Significant	Significant						
	Total	Returns	Returns	Total	Returns	Returns	Total	Returns	Returns				
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]				
<u>Model 6: BTC Returns + ETH Returns + Account Growth</u>													
1-Sided Parametric	1,726	121	1,605	90	21	69	1,636	100	1,536	17.4%	82.6%	23.3%	76.7%
1-Sided Nonparametric	1,726	164	1,562	90	23	67	1,636	141	1,495	14.0%	86.0%	25.6%	74.4%
2-Sided Parametric	1,726	97	1,629	90	19	71	1,636	78	1,558	19.6%	80.4%	21.1%	78.9%
2-Sided Nonparametric	1,726	80	1,646	90	19	71	1,636	61	1,575	23.8%	76.3%	21.1%	78.9%
<u>Model 7: BTC Returns + ETH Returns + XLM Returns</u>													
1-Sided Parametric	1,726	131	1,595	90	22	68	1,636	109	1,527	16.8%	83.2%	24.4%	75.6%
1-Sided Nonparametric	1,726	180	1,546	90	26	64	1,636	154	1,482	14.4%	85.6%	28.9%	71.1%
2-Sided Parametric	1,726	103	1,623	90	18	72	1,636	85	1,551	17.5%	82.5%	20.0%	80.0%
2-Sided Nonparametric	1,726	90	1,636	90	17	73	1,636	73	1,563	18.9%	81.1%	18.9%	81.1%
<u>Model 8: BTC Returns + ETH Returns + XLM Returns + Account Growth</u>													
1-Sided Parametric	1,726	118	1,608	90	20	70	1,636	98	1,538	16.9%	83.1%	22.2%	77.8%
1-Sided Nonparametric	1,726	170	1,556	90	22	68	1,636	148	1,488	12.9%	87.1%	24.4%	75.6%
2-Sided Parametric	1,726	92	1,634	90	17	73	1,636	75	1,561	18.5%	81.5%	18.9%	81.1%
2-Sided Nonparametric	1,726	76	1,650	90	15	75	1,636	61	1,575	19.7%	80.3%	16.7%	83.3%
<u>Model 9: Equal-Weighted Crypto Index</u>													
1-Sided Parametric	2,369	214	2,155	105	25	80	2,264	189	2,075	11.7%	88.3%	23.8%	76.2%
1-Sided Nonparametric	2,369	267	2,102	105	31	74	2,264	236	2,028	11.6%	88.4%	29.5%	70.5%
2-Sided Parametric	2,369	156	2,213	105	21	84	2,264	135	2,129	13.5%	86.5%	20.0%	80.0%
2-Sided Nonparametric	2,369	133	2,236	105	18	87	2,264	115	2,149	13.5%	86.5%	17.1%	82.9%
<u>Model 10: Equal-Weighted Crypto Index + Account Growth</u>													
1-Sided Parametric	2,369	196	2,173	105	22	83	2,264	174	2,090	11.2%	88.8%	21.0%	79.0%
1-Sided Nonparametric	2,369	258	2,111	105	27	78	2,264	231	2,033	10.5%	89.5%	25.7%	74.3%
2-Sided Parametric	2,369	144	2,225	105	19	86	2,264	125	2,139	13.2%	86.8%	18.1%	81.9%
2-Sided Nonparametric	2,369	126	2,243	105	17	88	2,264	109	2,155	13.5%	86.5%	16.2%	83.8%

Exhibit 1**The Findings of Dr. [REDACTED] "Select Categories" Test Do Not Imply that XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

	# of Trading Days			# of Event Days			# of Non-Event Days			% of Trading Days w/ Significant Returns		% of Event Days	
	With Significant		Without Significant	With Significant		Without Significant	With Significant		Without Significant	Event Days	Non-Event Days	Significant Returns	Without Significant Returns
	Total	Returns	Returns	Total	Returns	Returns	Total	Returns	Returns				
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]
Model 11: Lagged XRP Returns													
1-Sided Parametric	2,369	203	2,166	105	25	80	2,264	178	2,086	12.3%	87.7%	23.8%	76.2%
1-Sided Nonparametric	2,369	246	2,123	105	29	76	2,264	217	2,047	11.8%	88.2%	27.6%	72.4%
2-Sided Parametric	2,369	143	2,226	105	19	86	2,264	124	2,140	13.3%	86.7%	18.1%	81.9%
2-Sided Nonparametric	2,369	126	2,243	105	18	87	2,264	108	2,156	14.3%	85.7%	17.1%	82.9%
Model 12: Account Growth + Lagged Variables													
1-Sided Parametric	2,369	188	2,181	105	26	79	2,264	162	2,102	13.8%	86.2%	24.8%	75.2%
1-Sided Nonparametric	2,369	239	2,130	105	30	75	2,264	209	2,055	12.6%	87.4%	28.6%	71.4%
2-Sided Parametric	2,369	135	2,234	105	19	86	2,264	116	2,148	14.1%	85.9%	18.1%	81.9%
2-Sided Nonparametric	2,369	125	2,244	105	19	86	2,264	106	2,158	15.2%	84.8%	18.1%	81.9%
Model 13: BTC Returns + Lagged Variables													
1-Sided Parametric	2,369	205	2,164	105	25	80	2,264	180	2,084	12.2%	87.8%	23.8%	76.2%
1-Sided Nonparametric	2,369	251	2,118	105	28	77	2,264	223	2,041	11.2%	88.8%	26.7%	73.3%
2-Sided Parametric	2,369	162	2,207	105	21	84	2,264	141	2,123	13.0%	87.0%	20.0%	80.0%
2-Sided Nonparametric	2,369	139	2,230	105	20	85	2,264	119	2,145	14.4%	85.6%	19.0%	81.0%
Model 14: BTC Returns + Account Growth + Lagged Variables													
1-Sided Parametric	2,369	198	2,171	105	24	81	2,264	174	2,090	12.1%	87.9%	22.9%	77.1%
1-Sided Nonparametric	2,369	254	2,115	105	29	76	2,264	225	2,039	11.4%	88.6%	27.6%	72.4%
2-Sided Parametric	2,369	156	2,213	105	23	82	2,264	133	2,131	14.7%	85.3%	21.9%	78.1%
2-Sided Nonparametric	2,369	133	2,236	105	20	85	2,264	113	2,151	15.0%	85.0%	19.0%	81.0%
Model 15: BTC Returns + ETH Returns + Lagged Variables													
1-Sided Parametric	1,725	147	1,578	90	23	67	1,635	124	1,511	15.6%	84.4%	25.6%	74.4%
1-Sided Nonparametric	1,725	184	1,541	90	26	64	1,635	158	1,477	14.1%	85.9%	28.9%	71.1%
2-Sided Parametric	1,725	115	1,610	90	20	70	1,635	95	1,540	17.4%	82.6%	22.2%	77.8%
2-Sided Nonparametric	1,725	104	1,621	90	20	70	1,635	84	1,551	19.2%	80.8%	22.2%	77.8%

Exhibit 1**The Findings of Dr. [REDACTED] "Select Categories" Test Do Not Imply that XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

	# of Trading Days			# of Event Days			# of Non-Event Days			% of Trading Days w/ Significant Returns		% of Event Days	
	With		Without	With		Without	With		Without	Event Days [J]	Non- Event Days [K]	With Significant Returns [L]	Without Significant Returns [M]
	Significant		Significant	Significant		Significant	Significant		Significant				
	Total [A]	Returns [B]	Returns [C]	Total [D]	Returns [E]	Returns [F]	Total [G]	Returns [H]	Returns [I]				
<u>Model 16: BTC Returns + ETH Returns + Account Growth + Lagged Variables</u>													
1-Sided Parametric	1,725	136	1,589	90	22	68	1,635	114	1,521	16.2%	83.8%	24.4%	75.6%
1-Sided Nonparametric	1,725	179	1,546	90	25	65	1,635	154	1,481	14.0%	86.0%	27.8%	72.2%
2-Sided Parametric	1,725	99	1,626	90	20	70	1,635	79	1,556	20.2%	79.8%	22.2%	77.8%
2-Sided Nonparametric	1,725	95	1,630	90	19	71	1,635	76	1,559	20.0%	80.0%	21.1%	78.9%
<u>Model 17: BTC Returns + ETH Returns + XLM Returns + Lagged Variables</u>													
1-Sided Parametric	1,725	138	1,587	90	21	69	1,635	117	1,518	15.2%	84.8%	23.3%	76.7%
1-Sided Nonparametric	1,725	176	1,549	90	25	65	1,635	151	1,484	14.2%	85.8%	27.8%	72.2%
2-Sided Parametric	1,725	101	1,624	90	19	71	1,635	82	1,553	18.8%	81.2%	21.1%	78.9%
2-Sided Nonparametric	1,725	101	1,624	90	20	70	1,635	81	1,554	19.8%	80.2%	22.2%	77.8%
<u>Model 18: BTC Returns + ETH Returns + XLM Returns + Account Growth + Lagged Variables</u>													
1-Sided Parametric	1,725	131	1,594	90	21	69	1,635	110	1,525	16.0%	84.0%	23.3%	76.7%
1-Sided Nonparametric	1,725	185	1,540	90	24	66	1,635	161	1,474	13.0%	87.0%	26.7%	73.3%
2-Sided Parametric	1,725	100	1,625	90	19	71	1,635	81	1,554	19.0%	81.0%	21.1%	78.9%
2-Sided Nonparametric	1,725	98	1,627	90	18	72	1,635	80	1,555	18.4%	81.6%	20.0%	80.0%
<u>Model 19: Equal-Weighted Crypto Index + Lagged Variables</u>													
1-Sided Parametric	2,369	204	2,165	105	25	80	2,264	179	2,085	12.3%	87.7%	23.8%	76.2%
1-Sided Nonparametric	2,369	255	2,114	105	28	77	2,264	227	2,037	11.0%	89.0%	26.7%	73.3%
2-Sided Parametric	2,369	154	2,215	105	21	84	2,264	133	2,131	13.6%	86.4%	20.0%	80.0%
2-Sided Nonparametric	2,369	141	2,228	105	20	85	2,264	121	2,143	14.2%	85.8%	19.0%	81.0%
<u>Model 20: Equal-Weighted Crypto Index + Account Growth + Lagged Variables</u>													
1-Sided Parametric	2,369	203	2,166	105	25	80	2,264	178	2,086	12.3%	87.7%	23.8%	76.2%
1-Sided Nonparametric	2,369	266	2,103	105	30	75	2,264	236	2,028	11.3%	88.7%	28.6%	71.4%
2-Sided Parametric	2,369	152	2,217	105	23	82	2,264	129	2,135	15.1%	84.9%	21.9%	78.1%
2-Sided Nonparametric	2,369	144	2,225	105	21	84	2,264	123	2,141	14.6%	85.4%	20.0%	80.0%

Exhibit 1**The Findings of Dr. [REDACTED] "Select Categories" Test Do Not Imply that XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

# of Trading Days			# of Event Days			# of Non-Event Days			% of Trading Days w/ Significant Returns		% of Event Days	
With Significant		Without Significant	With Significant		Without Significant	With Significant		Without Significant	Event Days	Non-Event Days	With Significant Returns	Without Significant Returns
Total	Returns	Returns	Total	Returns	Returns	Total	Returns	Returns	Days	Days	Returns	Returns
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]

Notes and Sources: In this exhibit, days with "significant returns" refers to days that Dr. [REDACTED] classifies as "significantly positive." In his analysis, Dr. [REDACTED] classifies date t as "significantly positive" if any of its cumulative returns over the 1-, 2-, or 3-day event windows are statistically significant and positive and none of its cumulative returns over those windows are statistically significant and negative. See [REDACTED] Report, ¶ 63. In Models 5-8 and 15-18, Dr. [REDACTED] controls for the return of Ether (ETH), which only has pricing data beginning on August 7, 2015. For these models, Dr. [REDACTED] cannot estimate abnormal returns for earlier trading days and, therefore, he cannot test some of the earlier event days. See [REDACTED] Report, note 46. Dr. [REDACTED] equal-weighted cryptocurrency index in Models 9-10 and 19-20 is an equal-weighted index across the returns of ADA, BNB, BTC, ETH and XLM subject to data availability. See [REDACTED] Report, ¶ 39. In Models 11-20, Dr. [REDACTED] regresses "XRP returns on date t on the control variables measured at t and one lag of XRP returns and the control variables" to "correct for [] autocorrelation[.]" [REDACTED] Report, note 50.

[A] - [B]: Per Dr. [REDACTED] backup production, see "Model Results.xlsx" at tab 7-1.

[C] = [A] - [B] (Except for min-max ranges).

[D] - [E]: Per Dr. [REDACTED] backup production, see "Model Results.xlsx" at tab 7-1.

[F] = [D] - [E] (Except for min-max ranges).

[G] = [A] - [D] (Except for min-max ranges).

[H] = [B] - [E] (Except for min-max ranges).

[I] = [C] - [F] (Except for min-max ranges).

[J] = [E] / [B] (Except for min-max ranges).

[K] = [H] / [B] (Except for min-max ranges).

[L] = [E] / [D] (Except for min-max ranges).

[M] = [F] / [D] (Except for min-max ranges).

Exhibit 2**Event Days Analyzed in Dr. [REDACTED] "Select Categories" Test May Be Confounded
by Other Announcements On or Near the Event Day**

		# of Other Announcements Identified by Dr. [REDACTED] On or Near the Event Days Analyzed in the "Select Categories" Test			
		Minimum	Maximum	Median	Average
[1]	Within +/- 10 Days of the Event Day	0	14	4	5
[2]	Within +/- 7 Days of the Event Day	0	9	4	4
[3]	Within +/- 3 Days of the Event Day	0	8	1	2

Notes and Sources: Dr. [REDACTED] identifies 514 events in total, but focuses his analysis on "news announcements in [] categories related more directly to XRP[.]" See Fischel Report, ¶ 10. In his "Select Categories" test, Dr. [REDACTED] analyzes 105 event days with announcements in any of the following categories: (1) Milestones, (2) Trading Platform Listings, (3) Customer & Product Developments, (4) Ripple Commercialization Initiatives, and (5) Acquisitions & Investments. See Fischel Report, ¶ 19. For each of the 105 event days analyzed in Dr. [REDACTED] "Select Categories" test, we count the number of other announcements on or near the event day that were identified in Dr. [REDACTED] Appendix C, which includes (a) any announcements on the same event day that were not analyzed in Dr. [REDACTED] "Select Categories" test (for example, announcements that Dr. [REDACTED] categorized as Market Commentary & Company Overview) and (b) any announcements on the specified days before and after the event day.

APPENDIX A

DANIEL R. FISCHEL

November 2021

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PROFESSIONAL EXPERIENCE

Lee and Brena Freeman Professor of Law and Business, University of Chicago Law School (1/84 – 12/2005, chair awarded in 7/89, emeritus as of 1/1/2006); Dean of Law School (1/99 – 2/01); Visiting Professor of Law, University of Chicago Law School (7/82 - 6/83).

Professor of Law and Business, Northwestern University School of Law (1/1/2006 – 5/2011); Professor, Kellogg School of Management (courtesy appointment, 1/1/2006 – 5/2011).

Jack N. Pritzker Distinguished Visiting Professor of Law, Northwestern University School of Law (6/02-6/03).

Professor of Law and Business, University of Chicago Graduate School of Business (7/87 - 6/90).

Director, Law and Economics Program, University of Chicago (1/84 - 6/91).

Assistant Professor of Law, Northwestern University School of Law (6/80 - 6/81); Associate Professor of Law, Northwestern University School of Law (6/81 - 6/82); promoted to full professor in 6/82.

Attorney with Levy and Erens, Chicago, Illinois (7/79 - 6/80).

Law Clerk for Associate Justice Potter Stewart of the United States Supreme Court (1978 - 1979).

Law Clerk for Judge Thomas E. Fairchild, Chief Judge of the Seventh Circuit Court of Appeals (1977 - 1978).

CONSULTING EXPERIENCE

President and Chairman, Compass Lexecon (formerly Lexecon).

AREAS OF SPECIALIZATION

Securities and Financial Markets, Valuation and Financial Analysis, Bankruptcy and Financial Distress Litigation, ERISA Litigation, Class Certification, Damages, Corporate Governance.

PUBLICATIONS

Payback: The Conspiracy to Destroy Michael Milken and His Financial Revolution, Harper Business (1995).

The Economic Structure of Corporate Law, Harvard University Press (1991) (with Frank H. Easterbrook).

ARTICLES

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Comment, The Use of Government Judgments in Private Antitrust Litigation: Clayton Act Section 5(a), Collateral Estoppel, and Jury Trial, 43 U. Chi. L. Rev. 338 (1976).

EDUCATION

University of Chicago Law School, Chicago, Illinois; J.D. 1977, cum laude; Order of the Coif; Comment Editor, Vol. 44, University of Chicago Law Review; Approximately top 1% of the Class. Awarded Casper Platt Award for best paper written by a student of the University of Chicago Law School; awarded Jerome N. Frank Prize for excellence in legal writing while a member of the University of Chicago Law Review, 1975 - 1977. Studied law and economics with Richard Posner and other members of the faculty.

Brown University, Providence, Rhode Island; M.A. 1974 in American History.

Cornell University, Ithaca, New York; major-American History; minor-Economics; B.A. 1972

TESTIMONY

Deposition of Daniel R. Fischel In Re: Straight Path Communications Inc. Consolidated Stockholder Litigation, In the Court of Chancery of the State of Delaware, C.A. No. 2017-0486-SG, (October 21, 2021).

Deposition of Daniel R. Fischel In Re: Abu Dhabi Investment Authority vs. Mylan N.V. and Mylan Inc., In the United States District Court, Southern District of New York, Civil Action No. 1:20-cv-01342-JPO, (August 18, 2021).

Deposition of Daniel R. Fischel In Re: Mylan N.V. Securities Litigation, In the United States District Court, Southern District of New York, Case No. 1:16-CV-07926 (JPO), (August 17, 2021).

Deposition of Daniel R. Fischel In Re: Hawaii Structural Ironworkers Pension Trust Fund, Individually and on Behalf of All Others Similarly Situated vs. AMC Entertainment Holdings, Inc., et al., In the United States District Court, Southern District of New York, Case No. 1:18-cv-00299-AJN-SLC, (August 12, 2021).

Deposition of Daniel R. Fischel In Re: Sjunde Ap-Fonden, et al, vs. General Electric, et al., In the United States District Court, Southern District of New York, Index No. 17-cv-08457 (JMF), (August 9, 2021).

Testimony of Daniel R. Fischel In Re: United States of America vs. Edward Bases and John Pacilio, In the United States District Court, Northern District of Illinois, Eastern Division, Docket No. 18 CR 48, (July 29, 2021).

Testimony of Daniel R. Fischel In Re: Ahmed D. Hussein vs. Sheldon Razin, Steven Plochocki, Quality Systems, Inc., And Does 1-10, Inclusive, In the Superior Court of California, County of Orange, NO. 30-2013-00679600, CU-NP-CJC (July 27, 2021).

Testimony of Daniel R. Fischel In Re: Tesla Motors, Inc. Stockholders Litigation, In the Court of Chancery of the State of Delaware, Consolidated Civil Action No. 12711-VCS (July 23, 2021).

Testimony of Daniel R. Fischel In Re: Huntsman International, LLC vs. Albemarle Corporation, Rockwood Specialties Group, Inc., and Rockwood Holdings, Inc., American Arbitration Association, AAA Case No. 01-17-001-4588 (May 10, 2021).

Testimony of Daniel R. Fischel In Re: Resolution Life L.P. and Resolution Life (Parallel) Partnership vs. GBIG Holdings, Inc. f/k/a Southland National Holdings, Inc.; SNH Acquisition, LLC and Greg Lindberg, In the Supreme Court of the State of New York, Civil Division, Index Nos. 650575/19, 653258/19, (April 19, 2021).

Deposition of Daniel R. Fischel In Re: Matthew Sciabacucchi and Hialeah Employees' Retirement System vs. John Malone, et al., and Charter Communications, Inc., In the Court of Chancery for the State of Delaware, C.A. No. 11418-VCG, (April 16, 2021).

Deposition of Daniel R. Fischel In Re: Jeld-Wen Holdings, Inc. Securities Litigation, In the United States District Court for The Eastern District of Virginia, Richmond Division, Civil Action No. 3:20-cv-00112-JAG, (February 26, 2021).

Testimony of Daniel R. Fischel In Re: The Pacific Gas and Electric Company Administration of Stress Test Methodology Developed Pursuant to Public Utilities Code Section 451.2(b) and (2) Determination That \$7.5 Billion of 2017 Catastrophic Wildfire Costs and Expenses Are Stress Test Costs That May Be Financed Through Issuance of Recovery Bonds Pursuant to Section 451.2(c) and Section 850 et Seq.(U39E), Before the Public Utilities Commission of the State of California, Application No. 20-04-023, (December 15, 2020).

Deposition of Daniel R. Fischel In Re: Resolution Life L.P. and Resolution Life (Parallel) Partnership vs. GBIG Holdings, Inc. f/k/a Southland National Holdings, Inc.; SNH Acquisition, LLC and Greg Lindberg, In the Supreme Court of the State of New York, Index No. 650575/2019, (November 24, 2020).

Deposition of Daniel R. Fischel In Re: SH 130 Concession Company, LLC, Zachry Toll Road – 56 LP Cintra Texas 56 LLC et al. vs. Central Texas Highway Constructors, LLC, et al., In the United States Bankruptcy Court, Western District of Texas, Austin Division, Case No. 16-10262-TMD, Adversary No. 18-01030, (November 5, 2020).

Deposition of Daniel R. Fischel In Re: Ahmed D. Hussein versus Sheldon Razin, Steven Plochocki, Quality Systems, Inc., et al., In the Superior Court of the State of California, County of Orange, Case No. 302013-00679600 CUNPCJC, (October 22, 2020).

Deposition of Daniel R. Fischel In Re: Deutsche Bank National Trust Company, Solely in its Capacity as Trustee of the Harborview Mortgage Loan Trust Mortgage Loan Pass-Through Certificates, Series 2006-9, In the Supreme Court of the State of New York County of New York, Index No. 654208/2018 (September 25, 2020).

Testimony of Daniel R. Fischel In Re: Fairstone Financial Holdings Inc., J.C. Flowers IV L.P. and VP Canada Acquisition, L.P. vs. Duo Bank of Canada, Court File No. CV-20-00641857-00CL and Duo Bank of Canada vs. Fairstone Financial Holdings Inc., J.C. Flowers IV L.P. and VP Canada Acquisition, L.P., Court File No. CV-20-00643629-00CL, In the Ontario Superior Court of Justice, (September 11, 2020).

Testimony of Daniel R. Fischel In Re: AB Stable VIII LLC vs. Maps Hotels and Resorts One LLC, et al., In the Court of Chancery of the State of Delaware, C. A. No. 2020-0310-JTL (August 28, 2020).

Deposition of Daniel R. Fischel In Re: AB Stable VIII LLC vs. Maps Hotels and Resorts One LLC, et al., In the Court of Chancery of the State of Delaware, Case No. 2020-0130-JTL (August 14, 2020).

Deposition of Daniel R. Fischel In Re: Willis Towers Watson PLC Proxy Litigation, In the United States District Court for the Eastern District of Virginia, Alexandria Division, Master File No. 1:17-cv-1338-AJT-JFA (August 12, 2020).

Deposition of Daniel R. Fischel In Re: Forescout Technologies, Inc. et al. vs. Ferrari Group Holdings, LP, and Ferrari Merger Sub, Inc., et al., In the Court of Chancery of the State of Delaware, Civil Action No. 2020-0385-SG (July 13, 2020).

Deposition of Daniel R. Fischel In Re: Brigade Leveraged Capital Structures Fund Ltd. et al. vs. Kindred Healthcare, Inc., et al., In the Circuit Court of Chancery of the State of Delaware, Case No. 2018 0165 (February 5, 2020).

Testimony of Daniel R. Fischel In Re: Gannaway Entertainment, Inc. et al vs. Frankly Inc. et al., In the United States District Court, Northern District of California, San Francisco Division, Case No. 3:17-cv-04169-RS (December 17, 2019).

Deposition of Daniel R. Fischel In Re: The Official Committee of Unsecured Creditors of Allied Systems Holdings, Inc. and its affiliated debtors et al. v. Yucaipa, et al., In the U.S. Bankruptcy Court for the District of Delaware, Bankr., D. Del., Proc. Nos. 13-50530-KBO, 14-50971-KBO (December 16, 2019).

Testimony of Daniel R. Fischel In Re: Nord Anglia Education, Inc., In the Grand Court of The Cayman Islands, Financial Services Division, Cause No. FSD 235 of 2017 (IKJ). (December 6, 9, 10 and 11, 2019).

Deposition of Daniel R. Fischel In Re: Lindie L. Banks and Erica LeBlanc, individually and on behalf of all others similarly situated vs. Northern Trust Corporation and Northern Trust Company, In the United States District Court, Central District of California, Case No. 2: 16-cv-09141-JFK (JCx) (November 22, 2019).

Deposition of Daniel R. Fischel In Re: Tesla Motors, Inc. Stockholder Litigation, In the Court of Chancery of the State of Delaware, C.A. No. 12711-VCS (November 19, 2019).

Deposition of Daniel R. Fischel In Re: Melina N. Jacobs, On Behalf of Herself and All Others Similarly Situated vs. Verizon Communications, Inc., et al., In the United States District Court for the Southern District of New York, Civil Action No. 1:16-cv-01082 (August 28, 2019).

Deposition of Daniel R. Fischel In Re: American Realty Capital Properties, Inc. Litigation, In the United States District Court, Southern District of New York, Civil Action No. 1:15-mc-00040-AKH Class Action (July 25, 2019).

Deposition of Daniel R. Fischel In Rajesh M. Shah, et al vs. Zimmer Biomet Holdings, Inc., et al., In the United States District Court, Northern District of Indiana, South Bend Division, Case No. 3:16-cv-815-PPS-MGG (May 17, 2019).

Testimony of Daniel R. Fischel In Colonial Chevrolet Co., Inc., et al., Alley's of Kingsport, Inc., et al., and Union Dodge, Inc., et al. vs. The United States (Nos. 10-647C, 11-100C, and 12-900L – Consolidated), In the United States Court of Federal Claims (May 8, 2019).

Testimony of Daniel R. Fischel In Anthem, Inc. vs. Cigna Corporation, In the Court of Chancery of the State of Delaware, C.A. No. 2017-0114-JTL (March 8, 2019).

Deposition of Daniel R. Fischel In Re: Nine West holdings, Inc., et al., Debtors, United States Bankruptcy Court, Southern District of New York, Chapter 11 Case No. 18-10947 (SCC) (January 16, 2019).

Deposition of Daniel R. Fischel In Re: Sandisk LLC Securities Litigation, United States District Court, Northern District of California, San Francisco Division, Case No. 3:15-cv-01455-VC (November 16, 2018).

Deposition of Daniel R. Fischel In Re: Colonial Chevrolet Co., Inc., Alley's of Kingsport, Inc. and Union Dodge, Inc., et al vs. The United States, In the United States Court of Federal Claims, Nos. 10-647C, 11-100C and 12-900L (Consolidated) (November 15, 2018).

Testimony of Daniel R. Fischel In Re: United States of America, et al., vs. J-M Manufacturing Co., Inc., United States District Court, Central District of California – Western Division, No. CV 6-55 GW (November 5, 2018).

Deposition of Daniel R. Fischel In Re: Appraisal of Air Methods Corp., In the Court of Chancery of the State of Delaware, C.A. No.: 2017-0317-JRS (September 27 and 28, 2018).

Testimony of Daniel R. Fischel In Re: Akorn, Inc., v. Fresenius Kabi, AG, et al., In the Court of Chancery of the State of Delaware, C.A. No. 2018-0300-JTL (July 13, 2018).

Deposition of Daniel R. Fischel In Re: Starz Stockholder Litigation, In the Court of Chancery of the State of Delaware, Consolidated C.A. No. 12584-VCG (July 12, 2018).

Deposition of Daniel R. Fischel In Re: Akorn, Inc. vs. Fresenius Kabi AG, Quercus Acquisition, Inc. and Fresenius SE & Co. KGaA, In the Court of Chancery of the State of Delaware, Index No. 2018-0300 (June 30, 2018).

Deposition of Daniel R. Fischel In Re: Physiotherapy Holdings, Inc., et al., Debtors; PAH Litigation Trust v. Water Street Healthcare Partners, L.P., et al., In the United States Bankruptcy Court for the District of Delaware, Case No. 13-12965 (KG) (Jointly Administered) (June 5, 2018).

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Deposition of Daniel R. Fischel In Re: Keith C. Bogard, et al., v. National Community Bank Inc., et al., in the United States District Court, District of New Jersey, No. 90-5-32 (HAA) (December 20, 1994).

Deposition of Daniel R. Fischel In Re: Harvey Rosen, Ben Rogers and Julie Rogers v. Deloitte & Touche, Elias Zinn, Julius Zinn, Dennis Lamm, and Ronald Begnaud, in the 268th Judicial District Court, of Fort Bend County, Texas, Cause No. 84-482 (November 9, 1994).

Testimony of Daniel R. Fischel In Re: PPM America, Inc., et al. v. Marriott Corporation et al., in the United States District Court, for the District of Maryland, Civil Docket No. H-92-3068 (October 12, 1994).

Deposition of Daniel R. Fischel In Re: Browning-Ferris Industries, Inc., Securities Litigation, United States District Court, for the Southern District of Texas, Houston Division, Civil Action H-903477 (September 1, 1994).

Testimony of Daniel R. Fischel In Re: Computer Associates International Inc. Securities Litigation, United States District Court, Eastern District of New York, CV-90-2398 (JBW) (May 26 and 27, 1994).

Deposition of Daniel R. Fischel In Re: PPM America, Inc., et al. v. Marriott Corporation et al., United States District, for the District of Maryland, H-92-3068 (May 10, 1994 and March 8, 1994).

Deposition of Daniel R. Fischel In Re: Securities and Exchange Commission v. Shared Medical Systems Corporation, R. James Macaleer, James C. Kelly and Clyde M. Hyde, United States District Court, for the Eastern District of Pennsylvania, Civil Action - Law: No. 91- CV-6549 (February 22, 1994).

Testimony of Daniel R. Fischel In Re: Peter M. Schultz and Pamela A. Schultz v. Rhode Island Hospital Trust National Bank, N.A., et al., United States District Court, District of Massachusetts, Civil Action No. 88-2870-T (February 16, 1994).

Deposition of Daniel R. Fischel In Re: Henry T. Endo, et al. v. John M. Albertine, et al., United States District Court, Northern District of Illinois, Eastern Division, No. 88 C 1815 (November 11 and 12, 1993; October 28, 1993).

Deposition of Daniel R. Fischel In Re: Computer Associates International Inc. Securities Litigation, United States District Court, Eastern District of New York, CV 90-2398 (JBW) (November 2, 1993 and February 4, 1993).

Affidavit of Daniel R. Fischel In Re: Peter M. Schultz and Pamela A. Schultz v. Rhode Island Hospital Trust National Bank, N.A. et al., United States District Court, District of Massachusetts, Civil Action No. SS-2870-T (October 28, 1993).

Deposition of Daniel R. Fischel In Re: Alpheus John Goddard, III, etc. v. Continental Bank N.A., etc., State of Illinois, County of Cook, Circuit Court of Cook County, County Department- Chancery Division, No. 89 CH 1081 (September 10, 1993).

Deposition of Daniel R. Fischel In Re: Taxable Municipal Bond Section "G" Securities Litigation, United States District Court, Eastern District of Louisiana, MDL No. 863 (September 2, 1993).

Reply Affidavit of Daniel R. Fischel In Re: Columbia Securities Litigation, United States District Court Southern District of New York, 89 Civ. 6821 (LBS) (August 30, 1993).

Affidavit of Daniel R. Fischel In Re: Consumers Gas & Oil, Inc. v. Farmland Industries, Inc., et al., United States District Court, for the District of Colorado, Civil Action No. 92-F-1394 (August 26, 1993).

Declaration of Daniel R. Fischel In Re: Equitec Rollup Litigation, United States District Court for the Northern District of California, Master file No. C90 2064 CAL (July 28, 1993).

Deposition of Daniel R. Fischel In Re: United Telecommunications, Inc. Securities Litigation, United States District Court for the District of Kansas, No. 90-2251-0 (July 22, 1993, April 21 and 22, 1993).

Deposition of Daniel R. Fischel In Re: Consumers Gas & Oil, Inc., a Colorado farm cooperative in liquidation, on behalf of itself and others similarly situated v. Farmland Industries, Inc., a Kansas farm cooperative, et al., United States District Court, District of Colorado, 92-F- 1394 (June 18, 1993).

Deposition of Daniel R. Fischel In Re. Rosalind Wells v. HBO & Company, United States District Court, Northern District of Georgia, Atlanta Division, 8-87-CV-657A (JTC) (June 10, 1993 and May 24, 1993).

Deposition of Daniel R. Fischel In Re: Equitec Rollup Litigation, United States District Court, Northern District of California, No. C-90-2064 CAL (June 2 and 3, 1993).

Supplemental Declaration of Daniel R. Fischel In Re: Oracle Securities Litigation, United States District Court, Northern District of California, Master File No. C 90 0931 VRW (May 20, 1993).

Affidavit of Daniel R. Fischel and Kenneth R. Cone In Re: Raymond P. Hayden, et al. v. Jeffrey L. Feldman, et al., United States District Court, Southern District of New York No. 88 Civ. 8048 (JES) (May 12, 1993).

Testimony of Daniel R. Fischel In Re: Melridge, Inc., Securities Litigation, United States District Court for the District of Oregon, CV No. 87-1426-FR (May 4 and 5, 1993).

Declaration of Daniel R. Fischel In Re: Oracle Securities Litigation, United States District Court, Northern District of California, Master File No. C 90 0931 VRW (April 20, 1993).

Deposition of Daniel R. Fischel In Re: Gillette Securities Litigation, United States District Court, District of Massachusetts, No. 88-1858-K (April 1, 1993).

Affidavit of Daniel R. Fischel In Re: Columbia Securities Litigation, United States District Court, Southern District of New York, 89 Civ. 6821 (LBS) (March 25, 1993).

Deposition of Daniel R. Fischel In Re: Westinghouse Securities Litigation, United States District Court, Western District of Pennsylvania, CV No. 91 354 (March 23, 1993).

Declaration of Daniel R. Fischel In Re: Oracle Securities Litigation, United States District Court, Northern District of California, Master File No. C 90-0931 VRW (March 22, 1993).

Deposition of Daniel R. Fischel In Re: Kroy, Inc., a Minnesota corporation et al. v. Bankers Trust New York Corporation, et al., Superior Court of the State of Arizona in and for the County of Maricopa, No. CV 89-35680 (March 18, 1993).

Deposition of Daniel R. Fischel In Re: Amos M. Ames, Helen M. Ames, Robert F. Bourke, Louise L. Bourke, Leo E. Corr, April C. Corr, Wence M. Horak, Ruth Horak, Robert T. Freas, Maurita Freas, Bruce Fink, Jr., William H. Jones, Candace A. Jones, Richard Paul, William L. Paul, Carole Paul, Steven J. Paul, Best Power Technology, Incorporated, and Best Power Technology Sales Corporation, in the State of Wisconsin, Circuit Court, Juneau County, Consolidated Case Nos. 92-CV-31, 92-CV-32 (January 26, 1993).

Deposition of Daniel R. Fischel In Re: Federal Express Corporation Shareholder Litigation, in the United States District Court, Western District of Tennessee, Master File No. 90-2359- 4B (December 3, 1992).

Deposition of Daniel R. Fischel In Re: Raymond Snyder, Individually and on behalf of all those similarly situated v. Oneok, Inc., et al., in the United States District Court, Northern District of Oklahoma, Civil Action No. 88 C 1500 E (October 15 and 16, 1992).

Deposition of Daniel R. Fischel In Re: Melridge, Inc. Securities Litigation, Consolidated Actions, United States District Court, District of Oregon, Master File No. CV87-1426-JU and Nos. 387-06589-P11, 88-05-JU, 88-221-JU, 88-0699-PA, 88-1266-JU (September 17, 1992; July 25 and 26, 1991).

Deposition of Daniel R. Fischel In Re: Maxus Corporate Company v. Kidder, Peabody & Co. Incorporated, Martin A. Siegel and Ivan F. Boesky, in the District Court Dallas County, Texas, 298th Judicial District, No. 87-15583-M (September 11, 1992; August 18 and 19, 1992).

Deposition of Daniel R. Fischel In Re: Jennifer A. Florin and Alan L. Mundt, on behalf of themselves and all others similarly situated v. Wesray Capital Corp., Citizens and Southern Trust Company, a subsidiary of Citizens and Southern Corporation, Robert K. Barton, Leonard S. Gaby, Allen G. Lacoe, Robert A. Magnusson, Anthony A. Saliture, Harlan B. Smith, Thomas F. Stutzman, Raymond G. Chambers, Frank E. Richardson, E. Burke Ross, Jr., William E. Simon and Frank W. Walsh, Jr., in the United States District Court, Western District of Wisconsin, Civil Action No. 91C-0948 (August 12, 1992).

Deposition of Daniel R. Fischel In Re: Pearl Newman, Shanna Lehmann & Athanasios Tsivelekidis, on their own behalf and on behalf of all other persons similarly situated v. On- Line Software International, Inc. Jack M. Berdy, John C. Crocker, Richard A. Granger, Richard R. Holtmeier, Michael S. Juceam, Edward J. Siegel, Howard P. Sorgen and Richard Ward, United States District Court, District of New Jersey, Consolidated Civil Action Nos. 88-3247, 88-3411 (July 28 and 29, 1992).

Deposition of Daniel R. Fischel In Re: Crazy Eddie Securities Litigation, Oppenheimer-Palmieri Fund, I.P., et al. v. Peat Marwick Main & Co., et al., United States District Court for the Eastern District of New York, 87 Civ. 0033 (EHN), 88 Civ. 3481 (EHN) (June 11, 1992; March 26 and 27, 1992).

Testimony of Daniel R. Fischel In Re: American Continental Corporation/Lincoln Savings and Loan Securities Litigation, in the United States District Court, for the District of Arizona MDL Docket No. 834 (June 4, 1992; May 26, 27 and 28, 1992).

Testimony of Daniel R. Fischel In Re: State of West Virginia v. Morgan Stanley & Co. Incorporated, in the Circuit Court of Kanawha County, State of West Virginia, Civil Action No. 89-C-3700 (April 27, 1992).

Affidavit of Daniel R. Fischel In Re: William Steiner, on behalf of himself and all others similarly situated v. Tektronix, Inc., et al., in the United States District Court, District Court of Oregon, Civil No. 90-587-JO (March 23, 1992).

Deposition of Daniel R. Fischel In Re: Martin Kaplan and Selma Kaplan, on Behalf of Themselves and All Others Similarly Situated v. VICORP Restaurants, Inc., Charles R. Frederickson, Robert S. Benson,

Emerson B. Kendall, Robert T. Marto and Johyn C. Hoyt, United States District Court, District of Colorado, Civil Action No. 90-C-2182 (February 11, 1992).

Deposition of Daniel R. Fischel In Re: Interco Incorporated v. Wasserstein, Perella & Co., Inc., United States District Court, Eastern District of Missouri, Eastern Division, No. 91-0151-C- 6 (February 3, 1992 and December 12, 1991).

Statement of Daniel R. Fischel In Re: Far West Federal Bank, S.B., et al. v. Director, Office of Thrift Supervision, et al., United States District Court for the District of Oregon, Civil Action No. 90-103 PA (February 3, 1992).

Deposition of Daniel R. Fischel In Re: Capital Bank of California v. Morgan Stanley & Co., Incorporated, United States District Court, Central District of California, No. 91-1650-R (January 24, 1992).

Deposition of Daniel R. Fischel In Re: Trinity Ventures, et al. v. Federal Deposit Insurance Corporation, in its own capacity and as successor to the Federal Savings and Loan Insurance Corporation, United States District Court, for the District of Oregon, No. 90-103- PA (January 6, 1992).

Deposition of Daniel R. Fischel In Re: First Republicbank Securities Litigation, United States District Court, Northern District of Texas, Dallas Division, Civil Action No. 3-88-0641-H (January 2, and 3, 1992; November 26, 1991).

Deposition of Daniel R. Fischel In Re: State of West Virginia v. Morgan Stanley & Co. Incorporated; Salomon Brothers Inc.; and Goldman Sachs & Co., in the Circuit Court of Kanawha County, State of West Virginia, Civil Action No. 89-C-3700 (December 19 and 20, 1991).

Deposition of Daniel R. Fischel In Re: The Regina Company, Inc. Securities Litigation, United States District Court, District of New Jersey, Civil Action No. 88-4149 (HAA) (October 31, 1991).

Affidavit of Daniel R. Fischel In Re: Gillette Securities Litigation, United States District Court, District of Massachusetts, Civil Action No. 88-1858-K (October 7, 1991)

Deposition of Daniel R. Fischel In Re: Capital Maritime Corporation v. Amfels, Inc., Far East Levingston Shipbuilding Ltd., John B. Allison and Patrick A. McDermid, United States District Court for the Southern District of Texas Houston Division, C.A. No. H-90-3417 (September 12, 1991).

Deposition of Daniel R. Fischel In Re: Thomas J. Caldarone, Jr. v. Isidore Brown, et al., and John E. Washburn, et al. v. Isidore Brown, et al., United States District Court, Northern District of Illinois, Eastern Division, Docket Nos. 80 C 6251 and 81 C 1475 (August 28, 29, and 30, 1991).

Testimony of Daniel R. Fischel In Re: Apple Securities Litigation, United States District Court, Northern District of California, Northern Division, Docket No. C-84-20148 (May 20 and 21, 1991).

Testimony of Daniel R. Fischel In Re: The Stuart-James Co., Inc., et al. Litigation, United States of America before the Securities & Exchange Commission, in Denver, Colorado, Administrative Proceeding File No. 3-7164 (May 6, 1991).

Deposition of Daniel R. Fischel In Re: Jennie Farber on behalf of herself and all others similarly situated v. Public Service Company of New Mexico; Jerry D. Geist; John P. Bundrant and Albert J. Robison, United States District Court for the District of New Mexico, CIV 89-456 JB WWD (April 17 and 18, 1991).

Affidavit of Daniel R. Fischel In Re: Moise Katz, Frederick Rand, Elias Weissman, Richard D. Morgan, Marion R. Morgan and Mortimer Schulman v. Raymond A. Hay, United States District Court, Southern District of New York, No. 86 Civ. 5640 (JES) (March 29, 1991).

Deposition of Daniel R. Fischel In Re: Standard Chartered PLC., a United Kingdom corporation, et al. v. Price Waterhouse, a general partnership, Superior Court of the State of Arizona, in and for the County of Maricopa, CV 88-34414 (March 13 and 14, 1991).

Affidavit of Daniel R. Fischel In Re: United States of America v. AVX Corporation, and Commonwealth of Massachusetts v. AVX Corporation, United States District Court, District of Massachusetts, Civil Action Nos. 83-3882-Y and 83-3899-Y (January 29, 1991).

Deposition of Daniel R. Fischel In Re: Apple Computer Securities, United States District Court Northern District of California, San Jose Division, No. C-84-20148 (a) JW (December 13 and 14, 1990).

Deposition of Daniel R. Fischel In Re: Polycast Technology Corporation, and Uniroyal Plastics Acquisition Corp. v. Uniroyal, Inc., et al., United States District Court Southern District of New York, No. 87 Civ. 3297 (December 6, 1990 and November 28, 1990).

Deposition of Daniel R. Fischel In Re: Ellen Rudd, on behalf of herself and all others similarly situated, and Mayer Corporation on behalf of themselves, and all others similarly situated, and Louis Brandt, and Israel Baker, Jay R. Kuhne, Pininfarina Corp., and American Transfer Co., on behalf of themselves and all others similarly situated v. Kirk Kerkorian, et al., Superior Court of the State of California, County of Los Angeles, Nos. CA 000980, CA 000981, CA 001017, CA 620279 (June 21, 1990).

Testimony of Daniel R. Fischel In Re: City of San Jose v. Paine, Webber, Jackson & Curtis, Incorporated, et al., and related counter- and Third-Party Claims, United States District Court, Northern District, No. C-84-20601 RPA (May 23 and 24, 1990).

Deposition of Daniel R. Fischel In Re: City of San Jose v. Paine, Webber, Jackson & Curtis, Incorporated, et al., and related counter- and Third-Party Claims, United States District Court, Northern District, No. C-84-20601 RPA (May 22, 1990), No. RPA 84-20601 (November 16, 1989 and September 8, 1989).

Testimony of Daniel R. Fischel In Re: Kulicke and Soffa Industries, Inc. Securities Litigation, United States District Court for the Eastern District of Pennsylvania, No. 86-1656 (March 20 and 21, 1990).

Deposition of Daniel R. Fischel In Re: Kulicke and Soffa Industries, Inc. Securities Litigation, United States District Court for the Eastern District of Pennsylvania, No. 86-1656 (March 9, 1990; December 19 and 21, 1989).

Affidavit of Daniel R. Fischel In Re: Viacom International Inc. v. Carl C. Icahn, et al., v. Ralph M. Baruch, et al., United States District Court, Southern District of New York, No. 86 Civ. 4215 (RPP) (March 8, 1990).

Deposition of Daniel R. Fischel In Re: Technical Equities Coordination Litigation, Superior Court of the State of California for the County of Santa Clara, Master File No. 1991, Santa Clara County Superior No. 600306 (March 1, 1990).

Deposition of Daniel R. Fischel In Re: Amalgamated Clothing and Textile Workers Union, AFL- CIO, et al. v. David A. Murdock, et al., United States District court for the Central District of California, No. CV-86-6410 IH (February 8, 1990).

Deposition of Daniel R. Fischel In Re: Connecticut National Life Insurance Company, et al. v. Peter A. Sprecher and Laventhol & Horwath, United States District Court, Central District of California, No. CV 87-1945 WJR (Tx) (January 30, 1990).

Deposition of Daniel R. Fischel In Re: Consolidated Capital Securities Litigation, United States District Court, Northern District of California, No. C-85-7332 AJZ (January 22, 1990).

Declaration of Daniel R. Fischel In Re Plaintiffs' Damages in Re: Liquidity Fund, et al. v. Southmark Corporation, et al. in the Superior Court of the State of California for the County of San Mateo, No. 332435 (January 18, 1990).

Deposition of Daniel R. Fischel In Re: Norman Kamerman, Shirley Brown, Edward Rosen, Lexim Investors Corp., and Dohsa Anstalt, on behalf of themselves and all others similarly situated, and Barnett Stepak v. Saul Steinberg, Reliance Group Holdings, Inc., Reliance Group, Inc., Reliance Financial Services corp., and Reliance Insurance Company, United States District Court, Southern District of New York, No. 84 Civ. 4440 (September 13, 1989).

Affidavit of Daniel R. Fischel In Re: Edward A. Taylor, et al. v. A. O. Smith Corporation et al., Circuit Court for Lincoln County, Tennessee, No. 098-84 (August 11, 1989).

Deposition of Daniel R. Fischel In Re: Container Products Inc. v. Pace Industries, United States District Court, Southern District of New York, No. 88-CIV. 3549 (KMW) (July 19, 1989).

Deposition of Daniel R. Fischel In Re: Joseph B. Moorman, et al. v. Southmark Corporation, et al., Liquidity Fund, et al. v. Southmark Corporation, et al., Superior Court of the State of California for the County of San Mateo, Nos. 322135 and 332435 (July 11, 1989).

Testimony of Daniel R. Fischel In Re: Tessie Wolfson, et al. v. Frederick S. Hammer, and Meritor Financial Group, United States District Court for the Eastern District of Pennsylvania, Civil Action No. 87-8471 (June 20, 1989).

Deposition of Daniel R. Fischel In Re: Richard J. Heckmann, et al. v. C. L. Ahmanson, et al., and Consolidated Cases, Superior Court of the State of California for the County of Los Angeles, Nos. CA000851 and C642081 (June 8, 1989).

Deposition of Daniel R. Fischel In Re: Tessie Wolfson, et al. v. Frederick S. Hammer, United States District Court for the Eastern District of Pennsylvania, Civil Action No. 87-8472 (May 11, 1989).

Testimony of Daniel R. Fischel In Re: Tessie Wolfson, et al. v. Frederick S. Hammer, United States District Court for the Eastern District of Pennsylvania, Civil Action No. 87-8472 (April 13, 1989).

Deposition of Daniel R. Fischel In Re: National Union Fire Insurance Company of Pittsburgh, PA v. Wells Fargo Bank, N.A., District Court of Harris County, Texas, 125th Judicial District, No. 88-49246 (April 10 and 11, 1989).

Deposition of Daniel R. Fischel In Re: Susan Rothenberg, as Custodian for Stephen J. Rothenberg v. Charles E. Hurwitz, United Financial Corporation, United Savings Association of Texas, et al., United States District Court for the Southern District of Texas, Houston Division, Civil Action No. H-86-1435 (March 30, 1989).

Deposition of Daniel R. Fischel In Re: Jose Nodar, et al. v. William Weksel, Albert Bromberg, Henry B. Turner, IV, Frank L. Bryant, Leo Kuperschmid, Bennett S. Lebow, Ernst & Whinney and Oppenheimer & Co., Inc., United States District Court, Southern District of New York, No. 84 Civ. 3870 (VLB) and consolidation case No. 84 Civ. 5132 (VLB) (December 15 and 16, 1988).

Deposition of Daniel R. Fischel In Re: William Steiner, et al. v. Whittaker Corporation, et al., Superior Court of the State of California for the County of Los Angeles, No. CA000817 (December 7, 1988).

Deposition of Daniel R. Fischel In Re: Arnold I. Laven, et al. v. Western Union Corporation, et al., United States District Court for the District, Western District of Washington, MDL No. 551 (August 30 and 31, 1988).

Deposition of Daniel R. Fischel In Re: Washington Public Power Supply System Securities Litigation, United States District Court, Western District of Washington, MDL No. 551 (August 16 and 22, 1988).

Affidavit of Daniel R. Fischel In Re: District Business Conduct Committee for District No. 3 v. Blinder, Robinson & Company Inc., et al., National Association of Securities Dealers, Inc. National Business Conduct Committee, Complaint No. DEN-666 (July 21, 1988).

Deposition of Daniel R. Fischel In Re: Joseph Seidman, et al. v. Stauffer Chemical Company, et al, United States District Court for the District of Connecticut, No. B 84-543 (TFGD) (June 10, 1988 and May 5, 1987).

Deposition of Daniel R. Fischel In Re: Edlin Cattle Co., Inc., and James Edlin v. A. O. Smith Harvestore Products, Inc., et al., United States District Court for the Northern District of Texas, Amarillo Division, No. CA-2-86-0122 (May 12, 1988).

Deposition of Daniel R. Fischel In Re: MicroPro Securities Litigation, United States District Court for the Northern District of California, No. C-85-7428-EFL (A) (May 2, 1988).

Affidavit of Daniel R. Fischel In Re: Pizza Time Theatre Securities Litigation, United States District Court for the Northern District of California, Civil File No. 84-20048-(A)-RPA (March 25, 1988).

Affidavit of Daniel R. Fischel and Robert A. Sherwin In Re: First National Bank of Louisville v. Brooks Farms, and George C. Brooks, et al., Third-Party Plaintiffs v. A. O. Smith Corporation, et al., Circuit Court for Maury County, Tennessee, No. 2058 (March 3, 1988).

Testimony of Daniel R. Fischel In Re: Nucorp Energy Securities Litigation, United States District Court for the Southern District of California, M.D.L. 514 (March 15, 16, 17, and 18, 1988).

Deposition of Daniel R. Fischel In Re: Nucorp Energy Securities Litigation, United States District Court for the Southern District of California, M.D.L. 514 (January 27, 1988).

Deposition of Daniel R. Fischel In Re: Anheuser-Busch Companies, Inc. v. W. Paul Thayer, et al., United States District Court for the Northern District of Texas, Dallas Division, No. CA- 3-85-0794-R (January 21, 1988; December 4, 1987; and November 5, 1987).

Testimony of Daniel R. Fischel In Re: Securities and Exchange Commission v. First City Finance Corporation Ltd., and Marc Belzberg, United States District Court for the District of Columbia, Civil Action No. 86-2240 (December 18, 1987).

Testimony of Daniel R. Fischel In Re: The Irvine Company v. Athalie Irvine Smith and Athalie R. Clarke, Trustee, State of Michigan Circuit Court for the county of Oakland, Civil Action No. 8327011-CZ (December 14, 15, and 16, 1987).

Deposition of Daniel R. Fischel In Re: Securities and Exchange Commission v. First City Finance Corporation, Ltd. and Marc Belzberg, United States District Court for the District of Columbia, Civil Action No. 86-2240 (December 11, 1987).

Affidavit of Daniel R. Fischel In Re: Gerald D. Broder and Constance D. Broder v. Alphonse H. Bellac and William B. Weinberger v. Combustion Equipment Associates, Inc., et al., and William B. Weinberger v. Coopers & Lybrand, United States District Court for the Southern District of New York, 80 CIV 6175 (CES) 80 CIV 6839 (CES) 84 CIV 8217 (CES) (July 22, 1987).

Deposition of Daniel R. Fischel In Re: The Irvine Company v. Athalie Irvine Smith and Athalie R. Clarke, Trustee, State of Michigan, Circuit Court for the County of Oakland, Civil Action No. 83270011-CZ (June 1, 1987).

Deposition of Daniel R. Fischel In Re: Fortune Systems Securities Litigation, United States District for the Northern District of California, Master File No. 83-3348A-WHO (May 7, 1987).

Deposition of Daniel R. Fischel In Re: Victor Technologies Securities Litigation, United States District Court for the Northern District of California, Master File No. C-83-3906(A)-RFP (FW) (January 8, 1987 and October 30, 1986).

Reply Declaration of Daniel R. Fischel in Support of the Motion by the Activision Defendants for Summary Judgment In Re: Activision Securities Litigation, United States District Court for the Northern District of California, Master File No. C-83-4639(A)-MHP (October 27, 1986).

Testimony of Daniel R. Fischel In Re: NVHomes, L.P. v. Ryan Homes, Inc.; and Ryan Homes, Inc. v. NVHomes, L.P., et al., United States District Court for the Western District of Pennsylvania, Civil Action No. 86-2139 (October 24, 1986).

Supplemental Affidavit of Daniel R. Fischel In Re: NVHomes, L.P. v. Ryan Homes, Inc.; and Ryan Homes, Inc. v. NVHomes, L.P. and NVAcquisition L.P., et al., United States District Court the Western District of Pennsylvania, Civil Action No. 86-2139 (October 24, 1986).

Affidavit of Daniel R. Fischel in Support of the Motion by the Activision Defendants for Summary Judgment In Re: Activision Securities Litigation, United States District Court for the Northern District of California, Master File No. C-86-2139 (October 20, 1986).

Declaration of Daniel R. Fischel in Support of the Motion by the Activision Defendants for Summary Judgment In Re: Activision Securities Litigation, United States District Court for the Northern District of California, Master File No. C-83-4639(A)-MHP (October 2, 1986).

Affidavit in Support of Defendants Motion for Summary Judgment In Re: MCorp Securities Litigation, United States Court for the Southern District of Texas, Civil Action No. H-85- 5894 (September 25, 1986).

Deposition of Daniel R. Fischel In Re: Activision Securities Litigation, United States District Court for the Northern District of California, No. C 83 4639 (August 18 and 19, 1986).

Deposition of Daniel R. Fischel In Re: John Mancino v. James A. McMaghan, et al., United States District Court for the Northern District of California, Civil No. C-84-0407-TEH (August 14, 1986).

Testimony of Daniel R. Fischel In Re: Charles W. Leigh, et al. and George Johnson, et al. v. Clyde William Engle, et al., United States District Court for the Northern District of Illinois, Eastern Division, Case No. 78 C 3799 (August 1, 1986).

Reply Affidavit of Daniel R. Fischel In Re: The Amalgamated Sugar Company v. NL Industries, United States District Court for the Southern District of New York, 86 Civ. 5010 (VLB) (July 28, 1986).

Affidavit of Daniel R. Fischel In Re: The Amalgamated Sugar Company v. NL Industries, United States District Court for the Southern District of New York, 86 Civ. 5010 (VLB) (July 18, 1986).

Deposition of Daniel R. Fischel In Re: Charles W. Leigh, et al. and George Johnson, et al. v. Clyde William Engle, et al., United States District Court for the Northern District of Illinois, Eastern Division, Case No. 78 C 3799 (July 1, 1986).

Deposition of Daniel R. Fischel In Re: Seafirst Corporation v. William M. Jenkins, et al.; and Seafirst Corporation v. John R. Boyd, et al., United States District Court for the Western District of Washington at Seattle, Case No. C83-771R (February 27, 1986).

Deposition of Daniel R. Fischel In Re: Kreindler v. Sambo's Restaurants, Inc., United States District Court for the Southern District of New York, Case No. 79 Civ. 4538 (December 17, 1985).

Affidavit of Daniel R. Fischel In Re: United States of America v. S. Richmond Dole and Clark J. Matthews II (March 19, 1985).

Deposition of Daniel R. Fischel In Re: Craig T. McFarland, et al. v. Memorex Corporation, United States District Court for the Northern District of California, No. C 79-2926-WAI, C 79-2007-WAI, C 79-241-WAI (February 26, 1985; January 29 and 30, 1985).

Testimony of Daniel R. Fischel In Re: Robert J. Lawrence v. Grumman Corp. Pension Plan, et al., United States District Court for the Eastern District of New York, No. CV-81-3530 (December 19, 1983).

Testimony of Daniel R. Fishel In Re: Telvest, Inc. v. Junie L. Bradshaw, et al. and American Furniture Company, United States District Court, for the Eastern District of Virginia Richmond Division, No. CA-79-0722-R (December 4, 1981).

OTHER ACTIVITIES

Member, American Economic Association, American Finance Association.

Former Member of the Board of Overseers of the Becker-Friedman Institute at the University of Chicago.

Former Advisor to the Harvard Program on Corporate Governance at Harvard University. Former

Member, Board of Directors, Center for the Study of the Economy and the State. Former Member,

Mid-America Institute Task Force on Stock Market Collapse.

Have acted as a consultant and/or advisor to the New York Stock Exchange, the National Association of Securities Dealers, the Chicago Board of Trade, the Chicago Board Options Exchange, the Chicago Mercantile Exchange, the New York Mercantile Exchange, the Federal Trade Commission, the Department of Labor, the Securities and Exchange Commission, the Canadian Securities and Exchange Commission, the United States Department of Justice, the Federal Deposit Insurance Corporation, the Resolution Trust Corporation, the Federal Housing Finance Agency, and the Office of Thrift Supervision.

Referee, Journal of Financial Economics, Journal of Law and Economics, Journal of Legal Studies.

Participant and speaker at multiple conferences on the Economics of Corporate, Securities and Commodities Law and the Regulation of Financial Markets.

Former Chairman, American Association of Law Schools' Section on Law and Economics.

APPENDIX B

Materials Relied Upon

Legal Documents & Expert Reports

Expert Report and Exhibits of [REDACTED] Ph.D., October 4, 2021

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All other documents cited in this report and exhibits and appendices.

Exhibit 34

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

SECURITIES AND EXCHANGE)
COMMISSION,)
Plaintiff,)
vs.) Case No.
20-Civ-10832 (AT) (SN)
RIPPLE LABS, INC., BRADLEY)
GARLINGHOUSE, and)
CHRISTIAN A. LARSEN,)
Defendants.)

CONFIDENTIAL - SUBJECT TO PROTECTIVE ORDER

REMOTE VIDEO DEPOSITION OF

DANIEL R. FISCHEL

Monday, February 28, 2021

STENOGRAPHICALLY REPORTED BY:
CHERYL L. SANDECKI, CSR, RPR
LICENSE NO. 084-03710
JOB NO. 220228LAK

1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK
3

4 SECURITIES AND EXCHANGE)
COMMISSION,)
5)
Plaintiff,)
6) Case No.
vs.) 20-Civ-10832 (AT) (SN)
7)
RIPPLE LABS, INC., BRADLEY)
8 GARLINGHOUSE, and)
CHRISTIAN A. LARSEN,)
9)
Defendants.)
10 _____)
11
12

13 The videotaped deposition of
14 DANIEL R. FISCHER, called for examination
15 pursuant to the Rules of Civil Procedure for the
16 United States District Courts pertaining to the
17 taking of depositions, taken before
18 CHERYL L. SANDECKI, Certified Shorthand Reporter
19 for the State of Illinois, at 110 North Wacker
20 Drive, Chicago, Illinois, on February 28, 2022,
21 at the hour of 9:15 a.m.
22
23
24
25

1 A P P E A R A N C E S:

2
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MAXWELL CLARKE, SEC

MARINA MARTYNOVA, SEC

ARTUR MINKIN, SEC

ANA GUARDADO, Ripple Labs

STELLA UVAYDOVA, SEC

DEREK LETELLIER, Videographer

INDEX

WITNESS

EXAMINATION

DANIEL FISCHEL

EXAMINATION BY MR. HANAUER

9

EXHIBITS

NUMBER

MARKED FOR ID

Fischel Deposition Exhibit

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Exhibit DF-2	Amended Expert Report of [REDACTED] Ph.D. dated October 6, 2021	63
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*** EXHIBITS BOUND SEPARATELY ***

1 THE VIDEOGRAPHER: This is media unit one.

2 We are now on the video record.

3 This is the videotaped deposition of
4 Daniel Fischel being taken on February 28, 2022.

5 The time is now 9:17 a.m. as indicated on the
6 video screen. We are located at 110 North
7 Wacker Drive, Suite 3800, Chicago, Illinois.

8 This deposition is being taken on
9 behalf of the plaintiff and video recorded on
10 behalf of the plaintiff in the matter of
11 Securities and Exchange Commission versus Ripple
12 Labs, Inc., et al. The case number is
13 20-Civ-10832, filed in the United States
14 District Court, Southern District of New York.

15 My name is Derek Letellier, certified
16 legal videographer representing Gradillas Court
17 Reporters with offices in Glendale, California.
18 The court reporter today is Cheryl Sandeckki also
19 of Gradillas Court Reporters.

20 Counsel, please identify yourselves for
21 the video record and state the parties that you
22 represent.

23 MR. HANAUER: I think we usually just type
24 them in.

25 THE VIDEOGRAPHER: Okay, that's fine. If the

1 court reporter could please swear in the
2 witness.

3 (Witness administered an oath.)

4 DANIEL FISCHEL,
5 having been first administered an oath, was
6 examined and testified as follows:

7 EXAMINATION

8 BY MR. HANAUER:

9 Q. Could you please state and spell your
10 name for the record please?

11 A. Daniel Robert Fischel, F-i-s-c-h-e-l.

12 Q. And good morning, Mr. -- or Professor
13 Fischel. My name is Ben Hanauer. I represent
14 the plaintiff, the SEC in this case.

15 Is there any reason why you cannot give
16 accurate testimony today?

17 A. No.

18 Q. And how many preparation sessions did
19 you have for today's deposition?

20 A. Well, I had many, many discussions with
21 people that I work with at Compass Lexecon and
22 then I had one Zoom call with several counsel.

23 Q. Counsel for Ripple in this case?

24 A. Yes. I assume counsel for Ripple or
25 whoever else.

1 Q. Which counsel was it? Who was it?

2 A. For -- well, certainly for Ripple, but
3 I don't know if Ripple is the only -- you know,
4 in other words, the defendant -- there is more
5 than one defendant.

6 Q. So who were the attorneys on the Zoom
7 call you just referenced?

8 A. Well, Mr. Figel was on. Mr. Flumenbaum
9 was on. I believe there was an attorney from
10 Cleary on. There might have been some others.

11 Q. And that was the only preparation
12 session you had with counsel to prepare for
13 today's deposition?

14 A. That's right.

15 Q. And did you review -- in preparing for
16 today's deposition, did you review any documents
17 other than the ones cited in your report that
18 you have considered in forming any opinion that
19 you will express in this case?

20 A. I looked at some of the studies on
21 studying whether cryptocurrencies trade in an
22 efficient market, some of the ones cited in my
23 report but also some others. I can't think of
24 anything else that I reviewed.

25 Q. And the ones you didn't cite in your

1 report, will you be disclosing those?

2 A. I have no objection to it. But it's
3 certainly not up to me.

4 Q. What are they?

5 A. I don't know the titles, but the --
6 there have been other articles written in
7 addition to the ones cited by Dr. [REDACTED] And we
8 just did a more complete literature search.

9 Q. And who is "we"?

10 A. My firm, Compass Lexecon.

11 Q. And you considered those studies?

12 MR. FIGEL: Objection.

13 THE WITNESS: Well, considered, yes, in the
14 sense that I looked at them.

15 BY MR. HANAUER:

16 Q. And did those -- did you consider those
17 studies in forming any opinion you will be
18 expressing in this case?

19 A. I would say for the most part, they
20 were consistent with the opinions that I did
21 express in my report.

22 MR. HANAUER: Well, in that case, Counsel,
23 we're just going to put on the record that we
24 request that you disclose those studies pursuant
25 to Rule 26.

1 MR. FIGEL: Your request is noted. We will
2 take it under advisement.

3 BY MR. HANAUER:

4 Q. Professor Fischel, how many times have
5 you had your deposition taken as an expert
6 witness?

7 A. I haven't counted, but I would say a
8 significant number of times.

9 Q. More than 200?

10 A. I don't think more than 200. Probably
11 more than 100, but I don't think more than 200.

12 Q. And if -- for the depositions you've --
13 the depositions that were taken of you as an
14 expert witness, those are listed on Appendix A
15 to your report?

16 A. Yes, they should be.

17 Q. How many times have you testified at
18 trial as an expert witness?

19 A. Also I haven't counted, but a
20 significant number of times as well.

21 Q. More than 50?

22 A. Probably more than 50.

23 Q. In this case, this lawsuit, were you
24 ever retained in a nontestifying or consulting
25 capacity?

1 MR. FIGEL: Objection.

2 You can answer.

3 THE WITNESS: My understanding is that we are
4 always retained in a nontestifying capacity
5 until a decision is made to disclose, so in this
6 case, me as an expert.

7 BY MR. HANAUER:

8 Q. How many of your testifying expert
9 witness cases were you engaged by the
10 government?

11 A. I don't know the exact number. But,
12 you know, a number of times.

13 Q. Would you say it's a large or a small
14 percentage of your engagements?

15 A. Well, as a percentage of the total, you
16 know, probably pretty small but, you know, in
17 some very important cases.

18 Q. When was the last time you provided us
19 expert testimony on behalf of the government?

20 A. I testified in a case, it was a couple
21 years ago, in connection with the Chrysler
22 bankruptcy. I'm sure it's on my CV and it's a
23 long-reported decision that came out of that
24 case.

25 Q. And who did you represent -- who

1 retained you in that case?

2 A. The justice department.

3 Q. Was that a criminal matter?

4 A. No.

5 Q. When was the last time you were
6 retained as an expert witness by the government
7 in a prosecution or enforcement matter?

8 A. In the last couple weeks.

9 Q. And what case was that?

10 A. It's -- it hasn't been disclosed yet,
11 so I'm not going to disclose it.

12 Q. You were engaged to be a testifying
13 expert?

14 A. You know, again, usually the
15 understanding, even if it's not explicit, is we
16 are retained to provide expert services and a
17 decision is made at a subsequent point in time
18 as to who is going to -- if anyone, is going to
19 be a testifying expert.

20 Q. Do you have any employment other than
21 being a law professor and your work at Compass
22 Lexecon?

23 A. Well, I would say right now my formal
24 sole employment is with Compass Lexecon, even
25 though I still have very close connections to

1 the University of Chicago, not just the law
2 school.

3 Q. So are you still a professor at the
4 University of Chicago?

5 A. I still have my title. I haven't
6 actively taught in the last couple of years. I
7 keep trying to fit it in because I'm always
8 asked. But the last couple of years I've just
9 gotten too busy to do it.

10 Q. Do you still receive a salary or
11 compensation from the University of Chicago?

12 A. No. But even when I was an active
13 faculty member, I donated all my compensation
14 back. So that really hasn't changed.

15 But as I said, I'm still very much
16 involved with the university.

17 Q. How much of your professional time do
18 you spend working as an expert witness as
19 opposed to being involved as a professor?

20 MR. FIGEL: Objection.

21 You can answer.

22 THE WITNESS: You know, I would say now and
23 in the recent past really a hundred percent of
24 my professional time is associated with my work
25 and role at Compass Lexecon.

1 BY MR. HANAUER:

2 Q. In your role as a testifying expert,
3 has your expert testimony ever been excluded for
4 any reason?

5 A. For any reason? I guess I would have
6 to say yes to that.

7 Q. How many times?

8 A. You know, not very many and for, you
9 know, a series of different kind of reasons,
10 too. But I would say not on substance or
11 credentials, rather on other disclosed too late
12 or in one well-known case, the defendant's
13 disclosure was deemed by the District Court to
14 be inadequate and that led to a long series of
15 follow-up appellate and on bond-cum litigation
16 all involving the justification for the -- by
17 the District Court to allow me to testify as a
18 summary witness but not as an expert witness.

19 So -- and I guess there was one --

20 Q. What case was that, sir?

21 A. The criminal case, the United States
22 versus Nacchio. And then there was --

23 Q. In the Nacchio case, you performed an
24 event study in that case?

25 A. I don't remember. Very possibly, but I

1 don't remember.

2 Q. And I'm sorry, you were mentioning
3 another case when you spoke?

4 A. I just don't want my answer to be
5 incomplete and, therefore, misleading.

6 There was another case, the Pfizer
7 Securities Fraud Case in the Second Circuit
8 where a District Court did exclude my testimony.
9 Again, it's a complicated story behind that.
10 But then the Court of Appeals reversed the
11 District Court. Let me just finish, just to
12 give a complete answer.

13 The Court of Appeals ruled that -- if I
14 remember correctly, that the District Court did
15 not abuse its discretion in not allowing one
16 minor calculation to be admitted into evidence.
17 But the -- that was a very small part of my
18 testimony. The Court of Appeals said the rest
19 of my -- the District Court was reversed in not
20 allowing the rest of my testimony to be
21 presented to the jury.

22 Q. And that was the Pfizer securities
23 litigation?

24 A. That's right.

25 Q. And you performed an event study in

1 that case?

2 A. I'm sure I performed an event study. I
3 mean, I performed hundreds of event studies.
4 And in any kind of securities fraud case, I'm
5 sure I performed an event study.

6 Q. And the Second Circuit in the Pfizer
7 case affirmed the District Court's finding that
8 a portion of your testimony was unreliable?

9 A. One calculation -- small calculation, I
10 think as the Court of Appeals stated or, more
11 accurately, that the District Court did not
12 abuse its discretion in that finding.

13 Q. Any other cases where your testimony
14 was excluded?

15 A. Let's see. There was a case many years
16 ago where one opinion out of three of my
17 opinions -- it was actually a jointly-authored
18 report and the District Court ruled that one out
19 of three opinions, I think the court said,
20 wasn't relevant, if I remember correctly.

21 Q. What case was that?

22 A. You know, if I looked at my CV, I could
23 find it. But I don't remember the name of the
24 case. It was a long time ago.

25 Q. And --

1 A. I don't remember any others.

2 Q. You beat me to my question.

3 A. Yeah.

4 Q. So speaking of CV, probably a good time
5 as any, I put in front of you exhibit that's
6 been marked as DF-1. Do you see that?

7 A. Yes.

8 (Whereupon, Deposition
9 Exhibit DF-1 was marked for
10 identification.)

11 BY MR. HANAUER:

12 Q. And DF-1, that's a copy of the expert
13 rebuttal report you submitted in this case?

14 A. Yes.

15 Q. And I would like to ask you some
16 questions about your CV, which I believe is
17 Appendix A to Exhibit DF-1.

18 A. Okay.

19 Q. How many times has a court refused to
20 credit or to follow your expert opinion?

21 MR. FIGEL: Objection.

22 THE WITNESS: You know, I can't possibly
23 answer that question. You know, if you mean a
24 court did not rule in the way that -- or didn't
25 base a ruling on my expert testimony or

1 disagreed with my expert testimony, I can't
2 possibly answer that question.

3 BY MR. HANAUER:

4 Q. Okay. Has it been many times?

5 MR. FIGEL: Objection.

6 THE WITNESS: Well, I've testified a lot. I
7 would say the overwhelming majority of times
8 courts have -- where courts have commented on my
9 testimony have credited, agreed with it, cited
10 it, relied on it. And certainly there have been
11 a few times where the opposite occurred, where a
12 court disagreed with my testimony.

13 BY MR. HANAUER:

14 Q. So I would like to ask you, referring
15 to page 4 of the appendix, the United States v.
16 Bases and Pacilio case. You testified in that
17 matter?

18 A. I did.

19 Q. Here in Chicago?

20 A. I did.

21 Q. And what was your -- that was only this
22 past summer, correct?

23 A. That's right.

24 Q. And what was your opinion in that case?

25 A. That the economic evidence that I

1 reviewed did not support, it was really
2 inconsistent with the government's allegations
3 about spoofing.

4 Q. And the jury convicted the defendants
5 in that case?

6 A. It was actually a mixed verdict. The
7 jury acquitted on the spoofing count, which was
8 the count that I testified about; and convicted
9 on, I think, mail or wire-fraud counts, if I
10 remember correctly.

11 Q. And I want to ask you about turning to
12 page 9 of your CV. The Commodities Futures
13 Trading Commission versus Oystacher case. It's
14 the third one on page 9.

15 A. Yes, I see that.

16 Q. And you provided expert testimony at a
17 preliminary injunction hearing in that case?

18 A. That's right.

19 Q. And you critiqued the opinion of the
20 CFTC's expert witness?

21 A. That's correct.

22 Q. And Judge St. Eve in that case found
23 that your critiques did not undermine the CFTC's
24 expert's opinions?

25 MR. FIGEL: Objection.

1 THE WITNESS: You know, I would want to see
2 the opinion. I basically remember the court --
3 well, I don't want to -- I don't want to
4 speculate. I would rather see the opinion.

5 BY MR. HANAUER:

6 Q. And on the next page of your CV,
7 page 10, you referenced SEC versus Wiley case.

8 A. Yes, I remember that case.

9 Q. And you provided trial testimony for
10 the defendant?

11 A. I can't remember if it was a trial or
12 some kind of preliminary injunction hearing or
13 something. But I certainly testified for the
14 defendant.

15 Q. What was your opinion in that case?

16 A. You know, as you go farther back in
17 time, I just need to see. If you have a copy,
18 show it to me and I'll -- it will refresh my
19 recollection.

20 Q. You don't remember as we sit here
21 today?

22 A. I don't remember it well; well enough
23 to describe.

24 Q. If you go to page 14 of your case --
25 I'm sorry, of your CV. And do you see the case

1 near the middle of the page SEC versus Carl
2 Jasper?

3 A. I do.

4 Q. In that case you performed an event
5 study on behalf of the defendant?

6 A. Actually, you know, that's over ten
7 years ago. I have no recollection what that
8 case was about.

9 Q. And going to page 17 of your CV, the
10 second case is a case called United States
11 versus Sanjay Kumar?

12 A. Yes, I remember that case.

13 Q. And in that case you provided an
14 opinion that challenged the government's expert
15 witness's event study?

16 MR. FIGEL: Objection.

17 THE WITNESS: I don't know if that's really a
18 fair characterization of what I did. I remember
19 I challenged the government's calculation of
20 economic loss, if I remember correctly, in a
21 sentencing hearing.

22 BY MR. HANAUER:

23 Q. And in that case the court accepted the
24 government's expert opinion and did not accept
25 yours?

1 MR. FIGEL: Objection.

2 THE WITNESS: Yeah, that's correct, to the
3 best of my recollection.

4 BY MR. HANAUER:

5 Q. Then going to page 29 of your CV, in
6 the middle of the page, do you see a case called
7 SEC versus First City Finance Corporation?

8 A. Yes, I see that.

9 Q. I know it's going a little bit back.
10 But do you --

11 A. That's 25 years ago.

12 Q. Did you provide expert testimony for
13 the defendant in that case?

14 A. Yeah, I was going to say I think it was
15 an affidavit, but it says it's testimony, so it
16 was probably testimony.

17 Q. Do you remember anything about that
18 testimony?

19 A. Believe it or not, I do.

20 I think it was about the economic
21 consequences of a 13(d) filing, if I remember
22 correctly.

23 Q. And in that case the court determined
24 that your opinion relied on purely speculative
25 hypothetical figures?

1 MR. FIGEL: Objection.

2 THE WITNESS: You know, again, something that
3 specific I would have to look.

4 BY MR. HANAUER:

5 Q. When was the last time that you
6 provided expert testimony against the government
7 and the defendant was found not guilty or not
8 liable?

9 MR. FIGEL: Objection.

10 THE WITNESS: So it can't be the times I've
11 testified for the government and the courts have
12 relied and cited extensively my testimony,
13 you're not including that in your question?

14 BY MR. HANAUER:

15 Q. That's not part of my question.

16 A. I don't remember.

17 Q. Who retained you in this case?

18 A. I think I was originally retained by
19 the -- at least in terms of who contacted me,
20 the Kellogg Hansen firm.

21 Q. And is -- did you sign like an
22 engagement letter or something like that?

23 A. I don't know because sometimes we have
24 engagement letters, sometimes we don't depending
25 on typically whether the client that's retaining

1 us wants an engagement letter.

2 Q. Who is the client that's retaining you
3 in this case?

4 A. Well, as I said, I believe it's all the
5 defendants, but I'm not a hundred percent sure
6 of that.

7 I know the company Ripple is retaining
8 us and possibly the other defendants as well.

9 Q. Are you providing testimony on behalf
10 of either of the individual defendants in this
11 case?

12 MR. FIGEL: Objection.

13 THE WITNESS: The testimony that I'm giving
14 is what's contained in my report and whatever --
15 and my answers to questions. As I said, I -- I
16 know that I'm being retained by Ripple. I
17 assume I'm being retained by the other
18 defendants, but I'm not a hundred percent sure.

19 BY MR. HANAUER:

20 Q. Your hourly rate on this engagement is
21 \$1,750?

22 A. That's right.

23 Q. Is that your standard rate?

24 A. Yes.

25 Q. When did you last raise rates?

1 A. Maybe a couple years ago.

2 Q. When were you first retained in this
3 case?

4 A. Well, the -- I don't remember exactly,
5 but, you know, probably sometime in 2021.

6 Q. Were you and Compass Lexecon retained
7 at the same time?

8 A. Compass Lexecon would be the party that
9 was retained. I'm not typically, or to the best
10 of my recollection, ever separately retained
11 from Compass Lexecon.

12 Q. You're the chairman and president of
13 Compass Lexecon?

14 A. I am.

15 Q. Are you also the founder?

16 A. No.

17 Q. How long have you been with Compass
18 Lexecon?

19 MR. FIGEL: Objection.

20 THE WITNESS: Well, Compass Lexecon is the
21 successor firm to Lexecon. If you count the
22 times when it was just Lexecon, I think I
23 affiliated with Lexecon the first time, I think,
24 in 1981, if I remember correctly.

25

1 BY MR. HANAUER:

2 Q. Did you found Lexecon?

3 A. No.

4 Q. How many Compass Lexecon experts have
5 been retained in this case?

6 MR. FIGEL: Objection.

7 THE WITNESS: Well, if you mean formal
8 employees of Compass Lexecon, I think I'm the
9 only one, as far as I know.

10 Although I'm not exactly sure whether
11 Laurentius Morais is an employee or
12 an independent contractor. I believe Allen
13 Ferrell is an independent contractor.

14 Those are the experts that I'm aware of
15 that, you know, we have some relationship with.

16 BY MR. HANAUER:

17 Q. Anyone else?

18 A. Not that I know of or not that I can
19 think of. But it's possible that there are
20 other experts that I'm just not aware of.

21 Q. How many other engagements have you
22 done for Ripple?

23 A. None as far as I'm aware.

24 Q. And when I say "Ripple," do you
25 understand that I'm referring to the defendant

1 in this case?

2 A. Yes, I understand that.

3 MR. FIGEL: Objection, Mr. Hanauer. I assume
4 when you talk about defendant, you're going to
5 distinguish among Ripple and the individual
6 defendants?

7 MR. HANAUER: Thank you, Counsel.

8 BY MR. HANAUER:

9 Q. I'll clare -- when I talk about
10 Ripple -- or when I say "Ripple," you understand
11 that to mean the defendant Ripple Labs in this
12 case?

13 A. Yes, that's what I understand.

14 Q. How many engagements have you done for
15 the Kellogg Hansen firm?

16 MR. FIGEL: You can answer it with a number
17 to start with.

18 THE WITNESS: You know, again, I -- a
19 nontrivial number, but I -- over a long period
20 of time. I don't know the exact number.

21 BY MR. HANAUER:

22 Q. More than ten?

23 A. It might be more than ten. Maybe right
24 around ten, just as a rough -- just as a rough
25 guess.

1 Q. How many engagements have you done for
2 the Debevoise law firm?

3 MR. FIGEL: Again, why don't you start with a
4 number, if you know.

5 THE WITNESS: Yeah, I want some clarification.
6 Do you want me personally or the firm?

7 BY MR. HANAUER:

8 Q. Well, let's start with you.

9 A. Because if these questions are for the
10 firm, I really don't know. I can only speak
11 about the times I've -- I personally can
12 remember being involved in a case with the
13 Debevoise law firm only.

14 You know, again, a nontrivial number.
15 I don't know the exact number.

16 Q. Around the same as the Kellogg firm?

17 MR. FIGEL: Objection.

18 THE WITNESS: Maybe a little less, but, you
19 know, again, it's over a lot of years, so I'm
20 not a hundred percent sure.

21 BY MR. HANAUER:

22 Q. On this case, did the other testifying
23 Compass Lexecon experts and their support teams
24 coordinate any of their analysis or opinions?

25 MR. FIGEL: Objection.

1 THE WITNESS: Well, I can't speak for others.

2 I can only speak for myself.

3 I did not coordinate with anyone.

4 BY MR. HANAUER:

5 Q. And does Compass Lexecon have any
6 processes or checks installed in place to ensure
7 that teams work independently and do not overlap
8 or coordinate?

9 MR. FIGEL: Objection.

10 THE WITNESS: I think that would be a
11 case-by-case determination on whether those
12 kinds of separations, structural separations,
13 are required.

14 BY MR. HANAUER:

15 Q. Were any employed in this case?

16 MR. FIGEL: Objection.

17 THE WITNESS: In terms of formal directions
18 that -- of the teams would be completely
19 separate, I would say no.

20 BY MR. HANAUER:

21 Q. How many hours did you work on this
22 engagement between the time you were engaged and
23 the completion of your report?

24 A. I don't remember exactly. You know, as
25 a rough guess, I would say somewhere between 25

1 and 50 but -- hours, but I'm not sure. I would
2 have to check.

3 Q. And how many hours have you billed
4 since completing your report?

5 MR. FIGEL: Objection.

6 THE WITNESS: You know, again, in terms of
7 the -- not all the time has been recorded yet,
8 so, you know, I'll just give the same rough --
9 excuse me, the same rough guess, you know, maybe
10 somewhere between 25 and 50.

11 BY MR. HANAUER:

12 Q. How much money has Compass billed to
13 Ripple on this case in total?

14 MR. FIGEL: Objection.

15 THE WITNESS: I don't know.

16 BY MR. HANAUER:

17 Q. How are you compensated by Compass?

18 MR. FIGEL: Objection.

19 THE WITNESS: I get a hundred percent of my
20 hourly rate. And then I also get some share of
21 the overall profits of Compass Lexecon.

22 BY MR. HANAUER:

23 Q. Do you receive a portion of the rates
24 charged by other experts and staff working on
25 this litigation?

1 A. No.

2 Q. But the full 1,750 an hour, that goes
3 to you?

4 A. Yes.

5 Q. You've been on emeritus status at the
6 University of Chicago since 2006?

7 A. I don't know the exact year, but
8 approximately that's right.

9 Q. When was the last article or
10 publication that you authored?

11 A. It's on my CV, so whatever that is.

12 Q. Why don't we just take a look so we
13 have it in the record.

14 A. Okay. It looks like 2006.

15 Q. Do you consider yourself an expert in
16 the field of blockchain technologies?

17 A. No.

18 Q. Do you consider yourself an expert in
19 the field of digital assets or cryptocurrencies?

20 A. No.

21 Q. Have you ever owned any digital assets
22 or cryptocurrencies?

23 A. No.

24 Q. Are you an expert on the issue of
25 whether digital assets are securities under the

1 federal securities laws?

2 MR. FIGEL: Objection.

3 THE WITNESS: Well, first of all, that's a
4 legal question, so I'm not offering any legal
5 testimony. But apart from that, the answer is
6 no.

7 BY MR. HANAUER:

8 Q. Are you offering an opinion on how
9 courts interpret the term "investment contract"
10 as it relates to the federal securities laws?

11 A. That's the same answer as I just gave.
12 It's a legal question. I'm not offering any
13 legal opinions. And in addition to that, the
14 answer is no.

15 Q. Will you be offering an opinion whether
16 any XRP transaction constituted or involved
17 sales or offers of investment contracts?

18 MR. FIGEL: Objection.

19 THE WITNESS: Again, that's a legal opinion.
20 I will not be offering any opinion like that.

21 BY MR. HANAUER:

22 Q. Are you offering or will you be
23 offering any opinion on whether any transaction
24 qualifies for an exemption from registration
25 under the federal securities laws?

1 A. That's the same answer as my last
2 several answers. That's a legal question. I'm
3 not offering any legal opinions.

4 And apart from that, I'm not going to
5 -- I don't have expertise on that issue.

6 Q. How many times have you provided an
7 expert opinion related to an event study?

8 MR. FIGEL: Objection.

9 You can answer.

10 THE WITNESS: Countless numbers of times.

11 BY MR. HANAUER:

12 Q. How many times have you performed an
13 event study as an expert witness?

14 MR. FIGEL: Objection.

15 THE WITNESS: Hundreds, if not thousands of
16 times.

17 BY MR. HANAUER:

18 Q. Have you ever performed an event study
19 related to a digital asset or cryptocurrency?

20 A. No, not that I can think of.

21 Q. Are you offering any opinion whether
22 there are specific adjustments that should be
23 made to an event study for digital assets as
24 compared to an event study for stocks?

25 MR. FIGEL: Objection.

1 THE WITNESS: Well, I don't know if I would
2 say adjustments is the right word. I do think
3 one of the issues that always comes up with
4 event studies is the relationship between event
5 studies and the existence of efficient markets.
6 I'm extremely familiar with that issue.

7 And I do think there is a fundamental
8 difference between the use or the appropriate
9 use of event studies in connection with
10 cryptocurrencies as compared with, for example,
11 event studies in connection with publicly-traded
12 stocks on the New York Stock Exchange or NASDAQ
13 or any organized exchange, assuming that those
14 stocks on those exchanges satisfy the criteria
15 for an efficient market.

16 BY MR. HANAUER:

17 Q. So I understand that, but I guess my
18 question is: Are you offering an opinion about
19 any specific adjustments that should be made to
20 an event study for digital assets as compared to
21 an event study for stocks?

22 MR. FIGEL: Objection.

23 THE WITNESS: I guess the specific adjustment
24 is whether it's appropriate to use an event
25 study other than as a test for whether or not

1 cryptocurrencies trade in an efficient market.

2 BY MR. HANAUER:

3 Q. And I would -- what's your answer to
4 whether an event study is an appropriate test
5 for whether -- actually, strike that.

6 Again, I understand you're that saying
7 that there are differences between crypto
8 markets and stock markets. But are you going to
9 give the opinion that an adjustment needs to be
10 made to an event study for crypto assets as
11 opposed to an event study for stocks?

12 MR. FIGEL: Objection.

13 THE WITNESS: I've answered that question
14 several times. I think there is no event study
15 in the academic literature that finds that
16 cryptocurrencies trade in an efficient market.
17 And that raises the question, given that
18 finding -- and I discussed this in my report --
19 as to whether it's appropriate to use an event
20 study to reach conclusions about the
21 relationship between information and price
22 movements in the cryptocurrency context as
23 compared with the context where stocks trade in
24 an efficient market, such as the situations that
25 I've just described.

1 BY MR. HANAUER:

2 Q. When you perform an event study for
3 expert testimony, does your expert report
4 typically include a description of the important
5 steps in your methodology?

6 MR. FIGEL: Objection.

7 THE WITNESS: Well, that's a pretty vague
8 question.

9 You know, I guess I frequently discuss
10 what's generally referred to as the Cammer
11 factors, which are criteria which are frequently
12 recognized as criteria for determining whether
13 stocks or bonds or, I guess, any financial asset
14 trade in a financial -- trade in an efficient
15 market.

16 So I guess in that sense, I would say
17 yes.

18 BY MR. HANAUER:

19 Q. When you perform an event study, do you
20 first start with identifying all significant
21 price changes and then check to see if those
22 changes can be linked to news, or do you start
23 by identifying news and then check to see if
24 there was a price reaction to the news
25 announcement?

1 MR. FIGEL: Objection.

2 THE WITNESS: Well, you know, first of all, I
3 would say every case depends on the relevant
4 facts and circumstances depending on the
5 question being analyzed.

6 But, generally speaking, in event
7 studies, you have particular periods of time
8 that you're analyzing, and you analyze the
9 relationship between price movements and what
10 happened in connection with events or the lack
11 of events on particular days.

12 BY MR. HANAUER:

13 Q. But do you first look for price changes
14 of an asset and then see if those price changes
15 can be linked to news, or do you start with news
16 and then look to see if the news is linked to
17 price changes?

18 MR. FIGEL: Objection.

19 THE WITNESS: As I said, every case is
20 different. So it depends on the relevant facts
21 and circumstances, but I would say most
22 typically neither of the alternatives that you
23 just posited.

24 Most typically you look at days. If
25 you're looking at -- and whatever the relevant

1 period of time is in connection with the inquiry
2 that you're providing, you look at all the days
3 and you look at the -- you have a -- you form a
4 statistical model and you perform a -- one or
5 more regressions to analyze, as I said, the
6 relationship between price movements, or the
7 lack of price movements, on a set of days that
8 you are analyzing.

9 BY MR. HANAUER:

10 Q. In event studies that involve repeated
11 public announcements or repeated the news
12 announcements, do you typically only use the
13 date of the earliest news release, or do you
14 include all event days when that same news is
15 repeated?

16 MR. FIGEL: Objection.

17 THE WITNESS: There's a difference between
18 what you look at and how you interpret what you
19 look at.

20 In terms of what you look at, generally
21 speaking, you don't make subjective judgments as
22 to which days you look at. You look at all the
23 days. And then how you interpret the results
24 depends on, you know, again, the particular
25 facts and circumstances that you're analyzing.

1 So that if you see that there is a
2 series of days that have similar information or
3 identical information being disclosed, you take
4 that into account in how you interpret the
5 results.

6 BY MR. HANAUER:

7 Q. If the same news is announced on
8 multiple days, do you treat each day where there
9 is the same announcement as an event day?

10 MR. FIGEL: Objection.

11 THE WITNESS: Again, it just doesn't really
12 capture the typical way that event studies are
13 performed. You look at all the days.

14 Again, speaking at a high level of
15 generality, because as I said, every case is
16 different and you always have to take into
17 account the relevant facts and circumstances,
18 but you don't make subjective judgments about
19 what's an event day.

20 You look at all the days, and then you
21 see what happens on each day, if anything, and
22 what price reaction occurred on each day, if
23 anything. And you interpret the data as
24 appropriate depending on the relevant facts and
25 circumstances.

1 BY MR. HANAUER:

2 Q. Before you perform an event study as an
3 expert witness, do you always check whether the
4 market for the financial product at issue is
5 sufficiently efficient?

6 MR. FIGEL: Objection.

7 THE WITNESS: I would say either explicitly
8 or implicitly, yes, I think you do.

9 BY MR. HANAUER:

10 Q. And what's the difference about how you
11 go about checking efficiency explicitly or
12 implicitly?

13 MR. FIGEL: Objection.

14 THE WITNESS: Well, many of my expert reports
15 go through the various Cammer factors, as I
16 stated, so I would say that's an explicit
17 treatment.

18 Sometimes there's no dispute and it's
19 just obvious. So if you take a very actively
20 traded stock on the New York Stock Exchange, for
21 example, it might just be assumed by everyone
22 that that stock trades in an efficient market so
23 there's no need to demonstrate what's obvious.
24 So, you know, that's also possible.

25

1 BY MR. HANAUER:

2 Q. So for certain of your event studies,
3 you don't start by performing a Cammer analysis --

4 MR. FIGEL: Objection.

5 BY MR. HANAUER:

6 Q. -- C-A-M-M-E-R?

7 A. Yes, I'm sure that's true.

8 Q. Did anyone -- referring to your report
9 in this case, Exhibit DF-1, did anyone assist
10 you in preparing the report?

11 A. Yes.

12 Q. And who was that?

13 A. I would say three people particularly.
14 David Gross, Eddie Grgeta, and Constance Kelly.

15 Q. And those three individuals, they are
16 all affiliated with Compass?

17 A. They're all employees of Compass
18 Lexecon, correct.

19 Q. Did you write the entirety of your
20 report?

21 A. You mean did I draft every word, no.

22 Q. Who did? Or who else did?

23 A. You know, probably -- probably the
24 latter two names that I mentioned were involved
25 in the drafting, working under my supervision.

1 Q. Going through your report, are you able
2 to discern what portions you wrote and what
3 portions other people wrote?

4 A. No. Well, first of all, it's a very
5 interactive process.

6 Secondly, there were multiple drafts
7 that were written. And everyone was involved to
8 some extent.

9 But as I said, I would say primarily
10 the other people that did most of the drafting,
11 initial drafting, under my supervision were
12 Eddie Grgeta and Constance Kelly.

13 Q. And did those two folks, did they do
14 most -- did they draft most of your report?

15 MR. FIGEL: Objection.

16 THE WITNESS: I would say they -- they were
17 the most involved in implementing the opinions
18 that I wanted to give.

19 And, again, the report is a product of
20 multiple drafts. As I stated, it was very much
21 of a cooperative project in terms of talking
22 about it, thinking about it, organizing it,
23 obviously, all done under my supervision and
24 direction.

25

1 BY MR. HANAUER:

2 Q. Was anything in your report written by
3 Ripple's attorneys?

4 MR. FIGEL: Objection.

5 You can answer yes or no.

6 THE WITNESS: No.

7 BY MR. HANAUER:

8 Q. Did Ripple's attorneys direct you to
9 write anything?

10 MR. FIGEL: Objection. Give me just a
11 second, Mr. Hanauer.

12 Start with, you can answer yes or no.

13 THE WITNESS: No.

14 BY MR. HANAUER:

15 Q. Did you -- does your report incorporate
16 comments from Ripple's attorneys?

17 MR. FIGEL: Objection.

18 You can answer yes or no.

19 THE WITNESS: I don't think so, no.

20 BY MR. HANAUER:

21 Q. And you testified that there were three
22 Compass team members who primarily assisted in
23 preparing your report; is that correct?

24 A. Yes. In thinking about the case,
25 conceptualizing the case, discussing ideas about

1 the case, which ultimately led to the
2 preparation of the report and continued work
3 subsequently to the preparation of the work.
4 Those three that I mentioned.

5 Q. And how many other Compass Lexecon
6 personnel affiliated -- or assisted the three
7 people you mentioned?

8 MR. FIGEL: Objection.

9 THE WITNESS: There were certainly some
10 others. I don't know how many. I mean, I can
11 think of a couple names, and I'm sure there were
12 research assistants and others as well.

13 BY MR. HANAUER:

14 Q. How many Compass personnel billed time
15 in relation to your report?

16 A. I don't know.

17 Q. Who prepared Exhibits 1 and 2 to your
18 report?

19 A. Well, they were prepared after going
20 through Dr. [REDACTED] backup. I'm actually not
21 sure who actually, at least originally, went
22 through Dr. [REDACTED] backup to get the data to
23 prepare Exhibits 1 and 2.

24 Q. So understanding that you don't know
25 who went through Dr. [REDACTED] backup data, do you

1 know who was the person that prepared Exhibits 1
2 and 2 to your report?

3 MR. FIGEL: Objection.

4 THE WITNESS: Physically prepared the
5 reports -- the exhibits, excuse me? No, I would
6 say I went over the backup with the three people
7 that I mentioned. But how that backup got
8 physically translated into the exhibits, which,
9 as I said I went over, specifically went over
10 with the three people that I mentioned, I'm not
11 sure.

12 BY MR. HANAUER:

13 Q. Is there anything in your report that
14 is inaccurate?

15 A. Not that I know of.

16 Q. And when I say "your report," do you
17 understand that I'm referring to Exhibit DF-1?

18 A. Yes, I understand that.

19 Q. Is there anything in your report that
20 you need to correct?

21 A. Not that I'm aware of.

22 Q. Does your report contain a complete
23 statement of all the opinions you will express
24 in this case?

25 MR. FIGEL: Objection.

1 THE WITNESS: Well, certainly, the opinions
2 that I was aware of at the time of my report.
3 I'm not aware of any other opinions as of now
4 that I would express if asked. But, obviously,
5 in cases of this complexity and magnitude,
6 things might come up.

7 I haven't, you know, reviewed the
8 testimony of Dr. [REDACTED] for example, or any other
9 expert, you know, so I don't know what I could
10 be asked, what additional work could be
11 performed.

12 But as of now, I don't have any
13 additional opinions to the ones that are
14 expressed in my report.

15 BY MR. HANAUER:

16 Q. So, I take it, you will not be
17 offering -- as you sit here today, are you aware
18 of any opinions that you will offer in this case
19 that are not contained in your report?

20 MR. FIGEL: Objection.

21 THE WITNESS: As I sit here today, I am not
22 aware of any other opinions. But, as I said, in
23 cases of this complexity and magnitude, it's my
24 experience that things tend to come up, you keep
25 working, you keep thinking of new things, you're

1 told about new things, you're aware of positions
2 that are being taken in the case. So things
3 could come up.

4 But as of now, I'm not aware of any
5 additional opinions to the ones that are
6 contained in my report.

7 BY MR. HANAUER:

8 Q. Have you been asked to prepare either a
9 supplemental report or an additional report in
10 this case?

11 MR. FIGEL: Start by answering yes or no.

12 THE WITNESS: No.

13 BY MR. HANAUER:

14 Q. Does your report contain all of the
15 bases and reasons for the opinions you're
16 offering?

17 MR. FIGEL: Objection.

18 THE WITNESS: I would say yes, combined with
19 my experience and expertise.

20 BY MR. HANAUER:

21 Q. Does appendix -- why don't we just look
22 at it. Can you pull up Appendix B to your
23 report, please.

24 Does Appendix B to your report identify
25 all the facts and data you considered in forming

1 the opinions expressed in your report?

2 A. That I relied on in my report, it
3 should.

4 Q. Different question. Not relied on.
5 Considered.

6 MR. FIGEL: Objection.

7 THE WITNESS: Well, "considered" is such a
8 broad term. Anything that I came in contact
9 with.

10 BY MR. HANAUER:

11 Q. "Considered" is the words from the
12 federal rules, so that's why I'm using that
13 word.

14 MR. FIGEL: Objection.

15 THE WITNESS: I would say considered in the
16 way that I used the material for purposes of my
17 report, I would say yes. But it's not all the
18 material that I've ever seen in connection with
19 this case. That's what I -- that's the
20 distinction that I would draw.

21 BY MR. HANAUER:

22 Q. Just so the record is clear on this,
23 does Appendix B to your report identify all the
24 facts and data you considered in forming the
25 opinions expressed in your report?

1 MR. FIGEL: Objection.

2 THE WITNESS: Considered in the way that you
3 described, yes.

4 BY MR. HANAUER:

5 Q. Does Appendix B list all of the
6 academic literature and textbooks you considered
7 in forming the opinions expressed in your
8 report?

9 A. Yes, with the caveat that I mentioned
10 in my earlier answer, that I'm aware of other
11 articles that analyze the efficiency of
12 cryptocurrency markets, other than those cited
13 by Dr. [REDACTED] that I looked at in connection with
14 the preparation of my report.

15 Q. And can you name any of those?

16 A. Not from memory, as I said earlier.

17 Q. Aside from those articles you just
18 mentioned, are there any facts or data that you
19 considered but did not rely upon for this
20 engagement?

21 MR. FIGEL: Objection.

22 THE WITNESS: Well, that's really the
23 distinction that I was drawing before. I'm sure
24 I saw a lot of paper in this case that I'm not
25 relying on. I don't know if that comes within

1 your definition of "considered."

2 BY MR. HANAUER:

3 Q. Did the articles you just mentioned
4 that you said you reviewed but can't remember
5 the names of them, were any of them published in
6 peer-reviewed journals?

7 A. I believe so, yes.

8 Q. All of them?

9 A. I don't know.

10 MR. HANAUER: And, again, Counsel, I'll just
11 repeat my request on the record for disclosure
12 of those materials considered by Professor
13 Fischel.

14 MR. FIGEL: We understand your request and we
15 will take it under advisement.

16 BY MR. HANAUER:

17 Q. Apart from the information contained in
18 the documents either identified in your report
19 or in Appendix B to your report, did you
20 consider any other facts or data in forming the
21 opinions stated in your report?

22 MR. FIGEL: Objection.

23 THE WITNESS: I don't have anything to add to
24 what I've already said. I don't recall anything
25 that I considered in connection with forming my

1 opinions, but I don't want to say that I didn't
2 see anything else in connection with my work in
3 this case.

4 BY MR. HANAUER:

5 Q. Did you consider any of the SEC's
6 interrogatory responses?

7 A. I think I -- didn't I cite some
8 interrogatory responses by the SEC in my report?
9 I think I did. Maybe I'm confusing that with --

10 Q. And I don't want to --

11 A. Footnote was what I was thinking of.

12 Q. Yeah. And I don't want to trip you up,
13 Professor. It looks like under Legal Documents
14 and Expert Reports, the only discovery response
15 you have listed is the SEC's Answers to the
16 First Set of Requests for Admission.

17 A. Yeah, that's what --

18 MR. FIGEL: Objection.

19 THE WITNESS: That's what I was just thinking
20 of in footnote 33.

21 BY MR. HANAUER:

22 Q. Okay. So I'll repeat my question.

23 Did you consider any SEC interrogatory
24 responses?

25 MR. FIGEL: Objection.

1 THE WITNESS: Not in forming my opinions. I
2 don't remember if I ever saw any.

3 BY MR. HANAUER:

4 Q. Did you consider any request for
5 admission responses other than the SEC's
6 response to Defendant's First Set of Requests
7 for Admissions?

8 MR. FIGEL: Objection.

9 THE WITNESS: Same answer. I don't recall
10 one way or the other.

11 BY MR. HANAUER:

12 Q. Have you reviewed any deposition
13 transcripts in this case?

14 A. I don't believe so. I certainly plan
15 to look at Dr. [REDACTED] deposition at some point,
16 but I haven't as of yet.

17 Q. Have you read any other deposition
18 transcripts from this case?

19 A. No.

20 Q. You read the entirety of the amended
21 complaint in this case?

22 A. Well, when you say "the entirety," if
23 you mean every word, probably not.

24 Q. Are you offering the opinion that any
25 factual allegation in the complaint is untrue?

1 MR. FIGEL: Objection.

2 THE WITNESS: It's very hard to answer that
3 question. I'm certainly not generally offering
4 opinions about factual testimony one way or the
5 other. But what comes within your definition of
6 a "factual allegation," whether there is any
7 overlap between whatever your definition is and
8 the economic evidence and analysis that I
9 discussed in my report, I don't know.

10 So I think you'd have to be a little
11 bit more specific as to what you're including as
12 a factual allegation.

13 BY MR. HANAUER:

14 Q. Do you have first-hand knowledge of any
15 fact alleged in the complaint?

16 A. First-hand knowledge, no.

17 Q. In forming your opinions in this case,
18 did you consider any of the statements Ripple
19 made on its website?

20 MR. FIGEL: Objection.

21 THE WITNESS: I don't believe so, no.

22 BY MR. HANAUER:

23 Q. Did you consider any social media posts
24 by Ripple or its personnel?

25 MR. FIGEL: Objection.

1 THE WITNESS: No.

2 BY MR. HANAUER:

3 Q. Did you consider any Ripple promotional
4 materials?

5 MR. FIGEL: Objection.

6 THE WITNESS: No.

7 BY MR. HANAUER:

8 Q. Did you speak with any purchasers or
9 holders of XRP?

10 A. No, not to the best of my knowledge.

11 Q. Did you review any documents to
12 determine any purchaser or holder, their intent
13 for obtaining XRP?

14 MR. FIGEL: Objection.

15 THE WITNESS: No.

16 BY MR. HANAUER:

17 Q. Did you do anything to determine
18 whether any purchaser intended to sell their XRP
19 for a profit?

20 A. No.

21 Q. Did you do anything to determine
22 whether any particular purchaser or holder
23 intended to profit based on Ripple's efforts?

24 MR. FIGEL: Objection.

25 THE WITNESS: No.

1 BY MR. HANAUER:

2 Q. Are you offering any opinion about the
3 intent or expectation of any XRP purchaser or
4 holder?

5 MR. FIGEL: Objection.

6 THE WITNESS: No.

7 BY MR. HANAUER:

8 Q. So we've been going a little bit more
9 than an hour. I just want to check with you how
10 you're doing on time and breaks.

11 A. I'm fine either taking a break or not
12 taking a break, whatever your preference is or
13 other people's preference.

14 MR. FIGEL: Why don't we take a break.

15 Before we go off the record, just a
16 couple things. One, I assume we can have the
17 standard understanding that an objection by one
18 party constitutes an objection by all parties.

19 MR. HANAUER: So stipulated.

20 MR. FIGEL: And just since we are all dating
21 ourselves, I believe the Belzberg case was 35
22 years ago, not 25 years ago.

23 MR. HANAUER: Let's go off the record.

24 THE VIDEOGRAPHER: We are going off the
25 record. The time is 10:24 a.m.

1 (Whereupon, a recess was had at
2 10:24 a.m., after which the
3 deposition was resumed at
4 10:44 a.m. as follows:)

5 THE VIDEOGRAPHER: We are back on the record.

6 The time is 10:44 a.m.

7 You may proceed.

8 BY MR. HANAUER:

9 Q. Professor Fischel, have you read
10 Ripple's well submission that it submitted in
11 this matter?

12 A. No.

13 Q. In preparing your report, did you
14 consider any academic research or digital assets
15 or cryptocurrencies?

16 A. The articles on cryptocurrencies and
17 efficient markets that I mentioned. I can't
18 think of anything else, but let me just check to
19 make sure.

20 No. Other than that general category,
21 I would say no.

22 Q. So with the exception of the two papers
23 cited on Appendix B to your report, the Joo
24 paper and the Feng paper, in preparing your
25 report did you consider any other academic

1 literature relating to digital assets for
2 cryptocurrencies?

3 MR. FIGEL: Objection.

4 THE WITNESS: I'm getting the -- the sequence
5 of when I saw articles a little bit fuzzy in my
6 mind. I can't remember if Dr. [REDACTED] cited more
7 than those two. I think he did. But I
8 certainly looked at every article that he cited
9 on cryptocurrencies and efficient markets.

10 And as I said, I have looked at other
11 articles besides those two, but I can't remember
12 before or after. I know some after. But I
13 can't remember if there were also some before
14 other than those two.

15 MR. FIGEL: Excuse me, Mr. Hanauer, I'm not
16 sure if the -- I had an objection to the last
17 question. I'm not sure if that was the "chk."

18 THE COURT REPORTER: That was a check. I
19 didn't hear. Speak a little louder.

20 MR. FIGEL: Okay. Will do.

21 BY MR. HANAUER:

22 Q. Are you disputing the conclusions of
23 any academic paper cited by Mr. [REDACTED]

24 A. Again, it's a pretty open-ended
25 question. You'd have to show me which

1 conclusion or which paper you're referring to
2 before I could answer one way or the other.

3 Q. Maybe we'll get to that in a little
4 bit.

5 Do any of the opinions in your report
6 rely on any assumptions?

7 MR. FIGEL: Objection.

8 THE WITNESS: Again, that's such a broad
9 open-ended question.

10 You know, the term "assumptions" is
11 pretty open-ended. But I think in terms of any
12 of the opinions formally being based on any
13 particular assumptions, I think the answer to
14 that is no.

15 BY MR. HANAUER:

16 Q. Did Ripple's -- did Ripple or its
17 attorneys ask you to make any assumptions in
18 this case?

19 MR. FIGEL: Objection.

20 You can answer yes or no. Don't reveal
21 any communications with Ripple's counsel.

22 THE WITNESS: No.

23 BY MR. HANAUER:

24 Q. Are you offering any opinions related
25 to the conduct of the individual defendants in

1 this case, Mr. Garlinghouse or Mr. Larsen?

2 MR. FIGEL: Objection.

3 THE WITNESS: I don't believe so, no.

4 BY MR. HANAUER:

5 Q. Will you be offering any opinion
6 related to industry custom and practice?

7 A. No.

8 Q. Will you be offering an opinion related
9 to any of the defendants' affirmative defenses?

10 MR. FIGEL: Objection.

11 THE WITNESS: You have to tell me what they
12 are.

13 BY MR. HANAUER:

14 Q. As you sit here today, can you think of
15 any opinion you're offering related to any of
16 the defendants' affirmative defenses?

17 A. I don't know because I don't know what
18 the affirmative defenses are from memory.

19 Q. Are you offering -- will you be
20 offering any opinion related to Ripple's fair
21 notice defense?

22 MR. FIGEL: Objection.

23 THE WITNESS: No.

24 BY MR. HANAUER:

25 Q. Will you be offering an opinion related

1 to either of the individual defendants' scienter
2 defenses?

3 MR. FIGEL: Objection.

4 THE WITNESS: No. I mean, obviously the
5 opinions I'm offering are the ones in my report.
6 So if there is any overlap between any of my
7 opinions in my report and any of your questions,
8 you know, obviously my -- I'm expected to
9 testify if asked about my report.

10 But in connection with all the
11 questions that you're asking me, I don't expect
12 to, at least as of now, offer any additional
13 opinions beyond what's in my report on those
14 subjects.

15 BY MR. HANAUER:

16 Q. The opinions you offer in this case are
17 rebuttals to opinions offered by Dr. [REDACTED] in his
18 amended report dated October 6, 2021?

19 A. Again, I'm not sure of the date. But
20 they are rebuttal opinions to the opinions of
21 Dr. [REDACTED] That's correct.

22 Q. And just so it's in the record, a copy
23 of Dr. [REDACTED] report, that's Exhibit DF-2?

24 A. Yes, I see that. I wasn't aware of it.
25 I see the date as well.

1 (Whereupon, Deposition
2 Exhibit DF-2 was marked for
3 identification.)

4 BY MR. HANAUER:

5 Q. Do your opinions in this case pertain
6 solely to the opinions set forth in Dr. [REDACTED]
7 report?

8 MR. FIGEL: Objection.

9 THE WITNESS: It's really an ambiguous
10 question. Some of the opinions are based on
11 economic theory or literature that's not based
12 on Dr. [REDACTED] more general.

13 But the opinions I'm offering in the
14 case are rebuttal opinions to the opinions of
15 Dr. [REDACTED]

16 BY MR. HANAUER:

17 Q. Are you offering any rebuttal opinions
18 to Dr. [REDACTED] rebuttal to Dr. Ferrell's report?

19 A. Same answer as I gave a minute ago.
20 Not specifically, except to the extent that
21 something in my report can be characterized as
22 also relevant to a criticism of -- in responding
23 to a criticism of Dr. Ferrell's report --
24 Professor Ferrell's report.

25 Q. Have you read Dr. [REDACTED] rebuttal

1 report?

2 A. You mean this exhibit, whatever it is,
3 Exhibit 2?

4 Q. No. The rebuttal expert report that
5 Dr. [REDACTED] has submitted in this case.

6 A. I don't believe so, no.

7 Q. Will you be offering opinions regarding
8 any of the SEC's experts other than Dr. [REDACTED]

9 MR. FIGEL: Objection.

10 THE WITNESS: Same answer. Again, not
11 specifically as far as I know, other than to the
12 extent that the opinions in my report have some
13 relevance, if they do, to responding to claims
14 by other experts as well.

15 BY MR. HANAUER:

16 Q. And if I refer to Dr. [REDACTED] report, do
17 you understand that I'm referring to Exhibit
18 DF-2?

19 A. That is what I understand, correct.

20 Q. Have you reviewed any of the SEC's
21 expert reports in this case other than
22 Dr. [REDACTED] report?

23 A. No.

24 Q. So I want to ask you some questions
25 about event studies.

1 If you had been asked to conduct an
2 event study that assessed the claim -- I'm
3 sorry, let me start over.

4 If you had been asked to conduct an
5 event study that assessed claims of any link
6 between Ripple announcements and XRP prices,
7 would you have been able to do that?

8 MR. FIGEL: Objection.

9 THE WITNESS: It's very hard to answer that
10 question. Would I be given a purpose for why
11 I'm doing it, the context of why I'm doing it?

12 I'm not sure I can answer the question
13 without an answer to those questions.

14 BY MR. HANAUER:

15 Q. Well, Dr. [REDACTED] he did an event study
16 that looked at the impact of Ripple public
17 announcements and XRP prices, right?

18 MR. FIGEL: Objection.

19 THE WITNESS: Yes, he did that.

20 BY MR. HANAUER:

21 Q. If you wanted to conduct a similar
22 event study, could you do that?

23 MR. FIGEL: Objection.

24 THE WITNESS: Again, it's hard to answer that
25 question because if you just mean the actual act

1 of conducting an event study, you can conduct an
2 event study of the relationship between any
3 event and any price. It has nothing -- there's
4 nothing unique about cryptocurrencies.

5 The only issue is whether it's
6 appropriate to do it, what it shows you, what
7 you can infer from it. And that's why context
8 is important.

9 If you asked me to conduct an event
10 study between announcements by Kellogg's and the
11 price of Corn Flakes, you can do that.

12 In other words, an event study is just
13 a statistical technique to analyze the
14 relationship between what occurs on particular
15 days or events on particular days and price
16 movements.

17 It might not be valid for any purpose,
18 it might not tell you anything, but you could
19 physically conduct that statistical analysis for
20 anything.

21 But that's not really meaningful
22 outside the issue of for what purpose, whether
23 it's appropriate, and what it tells you. And,
24 again, that's one of the really fundamental
25 flaws, in my opinion, in Dr. [REDACTED] report and

1 why his methodology is so defective.

2 BY MR. HANAUER:

3 Q. Would you be able to conduct an event
4 study that validly or accurately determined a
5 link between Ripple public announcements and XRP
6 prices?

7 MR. FIGEL: Objection.

8 THE WITNESS: You know, again, it depends for
9 what purpose and it depends by what you mean by
10 "validly."

11 In other words, there are a series of
12 academic studies that have attempted to use
13 event studies to analyze whether cryptocurrencies
14 trade in an efficient market. If that's the
15 question that's being analyzed, then, yes, I
16 could -- if I were interested in analyzing that
17 question independently from the academic studies
18 that have analyzed that question, I could an --
19 I could do that, in the same way that academic
20 studies have already done that.

21 That's -- excuse me. That's why the
22 purpose of conducting an event study has to be
23 considered anytime you're asking the question of
24 what you can validly do or not do.

1 BY MR. HANAUER:

2 Q. So I think you said you could conduct
3 an event study to determine the efficiency of
4 the market for XRP?

5 MR. FIGEL: Objection.

6 THE WITNESS: That's right.

7 BY MR. HANAUER:

8 Q. Could you conduct an event study for
9 another purpose such as accurately determining
10 the impact of public announcements on XRP
11 prices?

12 MR. FIGEL: Objection.

13 THE WITNESS: Well, that gets a lot more
14 complicated because one of the findings in the
15 academic literature is -- one of the purposes of
16 determining whether it's possible to draw
17 meaningful conclusions about the relationships
18 between events and prices is the existence of an
19 efficient market because the definition of a
20 semi-strong efficient market is prices that
21 reflect publicly-available information quickly
22 and without bias.

23 And in the absence of a finding of an
24 efficient market, you don't have a -- those
25 criteria are not satisfied or may not be

1 satisfied or one or both may not be satisfied.

2 And that immediately is something that
3 has to be taken into account at the very least
4 and may call into question any conclusions that
5 are drawn in the absence of an efficient market.

6 But, again, you need to provide a
7 little more context and definition to answer
8 beyond that general answer.

9 BY MR. HANAUER:

10 Q. Did you conduct an event study in this
11 case?

12 A. No, other than -- not independently,
13 other than reviewing the academic literature and
14 reviewing the work by Dr. [REDACTED]

15 Q. Did anyone at Compass conduct an event
16 study related to this case?

17 A. Not to the best of my knowledge.

18 Q. Are you offering an opinion in this
19 case on the informational efficiency of the XRP
20 market?

21 MR. FIGEL: Objection.

22 THE WITNESS: Well, I think Dr. [REDACTED] for all
23 practical purposes, concedes that the XRP market
24 is not informationally efficient.

25 And apart from that, a number of the

1 academic studies concede the same thing. In
2 fact, the Joo article that he cites, if I
3 remember correctly, concludes that the XRP
4 market is one of the least efficient
5 cryptocurrency market, although he doesn't cite
6 that.

7 BY MR. HANAUER:

8 Q. What article is that?

9 A. The Joo article that he cites.

10 Q. J-O-O?

11 A. J-O-N, I think it is. Or maybe I'm
12 getting the name wrong.

13 Yeah, I'm sorry, J-O-O, you're right.

14 Q. Did you do any independent analysis to
15 test the efficiency of the XRP market?

16 A. No, other than what I just described of
17 reviewing the academic literature and looking at
18 the findings of Dr. [REDACTED]

19 Q. Did anyone at Compass do any
20 independent analysis to test the efficiency of
21 the XRP market?

22 A. Not to the best of my knowledge.

23 Q. As an expert witness, have you ever
24 performed an event study where you tried to
25 assess whether there was a link between a news

1 event and a price reaction, and you concluded
2 that there was no such link based on the
3 observation of abnormal reactions in price on
4 days with no news events?

5 MR. FIGEL: Objection.

6 THE WITNESS: You know, I've conducted a lot
7 of event studies in a lot of different contexts.
8 You know, I just don't know. I don't recall one
9 way or the other whether that situation has ever
10 occurred.

11 BY MR. HANAUER:

12 Q. Can you name any case, as you sit here
13 today, where you applied such an analysis?

14 MR. FIGEL: Objection.

15 THE WITNESS: Well, it's reached a particular
16 conclusion if I understood your -- based on an
17 assumed set of facts, if I understood your
18 question correctly.

19 I can't name any event study in the
20 hundreds or thousands that I've done where --
21 because there's so many different permutations
22 in so many event studies over so many years. I
23 just can't tell you one way or the other.

24 BY MR. HANAUER:

25 Q. So I want to ask you about the Joo

1 article, Announcement of Facts in the
2 Cryptocurrency Markets.

3 A. Okay.

4 Q. You read that article in connection
5 with your report?

6 A. Yes, that's correct.

7 Q. Do you dispute any of the findings in
8 the Joo article?

9 A. Well, again, you have to show me the
10 article and show me which finding you're
11 referring to.

12 Q. As you sit here today, can you name any
13 findings that you're able to dispute?

14 MR. FIGEL: Objection.

15 THE WITNESS: As I sit here, I don't remember
16 all the findings, so I don't know if there's any
17 that I disagree with without looking at the
18 findings themselves.

19 BY MR. HANAUER:

20 Q. Are you aware of any scholarly article
21 disputing any findings from the Joo article?

22 MR. FIGEL: Objection.

23 THE WITNESS: I'd have to look.

24 BY MR. HANAUER:

25 Q. As you sit here today?

1 A. I don't have the articles in front of
2 me. As I sit here today, I just don't know one
3 way or the other.

4 Q. Do you have any critiques of the design
5 of the event studies described in the Joo
6 article?

7 MR. FIGEL: Objection.

8 THE WITNESS: Again, I don't have the article
9 in front of me so I don't know.

10 (Whereupon, Deposition
11 Exhibit DF-3 was marked for
12 identification.)

13 BY MR. HANAUER:

14 Q. Is Exhibit DF-3 a copy of the Joo
15 article we've just been discussing?

16 A. It is.

17 What do you want me to look at?

18 Q. Well, I asked you some questions and
19 you said you'd need to have the report in front
20 of you so --

21 A. I thought you asked me some questions
22 about particular aspects of the Joo article.

23 Q. Okay. Do you have any critique of the
24 author's design of the event studies described?

25 A. You know, I haven't studied the design

1 of the empirical test in any detail. But just
2 looking over the article, I don't have any
3 particular specific criticisms.

4 Q. Did you -- in preparing your report,
5 did you consider the Feng article, Informed
6 Trading in the Bitcoin Market?

7 A. I think I considered it and discussed
8 it in -- I think it was a footnote in my report
9 if I remember correctly.

10 Q. Are you offering an opinion that
11 disputes any of the findings in that paper?

12 MR. FIGEL: Objection.

13 THE WITNESS: The same answer that I just
14 gave about this.

15 First of all -- this Joo article, first
16 of all, I don't have the article in front of me.

17 Secondly, even if I do have the article
18 in front of me, I'm not really trying to
19 duplicate the results and the kinds of things
20 you would really need to do to be able to know
21 if I had any disagreement with any of the
22 findings or the structure of the empirical
23 tests.

24 I did think the particular finding that
25 I put in the footnote of my report was

1 significant and, again, very similar to the
2 finding in the Joo report.

3 BY MR. HANAUER:

4 Q. And what finding is that?

5 A. The finding of inefficiencies in the
6 market creating arbitrage opportunities because
7 of the deviations from market efficiency that
8 exists in other contexts.

9 Q. Did you review the design of the event
10 study in the Feng article?

11 MR. FIGEL: Objection.

12 THE WITNESS: You know, as I would say -- I
13 would say the same thing as I said about the Joo
14 article. Not in any detail.

15 I certainly reviewed the article and
16 the findings and the conclusions. If there was
17 anything specific, you'd have to show me the
18 article.

19 But, as I said, even if you showed it
20 to me, I couldn't say definitively because that
21 wasn't really my intention in reviewing the
22 articles and I didn't try and duplicate the
23 results to see if I got the same answers as the
24 authors themselves got.

25

1 BY MR. HANAUER:

2 Q. Did you try and duplicate the results
3 of either the Gerritsen article or the Schaub
4 article cited in Mr. [REDACTED] report?

5 A. No.

6 Q. So the Gerritsen report, Can Bitcoin
7 Investors Profit From Predictions by Crypto
8 Experts, you did not cite that report in
9 Appendix B to your own report, you did not cite
10 that paper.

11 Did you consider the Gerritsen paper in
12 preparing your report in this case?

13 MR. FIGEL: Objection.

14 THE WITNESS: Yes, I looked at all the
15 reports cited by Dr. [REDACTED]

16 BY MR. HANAUER:

17 Q. Before you signed your report?

18 A. That's what I'm just a little bit
19 confused about in terms of timing. I'm not sure
20 if it was before or after.

21 Q. And as you sit here today, are you
22 offering any opinion disputing any of the
23 findings in the Gerritsen article?

24 MR. FIGEL: Objection.

25 THE WITNESS: The exact same answers that I

1 gave about the other two articles.

2 I don't have the article in front of
3 me, so I don't know which finding you're
4 referring to. But even if I did have the
5 article in front of me, I would give the same
6 answer, that I didn't really read the article
7 with the intention of trying to duplicate the
8 results to see if I agreed with everything that
9 was done and the results that were reported in
10 the article.

11 I was trying to survey the academic
12 literature to see what it revealed about certain
13 issues that were discussed in Dr. [REDACTED] report.

14 BY MR. HANAUER:

15 Q. Would your answer be the same for the
16 Mark Schaub article cited by Dr. [REDACTED]

17 A. Yes --

18 MR. FIGEL: Objection.

19 THE WITNESS: Yes, it would.

20 BY MR. HANAUER:

21 Q. For Dr. [REDACTED] report, did you read the
22 entirety of it?

23 A. Yes.

24 Q. Are you offering any opinion whether
25 Dr. [REDACTED] is qualified to offer the opinions

1 expressed in his report?

2 A. No, I'm not. I'm not offering any
3 opinion on whether he is or he isn't.

4 Q. Do you have any reason to dispute his
5 qualifications?

6 A. No, I don't.

7 Q. Did you review Dr. [REDACTED] work for
8 errors?

9 MR. FIGEL: Objection.

10 THE WITNESS: I'm not sure what you mean by
11 "errors." Like computational errors or -- what
12 kind of errors are you talking about?

13 BY MR. HANAUER:

14 Q. Did you review his report for
15 computational errors?

16 A. No.

17 Q. Did anyone at Compass review Dr. [REDACTED]
18 work to see if there were computational errors?

19 A. I don't believe so, no.

20 Q. Did you review the data Dr. [REDACTED] used
21 to conduct his event study?

22 MR. FIGEL: Objection.

23 THE WITNESS: I mean, I reviewed the report
24 so I saw the data that Dr. [REDACTED] used in his
25 report. That's what I would say.

1 BY MR. HANAUER:

2 Q. Did you review the backup data from
3 Dr. [REDACTED] report that the SEC produced to
4 Ripple?

5 A. Yes. I mean, as I said before, that's
6 where my Exhibits 1 and 2 came from, his backup
7 data.

8 Q. And did you review that data?

9 A. Well, again, I'm not sure what you mean
10 by "review that data." I reviewed the data in
11 his backup in order to create Exhibits 1 and 2.

12 Q. Did you or anyone at Compass find any
13 errors in Dr. [REDACTED] data?

14 MR. FIGEL: Objection.

15 THE WITNESS: We didn't really look for
16 errors. I don't know if anybody saw anything
17 that they thought was an error, if you mean like
18 a mechanical error or computational error.

19 BY MR. HANAUER:

20 Q. Did you or anyone working at your
21 direction attempt to replicate Dr. [REDACTED]
22 calculations?

23 A. No, as far as I know.

24 Q. And I believe that you testified that
25 neither you nor anyone at Compass conducted an

1 event study related to XRP?

2 A. I said that's certainly true of me.
3 And to the best of my knowledge, it's true of
4 others as well.

5 Q. Why didn't you or anyone at Compass try
6 and conduct an event study, excuse me, related
7 to XRP?

8 A. Because I thought the use of event
9 studies by Dr. [REDACTED] in his opinion was
10 methodologically flawed for a number of
11 different reasons in ways that could not be
12 corrected by performing another event study.

13 Q. Did you or anyone at Compass conduct an
14 event study related to any other digital assets?

15 MR. FIGEL: Objection.

16 THE WITNESS: No, to the best of my
17 knowledge.

18 BY MR. HANAUER:

19 Q. Did you conduct any study to test the
20 efficiency of the XRP market?

21 A. I think I've answered that already.

22 I think Dr. [REDACTED] I think in his
23 report, concedes that the XRP market is not
24 efficient. And apart from that, there is a
25 series of academic articles that conclude the

1 same thing.

2 Q. Did you attempt to apply the Cammer
3 factors to XRP?

4 A. I actually thought about that and I
5 thought about the Cammer factors. And, again,
6 it was obvious that XRP would not meet the
7 Cammer factors -- would not meet the
8 requirements for the finding of an efficient
9 market listed in the Cammer factors.

10 Q. Did you -- is there any written work or
11 analysis applying the Cammer factors to XRP?

12 MR. FIGEL: Objection.

13 THE WITNESS: I actually don't know the
14 answer to that because I specifically raised
15 that issue with people that I was working with,
16 and I didn't really follow up on it because the
17 answer is obvious.

18 But I don't know whether the people I
19 was working with actually implemented that
20 request in a -- or that idea in a formal way by
21 creating written work product. I just don't
22 know.

23 BY MR. HANAUER:

24 Q. Have you reviewed any event studies
25 related to XRP other than Dr. Metz's?

1 A. And other than what's in the academic
2 articles, no.

3 Q. Okay. So what academic articles
4 performing an event study related to XRP have
5 you reviewed?

6 MR. FIGEL: Objection.

7 THE WITNESS: Whatever articles that I
8 reviewed discuss the efficiency of the market in
9 XRPs by looking, you know, for example, at the
10 speed of price adjustment, the existence of
11 serial correlation, the existence of arbitrage
12 opportunities. That's what I would say.

13 BY MR. HANAUER:

14 Q. And I'm just looking for which articles
15 actually discuss that for XRP.

16 So that's in the Joo article, right?

17 A. Yes, I think that's in a number of the
18 articles. But, again, I can't recite that from
19 memory without looking at all the articles.

20 Q. You can't name an article other than
21 the Joo article that performed an event study
22 related to XRP?

23 MR. FIGEL: Objection.

24 THE WITNESS: I can't name them from memory
25 without having the articles in front of me,

1 correct.

2 BY MR. HANAUER:

3 Q. Are you offering an opinion in this
4 case regarding Dr. [REDACTED] conclusions about the
5 link between XRP prices and the prices of other
6 digital assets?

7 MR. FIGEL: Objection.

8 THE WITNESS: I would say I didn't -- I
9 certainly saw Dr. [REDACTED] discussion of that
10 issue in numerous places, but I did not conduct
11 any separate analysis of that one way or the
12 other.

13 BY MR. HANAUER:

14 Q. Are you offering the opinion whether or
15 not Ripple's actions or public announcements
16 cause XRP price movements?

17 A. Well, first of all, you're using the
18 word "cause." That has a particular meaning in
19 event study analysis.

20 You know, what an event study can show
21 is correlation. I think that's what even -- if
22 I -- I don't remember exactly Dr. [REDACTED]
23 phraseology, but that's the right statistical
24 answer to what an event study shows. And then
25 by interpretation you might be able to reach a

1 conclusion about the causation.

2 So I don't really think Dr. [REDACTED] shows
3 that or even claims that. But I wouldn't rule
4 out that certain events -- certain announcements
5 by XRP resulted in price changes in the sense
6 that, in the absence of those announcements, the
7 exact same price changes would not have
8 occurred.

9 Q. And when you say announcements by XRP,
10 do you mean --

11 A. I'm sorry.

12 Q. -- announcements by Ripple?

13 A. I meant announcements by Ripple. Thank
14 you.

15 Q. So using the correlation language that
16 you just referenced, are you opining in this
17 case whether or not there's a correlation
18 between Ripple's actions or public announcements
19 and XRP price movements?

20 A. Again, it's very hard to answer that
21 question at the level of generality of your
22 question.

23 I think Dr. [REDACTED] study is
24 fundamentally flawed in a variety of different
25 ways, but I still would not rule out the

1 possibility that there were times when
2 announcements by Ripple were correlated at some
3 point in time with price movements by XRP.

4 I think that's a fair interpretation of
5 the data.

6 Q. And did you perform any work or
7 analysis to determine if there was a correlation
8 between Ripple's actions or public announcements
9 and XRP price movements?

10 MR. FIGEL: Objection.

11 THE WITNESS: You know, I guess I would say
12 some in the sense that as a result of background
13 and experience, if you pick certain events that
14 you can anticipate would have a big price
15 effects or see the price effects first and then
16 look backwards towards the events, I believe you
17 could imagine -- not just imagine, conclude that
18 there was a correlation between certain
19 announcements and certain price movements.

20 But, again, that might be true for my
21 Kellogg's and Corn Flakes example. Or maybe a
22 more relevant example would be De Beers
23 announcements.

24 In other words, for any price movement
25 that's related to a product, if you look over a

1 multi-year period, you can find announcements
2 that are likely going to be correlated with
3 price movements. And that's really all that
4 Dr. [REDACTED] did.

5 BY MR. HANAUER:

6 Q. And I don't want to talk about the
7 theoretical. I just want to talk about like
8 what you actually did.

9 And did you perform any analysis to
10 actually determine if there is a statistically
11 significant association between Ripple's actions
12 or public announcements and XRP's price
13 movements?

14 MR. FIGEL: Objection.

15 THE WITNESS: I will say not in a formal
16 statistical sense. I think we looked at some of
17 the biggest price movements and the events that
18 occurred around those price movements or the
19 announcements that occurred around those price
20 movements.

21 And as I said, I think it would be fair
22 to conclude that there was a correlation between
23 the biggest price movements and certain
24 announcements, even to the point of going beyond
25 what an event study can tell you itself and

1 conclude for certain isolated price movements.
2 Those were at a minimum correlated, possibly
3 even caused by those announcements, but, again,
4 in ways that you can find throughout the
5 different -- all the myriad of different
6 relationships between products and price
7 movements.

8 BY MR. HANAUER:

9 Q. How many Ripple announcements did you
10 find were correlated with statistically
11 significant XRP price movements?

12 MR. FIGEL: Objection.

13 THE WITNESS: Well, I didn't quite say that.

14 What I said was, what we did do was
15 look at some of the biggest price movements that
16 Dr. [REDACTED] found and then looked at certain
17 announcements that occurred around the time of
18 those price movements and concluded that, you
19 know, just based on a fair interpretation of the
20 data that there would -- there would likely be a
21 correlation between the announcements and the
22 price movements, and possibly even a stronger
23 relationship for that handful of announcements
24 and that handful of price movements.
25

1 BY MR. HANAUER:

2 Q. And how many such announcements did you
3 find?

4 A. I don't remember the exact number. But
5 I think we tried to find the biggest price
6 movements. I'm not sure how we -- exactly how
7 we defined the biggest price movements but --
8 what the cutoff was, but some relatively small
9 number just really to illustrate that if you
10 start with 500 announcements over a seven-year
11 period or whatever it was, you can find a
12 handful that there are big price movements where
13 there is a relationship with -- that there
14 appears to be a relationship with a handful of
15 really big price movements and particular
16 announcements.

17 Q. Do you agree that Dr. [REDACTED] procedures
18 flagged days with large positive price
19 reactions?

20 MR. FIGEL: Objection.

21 THE WITNESS: I'm not sure what you mean by
22 "flagged days." You can look at price reactions
23 on every single day if you have the data to do
24 it. And then you can create a model to tell you
25 what a large price movement -- to define what a

1 large price movement is.

2 So I don't know if that's what you mean
3 by flagging days. But, you know, that's
4 certainly what you can do with a series of price
5 movements.

6 BY MR. HANAUER:

7 Q. Did Dr. [REDACTED] miss any days with large
8 positive price reactions?

9 MR. FIGEL: Objection.

10 THE WITNESS: I don't know because I didn't
11 attempt to replicate his study.

12 BY MR. HANAUER:

13 Q. Do you dispute Dr. [REDACTED] conclusion
14 that he finds statistically significant evidence
15 that XRP prices react to news about Ripple's
16 actions?

17 A. That's a hard question to answer.
18 Because I -- I find that the study is so
19 methodologically flawed for numerous reasons.

20 But notwithstanding those
21 methodological flaws, I do not disagree for the
22 reasons that I just said, that you could
23 identify certain large price movements that are
24 associated with -- in terms of correlation,
25 possibly even causation, with certain

1 announcements by Ripple. But I don't believe
2 that supports any of the conclusions that -- or
3 any of the opinions that Dr. [REDACTED] reached
4 because his analysis is so methodologically
5 flawed.

6 Q. So you discuss confounding news in your
7 report?

8 A. Among other things, that's right.

9 Q. Did you do any analysis to determine
10 whether Dr. [REDACTED] results were actually
11 confounded by confounding information?

12 MR. FIGEL: Objection.

13 THE WITNESS: You mean other than what I said
14 in the report? I'm not sure I understand the
15 question.

16 BY MR. HANAUER:

17 Q. Well, your report identifies various
18 events that you claim could be confounding news,
19 right?

20 A. Or were confounded, correct.

21 Q. Did you do any testing or analysis to
22 determine the effect on XRP's price of the
23 announcements you claim to be confounding news?

24 MR. FIGEL: Objection.

25 THE WITNESS: Well, sometimes I think there

1 is some qualitative things that you can say, as
2 I did in the report, and as Dr. [REDACTED] himself
3 said in his report in terms of certain
4 concessions that he made.

5 But a lot of times you can't
6 disentangle confounding information. And when
7 that happens -- this is a very well-known
8 problem in event studies -- you can't draw --
9 you can't reach conclusions about the -- in this
10 case I'll use the word "cause" -- causes of the
11 price movement.

12 You know, so for an example, in more
13 conventional event studies, it's frequently the
14 case that on a particular day you have two
15 events that occur, let's say, at the same time
16 and you don't have a basis for distinguishing
17 which one was responsible for the price
18 movement.

19 So in that situation, when that occurs,
20 it would be a mistake to conclude that one of
21 the two confounding events was responsible for a
22 price movement if you can't distinguish between
23 them.

24 And there is a similar problem that
25 exists with the confounding events in Dr. [REDACTED]

1 event study, although with respect to certain of
2 the events you can go beyond that and make
3 qualitative statements, as Dr. [REDACTED] himself does
4 in his report.

5 BY MR. HANAUER:

6 Q. Did you make any attempt to, in your
7 words, disentangle the announcements you
8 identified as confounding?

9 MR. FIGEL: Objection.

10 THE WITNESS: Some qualitative effort, yes.
11 But a lot of times you can't disentangle, that's
12 the whole point, and that's one of the
13 criticisms of the inferences that Dr. [REDACTED] draws
14 to the extent that his event study is meant to
15 demonstrate a relationship between Ripple's
16 actions that reflect Ripple's, I'll use the
17 word, "entrepreneurial efforts" and other causes
18 of particular price movements.

19 BY MR. HANAUER:

20 Q. Did you look at intraday price
21 movements to see the effect of multiple
22 announcements on the same day?

23 MR. FIGEL: Objection.

24 THE WITNESS: That's not really the big
25 problem with confounding information in

1 Dr. [REDACTED] event study.

2 But as I said, a lot of times you can't
3 disentangle and that causes you to not be able
4 to reach conclusions about the causes of price
5 movements. But I certainly did make some
6 qualitative assessments, as Dr. [REDACTED] does
7 himself.

8 In other words, there is a basic
9 distinction between creating information and
10 reporting information. If you take an example
11 outside of event studies and, for example, a
12 newscaster, a newscaster can report an event
13 which has a big effect -- it could even have a
14 big effect on prices -- but the newscaster is
15 reporting an event that the newscaster didn't
16 have anything to do with or the newscaster is
17 just reporting an event that is the product of
18 actions by others.

19 But if you looked at the price reaction
20 to what the newscaster said, sometimes markets
21 can move based on what the newscaster said, even
22 though the newscaster had nothing to do with
23 creating the event.

24 And so if you drew the inference that
25 it was the newscaster's efforts that created the

1 price movement, you would be making a
2 fundamental mistake because you would be
3 ignoring the difference between creating
4 information and reporting information.

5 And so in the case of cryptocurrencies,
6 for example, in XRP and Dr. [REDACTED] report, when
7 he uses things like decisions by other platforms
8 to allow XRP to be traded on a different
9 platform and calls that a significant event by
10 XRP, an XRP announcement that results in a
11 significant price movement, forgetting any other
12 problems with that analysis, in many ways that's
13 like the newscaster example. That's ignoring
14 the distinction between creating information and
15 reporting information.

16 And there are a number of other
17 illustrations like that in Dr. [REDACTED] list of, I
18 guess what he calls, "event days" that have
19 significant price reactions. And that's really
20 what I discuss in my report. And actually it's
21 Dr. [REDACTED] himself acknowledges in his report
22 because he has one footnote -- I don't remember
23 exactly what the subject was -- and I'm sure I
24 could find it -- where he reports significant
25 results and I think he has a footnote saying

1 it's not clear whether Ripple had anything to do
2 with the underlying events which caused the
3 price movement, even though the announcement was
4 made by Ripple but the announcement was
5 announcing something that was done by others.

6 If you are trying -- if what you are
7 trying to test for is whether entrepreneurial
8 efforts by Ripple are correlated with price
9 movements, then you can't ignore the distinction
10 between creating information and reporting
11 information. And that's a basic confounding
12 problem that really permeates all of Dr. [REDACTED]
13 analysis, one of many really fundamental
14 methodological flaws.

15 BY MR. HANAUER:

16 Q. Did you look at any intraday price data
17 on this assignment?

18 MR. FIGEL: Objection.

19 THE WITNESS: I think I said no because
20 that's not the principal reason why I'm -- at
21 least this particular methodological flaw in
22 Dr. [REDACTED] study occurred.

23 BY MR. HANAUER:

24 Q. And you said you made a variety of
25 qualitative assessments about the effect of

1 confounding announcements. Did you perform any
2 quantitative assessments about the effect of
3 confounding announcements?

4 MR. FIGEL: Objection.

5 THE WITNESS: No. But, again, as I said, one
6 of the problems with confounding announcements
7 is frequently they can't be disentangled and
8 that occurs all the time in standard event study
9 analysis. And when that occurs, it has to be
10 recognized as a limitation of what you can infer
11 from the data. And that's exactly what Dr. [REDACTED]
12 did not do. That's another, as I said, basic
13 methodological flaw.

14 BY MR. HANAUER:

15 Q. Are you offering any opinions about the
16 appropriateness of how Dr. [REDACTED] decided to
17 categorize the various types of Ripple news
18 discussed in his report?

19 MR. FIGEL: Objection.

20 THE WITNESS: I think to some extent, yes.
21 It's totally subjective. He picked certain days
22 to analyze, ignores the vast majority of days.
23 He also analyzes public events but not negative
24 events.

25 I'm not aware of any event study in any

1 academic journal that describes as proper
2 methodology only analyzing the price reaction to
3 positive events as opposed to negative events or
4 positive price reactions as opposed to negative
5 price reactions.

6 I'm not saying that none exists. But
7 it seems so fundamentally inconsistent with
8 basic statistical analysis and basic event study
9 methodology. I'm just not aware of any support
10 in peer-reviewed journals or anywhere else for
11 that kind of approach.

12 BY MR. HANAUER:

13 Q. Did Ripple make any public
14 announcements that categorized XRP in a negative
15 light?

16 MR. FIGEL: Objection.

17 THE WITNESS: I don't know whether they did
18 or they didn't. But it's not only how Ripple
19 characterized the event; it's what the price
20 reaction is to the event.

21 And typically event studies analyzing
22 the relationship between events and price
23 movements don't limit themselves to positive
24 price movements. As I said, that's a departure
25 from any recognized event study methodology that

1 I've ever seen --

2 BY MR. HANAUER:

3 Q. Are you --

4 A. -- in any peer-reviewed journals that
5 I'm familiar with.

6 Q. Are you offering any opinions regarding
7 the appropriateness of Dr. [REDACTED] index modeling
8 in this case?

9 MR. FIGEL: Objection.

10 THE WITNESS: You know, that's -- he's got
11 all those 20 different regressions. I haven't
12 really thought about whether there were any that
13 could have been added or subtracted. So I guess
14 no, I don't have any specific criticisms of that
15 one issue.

16 BY MR. HANAUER:

17 Q. Can you please look at your report,
18 paragraph 14.

19 A. Okay, I have it.

20 Q. And do you see you say [as read]:
21 Based on my review of the economic evidence?

22 A. Yes, I see that.

23 Q. What do you mean by "economic
24 evidence"? What are you referring to?

25 A. The things that are referred to

1 immediately after.

2 Q. Well, what's immediately after are your
3 conclusions, right?

4 A. About economic evidence.

5 Q. So when you say "economic evidence," is
6 that the -- mean the same thing as the facts and
7 data you reviewed?

8 MR. FIGEL: Objection.

9 THE WITNESS: Well, I mean, if you look at
10 the sentence, it says [as read]: Based on my
11 review of the economic evidence, I have
12 concluded that Dr. [REDACTED] analysis is
13 fundamentally flawed for multiple reasons and
14 provides no support for the SEC's claim that XRP
15 is a security.

16 And then it lists the areas that I gave
17 as reasons based on economic evidence that
18 Dr. [REDACTED] analysis, in my opinion, is
19 fundamentally flawed.

20 BY MR. HANAUER:

21 Q. And the four romanettes in paragraph
22 14, those are the four general critiques you
23 have about Dr. [REDACTED] opinions?

24 A. Yes, that's right.

25 Q. And beyond the reasons cited in

1 paragraph 14, are you offering any other reasons
2 why you believe Dr. [REDACTED] analysis is
3 fundamentally flawed?

4 MR. FIGEL: Objection.

5 THE WITNESS: Well, you know, I think the
6 report speaks for itself. It's organized I
7 think consistently with these four areas. So
8 that's what I would say.

9 BY MR. HANAUER:

10 Q. I guess, though, is there an area
11 beyond the four identified in paragraph 14 that
12 you think makes Dr. [REDACTED] analysis
13 fundamentally flawed?

14 MR. FIGEL: Objection.

15 THE WITNESS: Really just what's contained in
16 my report.

17 BY MR. HANAUER:

18 Q. Can you look at paragraph 16, please.

19 A. Sixteen. Okay.

20 Q. And referring to the first paragraph --
21 or the first sentence of paragraph 16, is there
22 an accepted economics definition of security --
23 of a security?

24 A. I don't know if I would call it an
25 accepted economic definition. But what's stated

1 in the first sentence of paragraph 16 is a
2 general statement about the economic meaning of
3 a security.

4 Q. Is there an accepted economics
5 definition of an investment contract?

6 A. Again, I'm not sure whether something
7 is understood as an accepted definition. But at
8 least my understanding of the common economic
9 meaning of an investment contract is an
10 investment, the success of which varies based on
11 the success or lack of success or -- of whatever
12 the firm or venture that the economic actor is
13 investing in.

14 Q. In this lawsuit does the court decide
15 whether Ripple's XRP distributions violated the
16 federal securities laws using the economics
17 definition of investment contract or the
18 definition of investment contract as commonly
19 used under the federal securities laws?

20 MR. FIGEL: Objection.

21 THE WITNESS: I don't have an opinion on what
22 the court should rely on. That's obviously up
23 to the court.

24 BY MR. HANAUER:

25 Q. Are you offering the opinion that in

1 order for an investment product to be considered
2 a security under the federal securities laws the
3 holder of that investment product must have a
4 claim on the cash flows or some other asset of
5 the investment products issuer?

6 MR. FIGEL: Objection.

7 THE WITNESS: That's a legal opinion. I'm
8 not offering any legal opinions.

9 BY MR. HANAUER:

10 Q. So you cite the Supreme Court's
11 decision in SEC versus W.J. Howey Company?

12 A. That's right.

13 Q. And you refer to the Howey test?

14 A. Correct.

15 Q. And that's in paragraph seven of your
16 report?

17 A. That's right.

18 Q. Does Dr. [REDACTED] offer the opinion that
19 XRP is a security under the Howey test?

20 MR. FIGEL: Objection.

21 THE WITNESS: Well, you'd have to ask him. I
22 didn't see that particular opinion phrased that
23 way in his report.

24 BY MR. HANAUER:

25 Q. Does Dr. [REDACTED] report offer an opinion

1 whether any aspect of the Howey test is
2 satisfied?

3 MR. FIGEL: Objection.

4 THE WITNESS: If you mean does he literally
5 offer an opinion that says this element is
6 satisfied or not satisfied, again, you'd have to
7 ask him. But not that I recall.

8 BY MR. HANAUER:

9 Q. Does Dr. [REDACTED] opine whether any XRP
10 transactions constitute the offer of sale of
11 securities?

12 MR. FIGEL: Objection.

13 THE WITNESS: Same answer.

14 BY MR. HANAUER:

15 Q. And are you offering an opinion on
16 whether any of Ripple's XRP transactions
17 satisfied the Howey test?

18 A. Again, that's a legal opinion. So, no,
19 I'm not; I'm not offering any legal opinions.

20 Q. Did you consider yourself an expert on
21 how courts have applied the Supreme Court's
22 Howey decision?

23 MR. FIGEL: Objection.

24 THE WITNESS: That's another legal opinion.
25 And I'm not offering any legal opinions.

1 BY MR. HANAUER:

2 Q. Did you have -- have courts provided
3 more recent guidance since Howey on how to
4 determine if transactions involve the offer or
5 sales of securities?

6 MR. FIGEL: Objection.

7 THE WITNESS: That's another legal opinion.
8 I'm not offering any legal opinions.

9 BY MR. HANAUER:

10 Q. Did you review any such decisions in
11 preparing your report?

12 A. No.

13 MR. HANAUER: Let's go off the record.

14 THE VIDEOGRAPHER: This is the end of media
15 unit one. We are going off the record. The
16 time is 11:57 a.m.

17 (Whereupon, a recess was had at
18 11:57 a.m., after which the
19 deposition was resumed at
20 12:19 p.m. as follows:)

21 THE VIDEOGRAPHER: We are back on the record.
22 This is the start of media unit two, the
23 deposition of Daniel Fischel. The time is
24 12:19 p.m.

25 You may proceed.

1 BY MR. HANAUER:

2 Q. Professor Fischel, before we went on
3 break, you provided an economics definition of
4 investment contract.

5 Do you remember that?

6 A. I think I said I'm not sure there is
7 such a thing as an accepted definition, but
8 that's, I think, a general economic
9 understanding of what an investment contract is.

10 Q. I actually want to clarify that point.
11 Whatever definition you gave, does that come
12 from any academic textbook or scholarly article?

13 A. It very well might as a description. I
14 didn't search to see if that, I would say,
15 general understanding is contained in some type
16 of finance or business text. I would expect
17 that it would appear somewhere. But I didn't
18 check.

19 Q. Can you name one as you sit here today?

20 A. No, I can't because I didn't
21 investigate that question.

22 Q. Can I ask you to look at paragraph --
23 or page 10 of your report, please.

24 A. Sure. Okay.

25 Q. And do you see a heading A says [as

1 read]: The findings of Dr. [REDACTED] event study
2 methodology do not demonstrate that XRP holders
3 profit solely or primarily from the efforts of
4 Ripple?

5 A. Yes, I see that.

6 Q. Does Dr. [REDACTED] report offer the
7 opinion that XRP holders profit solely or
8 primarily from the efforts of Ripple?

9 MR. FIGEL: Objection.

10 THE WITNESS: Again, he doesn't use those
11 words. But in my opinion he reports his results
12 in a very misleading way because what he does
13 is, you know, for a series of the announcements
14 that he subjectively picks, he has a series of
15 exhibits where he just shows check marks to show
16 that there is, in his opinion, a statistical
17 relationship between the events out of the 500
18 that he picks and price reactions.

19 But if you look at his backup, and
20 that's the purpose of my Exhibit 1, you get a
21 very different reaction, a very different
22 understanding of what that relationship is,
23 meaning that on the overwhelming majority of
24 days where he says there are events, there is no
25 statistically significant price reaction. And

1 on a significant number of days where there is
2 no events, there is a statistically significant
3 price reaction. And you would never get that
4 understanding from his exhibits with checks.

5 And so I thought the way he reported
6 his results were very misleading, apart from the
7 other fundamental methodological flaws that I
8 discuss in my report, a few of which I referred
9 to already. And that's really the purpose of
10 this section.

11 BY MR. HANAUER:

12 Q. Did you perform any work or analysis to
13 test whether XRP holders profits solely or
14 primarily from the efforts of Ripple?

15 MR. FIGEL: Objection.

16 THE WITNESS: I think Dr. [REDACTED] own results
17 taken at face value, even apart from the
18 methodological flaws which exist, demonstrate
19 that XRP price changes are not, and therefore,
20 XRP's holders profits from price changes are not
21 solely or primarily attributable to Ripple's
22 efforts.

23 BY MR. HANAUER:

24 Q. I'm not asking what Dr. [REDACTED] did. I'm
25 asking what you did.

1 Did you do any work or analysis to test
2 whether XRP holders profit solely or primarily
3 from Ripple's efforts?

4 MR. FIGEL: Objection.

5 THE WITNESS: As I said, I didn't think it
6 was necessary to do any tests because Dr. [REDACTED]
7 own results demonstrate what I just said, which
8 is also included in this particular section of
9 my report and in Exhibit 1.

10 BY MR. HANAUER:

11 Q. Can the SEC satisfy the expectation of
12 profits prong of the Howey test by establishing
13 that under the circumstances Ripple promoted XRP
14 primarily as an investment?

15 MR. FIGEL: Objection.

16 THE WITNESS: That sounds like a legal
17 question. I don't have any opinion on that one
18 way or the other.

19 BY MR. HANAUER:

20 Q. Are you offering an opinion whether,
21 under all the circumstances, Ripple ever
22 promoted XRP primarily as an investment?

23 MR. FIGEL: Objection.

24 THE WITNESS: No, I'm not offering an opinion
25 on that.

1 BY MR. HANAUER:

2 Q. Did you consider whether Ripple ever
3 promoted XRP primarily as an investment?

4 A. No, I didn't. For purposes of the
5 analysis in my report, I did not.

6 Q. Are you offering an opinion on whether,
7 under all the circumstances, Ripple promoted XRP
8 as a means whereby XRP purchasers could pool
9 their own activities, their money, and Ripple's
10 contribution in a meaningful way?

11 MR. FIGEL: Objection.

12 THE WITNESS: I'm not offering an opinion
13 about that.

14 BY MR. HANAUER:

15 Q. Did you consider whether Ripple ever
16 promoted XRP as a means whereby Ripple
17 purchasers could pool their own activities,
18 their money, and Ripple's contributions in a
19 meaningful way?

20 MR. FIGEL: Objection.

21 THE WITNESS: No. As with the previous
22 questions, it's not really. I didn't consider
23 it and it's not relevant for the purposes of my
24 analysis.

1 BY MR. HANAUER:

2 Q. Well, why is it relevant for you to
3 consider whether XRP holders profits solely or
4 primarily from the efforts of Ripple but not
5 whether Ripple promoted XRP as an investment?

6 MR. FIGEL: Objection.

7 THE WITNESS: For the reason that I just
8 said, that Dr. [REDACTED] has exhibit after exhibit
9 where he reports the existence of relationships
10 with check marks. But if you look at his
11 backup, you get a very different impression of
12 what's behind those check marks. And it's only
13 as a result of his subjective choice of dates to
14 look at and how he interprets price reactions in
15 connection with those dates that he can even get
16 the check marks that he shows.

17 But as I said, even apart from the
18 methodological flaws, which are pervasive in
19 Dr. [REDACTED] report, even taken at face value, I
20 think it's fair to say that he reports his
21 results in a very misleading way. And if you
22 look at his backup, you can see that the
23 relationships which he purports to find are
24 actually much weaker and look very different
25 than the way that he reports them.

1 BY MR. HANAUER:

2 Q. Are you offering an opinion as to
3 whether XRP purchasers had a reasonable
4 expectation of profits to be derived from the
5 entrepreneurial or managerial efforts of Ripple?

6 A. I'm not offering an opinion about that.

7 Q. Did you consider whether XRP purchasers
8 had a reasonable expectation of profits to be
9 derived from the entrepreneurial or managerial
10 efforts of Ripple?

11 A. I didn't consider that in connection
12 with forming any of my opinions because it's not
13 relevant.

14 Q. Can you look please at page -- or
15 paragraph 18 of your report.

16 A. Okay.

17 Q. And I want to refer you to the second
18 sentence. And you write [as read]: In fact,
19 taken at face value, Dr. [REDACTED] analysis finds
20 that, (i), most days were significantly
21 positive, XRP returns had no news about Ripple's
22 efforts; and, (ii), most days with news about
23 Ripple's efforts did not have significantly
24 positive XRP returns.

25 Do you see that?

1 A. Yes, I see that.

2 Q. Are you offering the opinion that
3 either of those metrics identified in the two
4 romanettes, are you offering the opinion that
5 either of those are the determinative metrics
6 for event studies?

7 MR. FIGEL: Objection.

8 THE WITNESS: I don't understand that
9 question.

10 BY MR. HANAUER:

11 Q. Well, have you -- are you offering the
12 opinion that an event study gauges price
13 reaction by looking at the days where there is
14 significant returns but no -- no news
15 announcements?

16 MR. FIGEL: Objection.

17 THE WITNESS: I mean, an event study can show
18 you that. How relevant that is in a particular
19 case depends on the -- obviously the relevant
20 facts and circumstances of the case.

21 BY MR. HANAUER:

22 Q. Have you ever performed an event study
23 for litigation that based your finding on the
24 comparison of days with significantly positive
25 returns compared to the days without news

1 announcements?

2 MR. FIGEL: Objection.

3 THE WITNESS: Yeah, I think probably the
4 answer to that would be yes, I think.

5 BY MR. HANAUER:

6 Q. Can you name one, please?

7 A. I think there was some insider trading
8 cases that I have been involved in where that
9 kind of presentation was part of what we did,
10 showing basically the relationship between
11 trading days and events and showing -- and price
12 movements, and showing that a lot of days when
13 there were events, there was no trading in
14 advance of the events. And a lot of the days
15 when there were big price movements, there was
16 no trading or no events, something of that
17 nature. So I think the answer to your question
18 would be yes.

19 Q. Can you name one of the those cases, as
20 you sit here today?

21 A. For some reason the name Billy Bob
22 Harris sticks in my mind. I don't know if
23 that's a real person or I'm just imagining that
24 name. But I think there was a case involving
25 Billy Bob Harris. But I know there were others,

1 too.

2 But as I sit here, I don't remember the
3 exact names of the cases.

4 Q. Did you ever perform an event study for
5 litigation where the determining metric you
6 looked at was days with events not having
7 significantly positive returns?

8 MR. FIGEL: Objection.

9 THE WITNESS: What did you say? "The
10 determining metric"? You know, other than what
11 I just said, I can't think of any others, as I
12 sit here. But, again, I've done so many event
13 studies and so many different contexts over so
14 many years, it's very hard to generalize of what
15 I did or didn't do that would fit every single
16 example.

17 BY MR. HANAUER:

18 Q. Can I ask you to look at paragraph 20,
19 please --

20 A. Okay.

21 Q. -- of your report.

22 What is the significance of 76.3 to
23 89.5 percent of days with significantly positive
24 XRP returns having no news about Ripple's
25 efforts?

1 MR. FIGEL: Objection.

2 THE WITNESS: It's what I just said. It
3 demonstrates from Dr. [REDACTED] own backup exactly
4 what the relationship was between statistically
5 significant days with statistically significant
6 returns and whether or not there was news,
7 again, taking Dr. [REDACTED] study at face value,
8 including his subjective analysis of which of
9 the 500 days should be analyzed, which shouldn't
10 be analyzed, which are -- tell you something
11 that is probative in terms of the hypothesis
12 that he's testing.

13 But even just taking exactly what he
14 did at face value and forgetting all the
15 methodological criticisms that exist, this is
16 what his results show, which is very different
17 from the way he reports his results with checks.

18 MR. HANAUER: One second.

19 (Short pause in proceedings.)

20 BY MR. HANAUER:

21 Q. In order to determine whether Ripple
22 news announcements contribute to XRP prices,
23 should one check the magnitude of the price
24 reaction on news days?

25 MR. FIGEL: Objection.

1 THE WITNESS: Well, again, your question
2 presumes that there is a basis for looking at an
3 inefficient market, a price reaction on days
4 where there are announcements.

5 And one of the whole significant
6 findings of the lack of an efficient market is
7 there is not really a theoretical or empirical
8 basis to do that.

9 But putting that fundamental criticism
10 to one side, as a matter of statistics, it's
11 generally accepted that there are well-accepted
12 methodological techniques to answer questions of
13 which price movements are large enough or which
14 returns, to be more precise, are large enough
15 that they are unlikely to be attributable to
16 chance alone.

17 BY MR. HANAUER:

18 Q. Did you perform any analysis in this
19 case to check the magnitude of price reaction of
20 XRP to Ripple announcements?

21 MR. FIGEL: Objection.

22 THE WITNESS: Not other than reviewing
23 Dr. [REDACTED] analysis and, again, with the
24 background of the relevant academic literature
25 that I've referred to several times.

1 BY MR. HANAUER:

2 Q. Is it informative in event studies to
3 compare price reaction on news days to price
4 reaction on no news days?

5 MR. FIGEL: Objection.

6 THE WITNESS: Can be. I mean, I think it's a
7 function of what it is you're trying to test
8 under the relevant facts and circumstances at
9 the time.

10 BY MR. HANAUER:

11 Q. Did you perform any such analysis in
12 this case?

13 MR. FIGEL: Objection.

14 THE WITNESS: No, other than looking at the
15 results that Dr. [REDACTED] reported.

16 BY MR. HANAUER:

17 Q. Have you performed such analysis before
18 on other event studies for litigation?

19 MR. FIGEL: Objection.

20 THE WITNESS: Probably. I mean, comparing
21 the returns on news days with the returns on
22 non-news days, yeah. I think so, yes, for the
23 magnitude of returns, the volatility of returns.
24 Yes, I'm sure I have.

25

1 BY MR. HANAUER:

2 Q. Did you do any work or analysis on this
3 case to determine whether there was a difference
4 between significant returns on news days and no
5 news days?

6 MR. FIGEL: Objection.

7 THE WITNESS: In terms of the magnitude of
8 returns, I don't think so, but I'm not a hundred
9 percent sure.

10 BY MR. HANAUER:

11 Q. Did you do any work or analysis to
12 determine how much XRP returns on the news days
13 contributed to the total XRP returns during the
14 relevant periods -- relevant period?

15 A. You know, that's really, I think, the
16 same question you just asked me.

17 I don't think so in terms of that very
18 specific comparison, but I'm not a hundred
19 percent sure.

20 Q. Did you test the magnitude of abnormal
21 returns estimated by Dr. [REDACTED] on news days
22 compared to no news days?

23 THE COURT REPORTER: You said abnormal,
24 right? Okay.

25 MR. FIGEL: Objection.

1 THE WITNESS: Yeah, as I've said a number of
2 times, I just analyzed Dr. [REDACTED] backup to look
3 at what he himself found, as opposed to
4 performing any completely independent event
5 studies.

6 What I'm not sure of is -- in response
7 to a couple of your questions is whether we took
8 his results and sliced them and diced them in
9 the ways that you're suggesting, as opposed to
10 the ways that are reported in my Exhibit 1.

11 BY MR. HANAUER:

12 Q. In your words, did you slice and dice
13 Dr. [REDACTED] results in a way that's not reflected
14 on Exhibit 1?

15 A. You know, as I said, I don't think so
16 in any systematic way, but I'm not a hundred
17 percent sure.

18 Q. Are you offering the opinion that
19 Dr. [REDACTED] event study is flawed based on the
20 number of no news days with significant returns?

21 A. You know, again, I think, you know,
22 that presumes, you know, among other things, the
23 efficiency of the market. And so I'm ignoring
24 some of the methodological criticisms that I
25 believe characterize Dr. [REDACTED] report.

1 But in specific answer to your
2 question, again, that's, if I understand the
3 question correctly, different from the way I
4 reported Dr. [REDACTED] backup in Exhibit 1. And so
5 I don't believe we did exactly what you just
6 said, but I'm not sure.

7 BY MR. HANAUER:

8 Q. Are you offering the opinion that
9 Mr. [REDACTED] event study is flawed based on the
10 number of news days without significant returns?

11 A. As I said, I think Dr. [REDACTED] reports his
12 results in a fundamentally misleading way, and I
13 think there are other methodological flaws that
14 undermine his event study.

15 And that's basically what I said in my
16 report and that's what I think.

17 Q. So in paragraph 20, the percentages in
18 romanettes (i) and (ii), does that come from
19 Exhibit 1 --

20 A. Yes.

21 Q. -- to your report?

22 A. Yes, it does.

23 Q. And do the metrics in those two
24 romanettes establish that XRP holders do not
25 profit solely or primarily from the efforts of

1 Ripple?

2 A. I think they are inconsistent with the
3 claim that XRP holders primarily -- that profit
4 primarily or solely from the profits of Ripple.

5 Q. So for Exhibit 1 to your report, can
6 you remind me who prepared that?

7 A. I'll just adopt all my previous answers
8 to that question. I'm not sure who actually
9 physically prepared the exhibit.

10 The exhibits are taken straight from
11 Dr. [REDACTED] backup, which we analyzed to try and
12 get behind the way he reported his results in
13 his report.

14 Q. So whoever -- whoever it is that
15 prepared Exhibit 1 to your report, what did you
16 do to verify their work?

17 A. Again, we just took the exhibit
18 directly from Dr. [REDACTED] backup to his report.
19 It wasn't an independent test that we did. It
20 was just reporting what Dr. [REDACTED] himself found
21 but didn't include in his report.

22 Q. But you didn't prepare Exhibit 1,
23 right, to your report?

24 A. You mean personally did I create the
25 exhibit physically, as opposed to the idea of

1 showing that his own backup looks very different
2 from the way he reported his results in the
3 report? If that's what you're asking, yes, I
4 did not physically prepare the exhibit.

5 Q. So if you didn't prepare the exhibit,
6 what did you do, if anything, to verify the work
7 of whoever did prepare Exhibit 1 to your report?

8 A. Because the work, again, is taken
9 directly from Dr. [REDACTED] backup.

10 I mean, did I check whether every
11 number is transcribed correctly? No, I didn't.
12 I assume we usually have some internal checking
13 process, so I assume that was done.

14 But this is -- again, these are not a
15 matter of any independent analysis that we did
16 other than looking at what Dr. [REDACTED] found as
17 revealed in his backup and just moving those
18 findings from the backup to the exhibit.

19 Q. So referring to the second romanette on
20 Exhibit 20 where you cite the 70.5 to
21 84.8 percent figure, where on Exhibit M do those
22 numbers come from? Or, I'm sorry, where on
23 Exhibit 1 to your report do those numbers come
24 from?

25 A. Just one second, please.

1 All right. If you look at Exhibit 1,
2 and you look at the first page of Exhibit 1, and
3 you look at the top two lines going across for
4 the very last vertical entry, percentage of
5 event days with significant returns and without
6 significant returns, okay, you see the two
7 numbers, 70.5 percent and 84.8 percent.

8 Q. So column M?

9 A. Column M, which are itself -- just one
10 second, please.

11 If you look at the pages behind the
12 first page and you look at all the entries under
13 exhibit -- under letter M, if everything is
14 working correctly, you should find a low number
15 of 70.5 and a high number of 84.8.

16 So, let's see. I see the 84.8 and I
17 see the 70.5.

18 Q. And the 84.8 number, that comes from
19 the two-sided nonparametric specification of
20 model one?

21 A. That's correct.

22 Q. And how did you calculate the numbers
23 in column M?

24 A. You know, frankly, I can't remember if
25 those calculations were by us to sort of -- to

1 take Dr. [REDACTED] numbers and just translate them
2 to percentages or whether they were in the
3 backup themselves. I just don't remember.

4 Q. So is the number M the function of
5 comparing any two other columns on Exhibit 1?

6 A. You know, again, I would have to check
7 myself if the -- you know, I just have to check.

8 Q. Okay.

9 A. I'm not sure.

10 Q. I think I figured it out how to do it,
11 but I'm going to ask you to verify it for me.
12 Okay?

13 A. Okay.

14 MR. HANAUER: Would you mind passing this
15 down.

16 THE WITNESS: Yeah, I'm not going to use your
17 little calculator or computer or whatever this
18 is. I mean, you can represent whatever numbers
19 you want to me based on your usage of this
20 instrument. And if I can agree, I will, or if I
21 can't agree, I'll say I need to independently
22 verify it.

23 BY MR. HANAUER:

24 Q. So if I ask you to type something into
25 a calculator, you won't do that?

1 A. I will do it, I'm just not going to do
2 anything more than type the numbers into the
3 calculator.

4 Q. Okay. And I won't ask you to. Okay?

5 A. Okay.

6 Q. So I think that the way you got to
7 column M is to divide column F by column D.

8 Can you try doing that for model 1,
9 two-sided nonparametric?

10 A. Yeah, you know, for --

11 MR. FIGEL: I object to this.

12 Mr. Hanauer, you obviously have a
13 calculator. You could have done it before this.
14 You can represent to him what the arithmetic is.
15 I don't think it's an appropriate use of
16 deposition time to have him go through a
17 rhetorical exercise of using a calculator.

18 THE WITNESS: Well, you know, for whatever
19 it's worth, I do think that is what it is. I
20 was just looking at the -- eyeballing the data.

21 But I can't perform the calculation in
22 my head, and I don't want to use your
23 calculator. But that is the way it looks to
24 me.

25

1 (Whereupon, Deposition
2 Exhibit DF-19 was marked for
3 identification.)

4 MR. FIGEL: As I suspected, you've already
5 done the math, so we'll take your
6 representations about the arithmetic.

7 MR. HANAUER: I've been told you may not want
8 the witness using a calculator.

9 BY MR. HANAUER:

10 Q. So, again, if I'm trying to figure out
11 how you arrived at column M, is it safe to say
12 that you divided, at least for the two-sided
13 nonparametric portion of model 1, did you divide
14 column F by column D?

15 A. You know, as I said, I think so. I
16 mean, that's what I thought so before you gave
17 me this sheet. I didn't perform these
18 calculations so it looks right to me. But, you
19 know, obviously, I want to have a chance to
20 check it myself.

21 Q. And that's why I put a calculator in
22 front of you.

23 A. Yeah, but I don't want to use your
24 calculator and I don't want to do these
25 calculations on the fly.

1 That's the way it looks to me. I'm
2 willing to say that much. That's what I think.

3 But to be a hundred percent sure, I'd
4 want to check myself.

5 Q. Okay. Well, maybe if we're -- when we
6 have a break and you can use whatever instrument
7 you feel is appropriate, if you think my math is
8 wrong, please let me know.

9 MR. FIGEL: I have a proposal, Mr. Hanauer.
10 We'll take your representation that you've done
11 the math correctly. I will do a parallel check.
12 If I see something, I will bring that to your
13 attention.

14 I just don't think it's fair to ask the
15 witness to use an unfamiliar calculator and do
16 mathematical calculations on the record.

17 MR. HANAUER: Okay.

18 THE WITNESS: And just to be clear, I'm not
19 suggesting that I think your math is wrong. I
20 didn't say that.

21 BY MR. HANAUER:

22 Q. Well, there's a good chance it could
23 be, but that's neither here nor there.

24 So column M, it looks like that
25 calculates the frequency of event days without

1 significant returns among all event days.

2 Is that accurate?

3 A. That's the way it looks.

4 Q. And are you offering the opinion
5 that --

6 A. Actually, can you just hold on for one
7 second. There may be a simpler answer to this.

8 And I apologize for not thinking of
9 this right away. If you look at the last page
10 of Exhibit 1, there is a legend that tells you
11 how every column is calculated.

12 And column M is column F divided by
13 column D.

14 Q. There we go.

15 So having that --

16 A. It's on -- in other words, it's on the
17 exhibit.

18 Q. Exhibit 1 to your report?

19 A. Correct.

20 Q. So on Exhibit 1 to your report, does
21 column M calculate the frequency of event days
22 without significant returns among all event
23 days?

24 A. I mean, column M calculates whatever is
25 that's reflected on column M, which is what's

1 stated.

2 Q. So that would be significant -- the
3 frequency of significant returns, that's column
4 F, right? I'm sorry.

5 So column F is event days without
6 significant returns?

7 A. That's right.

8 Q. And column D is event days total?

9 MR. FIGEL: Objection.

10 THE WITNESS: Again, this is -- just to be
11 clear, this is Dr. [REDACTED] backup. It's not our
12 calculation. This is reporting what he found --
13 what he did based on his determination as to
14 what days counted and what days didn't count and
15 how you separate the days in different
16 categories in his subjective opinion.

17 But column D is -- again, the number of
18 the event days varies depending on which
19 specification you're looking at. Because for
20 some specifications, there were more trading
21 days -- or more days and therefore more event
22 days than others. He discusses that in his
23 report.

24 But with respect to the first
25 regression specification on page 2 of 6, there

1 are 105 -- according to Dr. [REDACTED] 105 total
2 event days; 16 of them have significant returns,
3 according to Dr. [REDACTED] 89 of them do not have
4 significant returns.

5 Again, I'm just going to say, again,
6 this is accepting Dr. [REDACTED] conclusions and
7 analysis at face value and ignoring the
8 methodological flaws that exist. But these are
9 his reports -- these are his results, rather, as
10 reported in his backup.

11 BY MR. HANAUER:

12 Q. Have you ever prepared an event study
13 as a testifying expert that relies on the metric
14 frequency of event days without significant
15 returns among all -- among all event days that
16 relies on that metric to establish or disprove
17 the relationship between public announcements
18 and the price of a security?

19 A. Well, that was sort of a compound
20 question.

21 The closest thing that I can think of
22 is what I've said we've done in a number of
23 different insider trading cases, which I do
24 recall, of looking at some total set of days
25 that were at issue in the case and looking at

1 the days when there were price movements or were
2 not price movements and were trades -- was
3 trading around those days, there was not trading
4 around those days, and the various comparisons
5 that you get performing that analysis.

6 Q. And that was -- and if I were to ask
7 you to name a case --

8 A. The only name that came to me was Billy
9 Bob Harris. But I do think there are other
10 cases as well.

11 Q. Are you aware of any academic or
12 scholarly literature that supports using that
13 metric to support an event study?

14 MR. FIGEL: Objection.

15 THE WITNESS: I don't know what you mean,
16 "support an event study." These are the --
17 these are Dr. [REDACTED] results of his event study.
18 They neither support or don't support. It's
19 just what the event study shows, according to
20 Dr. [REDACTED]

21 BY MR. HANAUER:

22 Q. Are you aware of any academic or
23 scholarly literature that supports using that
24 metric as a way to criticize an event -- the
25 results of an event study?

1 A. I'm not criticizing the results of an
2 event study. The results are what the results
3 are.

4 Again, putting aside the methodological
5 criticisms that I have, these are the results
6 that are reported. What I have said is the way
7 that Dr. [REDACTED] reported these results, his own
8 results, with just checks and not showing how
9 weak the relationships are even if under his
10 test choosing the days that he wants to look at,
11 ignoring the vast majority of days, you know,
12 defining his own test of statistical
13 significance, these are just all his results
14 just taken at face value.

15 And I do think both because of the
16 subjectivity, the fact that there was an
17 inefficient market, the fact that he's only
18 looking at one-sided events, he's not looking at
19 negative events, as well as some other
20 methodological criticisms that are even more
21 fundamental, for the most part, I'm ignoring all
22 of those right now.

23 I'm just looking at, this is what he
24 found. But he didn't report this is what he
25 found. What he reported was a series of check

1 marks. And I think the check marks are
2 misleading in light of the actual results of the
3 event studies that he himself performed.

4 Q. Let me ask you about column L on
5 Exhibit 1 to your report.

6 A. Okay.

7 Q. And that represents the frequency of
8 event days that had significant returns?

9 A. That's right.

10 Q. And it looks like -- does Exhibit 1
11 have -- contain the data you would need to
12 calculate the frequency of nonevent days with
13 significant returns?

14 MR. FIGEL: Objection.

15 THE WITNESS: Well, if you look at columns G,
16 H, and I, if I understand the question
17 correctly, they deal with the number of nonevent
18 days and the number of significant returns and
19 the number of nonsignificant returns, according
20 to Dr. [REDACTED] in his own event study in all these
21 -- in all these different specifications.

22 BY MR. HANAUER:

23 Q. So if I wanted to find the frequency of
24 nonevent days with significant returns using
25 Dr. [REDACTED] data, would I divide column H by

1 column G?

2 A. The number of nonevent days with
3 significant returns, that's the question? Yes,
4 I think that's what you would do.

5 Q. So I'd like to refer you to model 1,
6 two-sided nonparametric specification.

7 A. Okay.

8 Q. So if I wanted to divide H by G for
9 that model, would it be 104 divided by 2,264?

10 A. I believe so, yes, that's what it would
11 be.

12 Q. And if we look at exhibit -- my Exhibit
13 DF-19, it says 104 divided by 2,264 equals
14 4.6 percent?

15 A. That's what it looks like.

16 Q. Do you have any reason to doubt that
17 calculation?

18 A. No, I don't.

19 Q. Are you familiar with the concept of
20 false positives in statistical tests?

21 A. Yes.

22 Q. What is the typical expectation for
23 false positives in a statistical test?

24 MR. FIGEL: Objection.

25 THE WITNESS: At the level of generality of

1 your question, I'm not sure there is an
2 expectation.

3 BY MR. HANAUER:

4 Q. Isn't the level of -- you would
5 typically expect false positives in statistical
6 tests between five and ten percent?

7 A. Those are conventional levels of
8 statistical significance.

9 In event studies, I'm not sure they
10 would apply always, no matter what the test was.
11 But generally you would expect to find,
12 depending if you had a one-tailed test or a
13 two-tailed test, a price reaction that's
14 statistically significant randomly, even if not
15 attributable to, not correlated with or caused
16 by a particular event. Solely by chance, in
17 other words.

18 Q. So if we think about that 4.6 percent
19 number of the nonevent days with significant
20 returns, is it possible that some of those
21 significant nonevent observations with
22 significant returns could be false positives?

23 MR. FIGEL: Objection.

24 THE WITNESS: I'm not sure I'd call them
25 false positives. I mean, they are what they

1 are.

2 MR. HANAUER: Now a good time for a break?

3 MR. FIGEL: Sure.

4 THE VIDEOGRAPHER: We are going off the
5 record. The time is 1:11 p.m.

6 (Whereupon, a recess was had at
7 1:11 p.m., after which the
8 deposition was resumed at
9 2:22 p.m. as follows:)

10 THE VIDEOGRAPHER: We are back on the record.
11 The time is 2:22 p.m.

12 You may proceed.

13 BY MR. HANAUER:

14 Q. Professor Fischel, could I ask you to
15 please look at page 18 of your report.

16 And do you see a heading D in between
17 paragraphs 30 and 31?

18 A. Yes, I do.

19 Q. Does Dr. [REDACTED] report offer the
20 opinion that XRP holders are engaged in a common
21 enterprise with Ripple?

22 A. He doesn't say those words, as far as I
23 can recall.

24 Q. Did you perform any work or analysis to
25 determine whether or not XRP holders are engaged

1 in a common enterprise with Ripple?

2 A. Well, I would say one of my
3 methodological criticisms of Dr. [REDACTED] is his
4 entire event study proves nothing about any of
5 the competing claims in this case. Not only it
6 doesn't prove anything, it doesn't shed any
7 light on any of the competing claims in this
8 case.

9 And to the extent that one of the
10 claims in this case related to whether or not
11 XRP is a security, which is clearly a legal
12 question, according to what Dr. [REDACTED] has done,
13 his whole approach, even the way he sets up his
14 hypothesis that he's testing in paragraph 30,
15 has nothing to do with anything in terms of the
16 disputed issues in the case.

17 And so that's a really basic criticism,
18 but it's really a basic methodological
19 criticism. In other words, if you wanted to
20 show that this event study that Dr. [REDACTED] did
21 sheds some light on any of the issues in the
22 case, you would want to say that these results
23 that he finds, apart from some of the other
24 methodological criticisms, show something of
25 consequence in terms of the relationship between

1 XRP and Ripple that does not exist in multiple
2 other contexts.

3 So just to give one example, if you --
4 I think I mentioned this earlier. If you took
5 De Beers and you took seven years of price --
6 seven years of announcements and seven years of
7 analysis of the prices of diamonds, I haven't
8 done the analysis, but I have no doubt that if
9 you took hundreds of announcements over seven
10 years, you would find some announcements that
11 had a price effect on diamonds.

12 And that would be true about oil. I
13 even mentioned earlier about a less direct
14 example, but, nevertheless, the same point about
15 a food -- a food manufacturer like Kellogg's and
16 a product like, you know, the price of Corn
17 Flakes.

18 And so to the extent that the event
19 study doesn't have any claim -- doesn't have any
20 relationship, doesn't even purport to have any
21 relationship to any of the issues that are
22 relevant in an economic or legal sense to what's
23 disputed in the case, including the issue of
24 whether Ripple and XRP are in a common
25 enterprise, I think that's a really major

1 methodological flaw.

2 Q. Okay. And I understand that your --
3 you disagree with Dr. [REDACTED] conclusion -- well,
4 you disagree with a contention that there's a
5 common enterprise, right?

6 MR. FIGEL: Objection.

7 THE WITNESS: Well, common enterprise is, in
8 part, a legal term. But, you know, whatever it
9 means as a matter of economics, Dr. [REDACTED] does
10 not show that the relationship between Ripple
11 and XRP is any different than the relationship
12 between De Beers and diamonds or oil companies
13 and oil or food manufacturers and food prices,
14 and doesn't even purport to.

15 He never even states what he's testing
16 in ways that distinguish the relationship
17 between De Beers -- excuse me, the relationship
18 between Ripple and XRP from all of these other
19 examples.

20 You know what, when I looked at
21 paragraph 30 of his report -- and I remember the
22 number -- I think all you have to do is look at
23 that paragraph and realize that the entire
24 exercise that Dr. [REDACTED] is conducting is really
25 fundamentally flawed from a methodological point

1 of view.

2 Because, for example, he doesn't have
3 any control group. If you wanted to do this in
4 some kind of an academic way, you would want to
5 try and show that the relationship -- forgetting
6 all the subjectivity and the lack of efficient
7 markets, you'd want to show that the
8 relationship between Ripple and XRP, for
9 example, is different than the relationship
10 between other cryptocurrencies, between their
11 founders' companies and price movements.

12 You'd want to show that it's different
13 from commodities, such as diamonds.

14 BY MR. HANAUER:

15 Q. And excuse me, Professor, I think
16 you're steering a little from my question, so if
17 you don't mind, I'm going to try and rephrase.

18 MR. FIGEL: Objection. I'd like the witness
19 to be able to finish his answer. You
20 interrupted him.

21 MR. HANAUER: Well, I move to strike his
22 answer as nonresponsive.

23 MR. FIGEL: Well, I'd like to have him finish
24 it and then you can make whatever motion you'd
25 like.

1 BY MR. HANAUER:

2 Q. Is there anything else you'd like to
3 add to the question of: You disagree with the
4 contention that there's a common enterprise?

5 A. I think for the reasons that I just
6 stated, and the lack of a control group, a lack
7 of a comparison.

8 Again, that's just a basic and
9 fundamental methodological flaw because it sheds
10 no light on this relationship, has any different
11 characteristics than an infinite number of other
12 relationships that have nothing to do with
13 securities or cryptocurrency.

14 And so in terms of what it has to do
15 with common enterprise, to the extent that
16 there's some intended relationship between what
17 Dr. [REDACTED] has done and the -- to shed any light
18 on the relevant issues that need to be decided
19 in this case, including the issue of common
20 enterprise, he hasn't done that. He doesn't
21 purport to do that.

22 And, again, that just fails all basic
23 recognized standards for proper methodological
24 approaches. And that's a fundamental defect.

25 Q. So I understand that you disagree with

1 Dr. [REDACTED] methodology.

2 What I'm asking you, though, is: Did
3 you perform any affirmative work or testing or
4 analysis to try and test whether XRP holders are
5 engaged in a common enterprise with Ripple?

6 MR. FIGEL: Objection.

7 THE WITNESS: You know, as I've indicated
8 multiple times, my report is a rebuttal report
9 to Dr. [REDACTED]

10 The conclusion that I've reached is for
11 reasons that I've just stated and other reasons
12 that I've previously stated or are contained in
13 my reports, I don't believe that Dr. [REDACTED]
14 entire analysis, because it is so methodologically
15 flawed and violates all standards of appropriate
16 methodology and peer-tested -- and peer-reviewed
17 journals, sheds any light on the question of
18 whether or not the relationship between Ripple
19 and XRP is one that you could call a common
20 enterprise.

21 BY MR. HANAUER:

22 Q. But did you do any testing on your own
23 to answer that question?

24 MR. FIGEL: Objection, asked and answered two
25 or three times now.

1 THE WITNESS: Yeah, I don't have anything to
2 add. The analysis that I did on my own was my
3 analysis and critique of Dr. [REDACTED] That's what
4 I did.

5 BY MR. HANAUER:

6 Q. Is there an accepted economics
7 definition of common enterprise?

8 A. Again, you've asked me this question in
9 connection with other terms. I don't know if
10 I'd say there's an accepted definition. There's
11 frequently an understanding of what a common
12 enterprise is.

13 Q. In the economics literature?

14 A. As a matter of economics.

15 Q. So if I wanted to test, from an
16 economic perspective, whether a common
17 enterprise exists or not, what would I do?

18 MR. FIGEL: Objection.

19 THE WITNESS: Well, it depends a little bit
20 on the context. But one thing you would want to
21 do is you'd want to see if the relationship
22 between the parties creates some commonality in
23 terms of what's good news for one is good news
24 for the other and what's bad news for one is bad
25 news for the other.

1 Again, I don't know if I'd call that an
2 accepted definition, but that's a usual economic
3 understanding of the term common enterprise.

4 BY MR. HANAUER:

5 Q. And are you offering the opinion that
6 XRP holders are not engaged in the common
7 enterprise with Ripple?

8 MR. FIGEL: Objection.

9 THE WITNESS: The opinions that I'm offering
10 are exactly what I've said and what's contained
11 in my report.

12 BY MR. HANAUER:

13 Q. I'm asking a yes or no question.

14 MR. FIGEL: Objection.

15 THE WITNESS: You know, you told me -- you
16 cut me off before, so I don't want to repeat
17 what I just said. But if you want me to repeat
18 it again, I will.

19 I'm offering the opinion that the
20 analysis that Dr. [REDACTED] has performed is
21 fundamentally flawed, violates various basic
22 requirements of standard methodology established
23 in peer-reviewed journal after peer-reviewed
24 journal.

25 And for all those reasons, including

1 ones that I've stated in my previous answers and
2 the ones contained in my report, I believe his
3 report sheds no light whatsoever on the issue of
4 whether or not Ripple and XRP are engaged in a
5 common enterprise, however common enterprise is
6 defined.

7 BY MR. HANAUER:

8 Q. So the question you just identified
9 "engaged in a common enterprise," why is that
10 question even relevant to this case?

11 MR. FIGEL: Objection.

12 THE WITNESS: Well, whether it's legally
13 relevant or not is a question for the court to
14 decide, not for me to decide.

15 I mean, I think those words are used in
16 the Howey test itself, you know. But, you know,
17 again, I'm not offering any legal opinions.

18 The basic opinion I'm offering is that
19 if you look at the test that Dr. [REDACTED] claims he
20 is performing, look at paragraph 30 -- I'm happy
21 to read it into the record if you want me to
22 read it into the record -- it's a generic
23 question that has nothing to do with the
24 relationship between Ripple and XRP in a way
25 that's any different from the relation of

1 countless other firms and products of firms or
2 investments in firms, however you want to phrase
3 it.

4 BY MR. HANAUER:

5 Q. So you cite to Howey. Does Howey use
6 the terms "engaged in a common enterprise"?

7 MR. FIGEL: Objection.

8 THE WITNESS: Well, you know that better than
9 I do. But let's see what -- I quoted it, so I
10 don't want to paraphrase it.

11 BY MR. HANAUER:

12 Q. I want to make sure we're right on the
13 terminology here.

14 A. The words "common enterprise" appear in
15 paragraph seven.

16 Q. I asked you engaged in a common
17 enterprise. Is that language anywhere in Howey?

18 MR. FIGEL: Objection.

19 THE WITNESS: I don't see those exact words
20 in Howey.

21 BY MR. HANAUER:

22 Q. And, in fact, Howey --

23 A. At least not in this quote that I have.

24 Q. And, instead, Howey uses the words
25 "invests money in a common enterprise," correct?

1 A. That's what it says.

2 Q. Are you offering an opinion whether or
3 not XRP purchasers invested money in a common
4 enterprise?

5 A. Well, I think if you're asking whether
6 I'm expressing an opinion whether holders of XRP
7 invested in Ripple, you know, there is certainly
8 not a one-for-one correlation there.

9 Q. That wasn't my question.

10 Are you offering an opinion whether or
11 not holders of XRP invested money in a common
12 enterprise?

13 A. Your question doesn't really make any
14 sense. Ripple is the common -- I don't
15 understand. What is your definition of what the
16 common enterprise is in your definition -- in
17 your question?

18 Q. Unfortunately, I'm the one that asks
19 the questions.

20 A. Then I don't understand the question.

21 Q. What I'm trying to determine is why are
22 you using the term "engaged in a common
23 enterprise" when the test is "invested money in
24 a common enterprise"?

25 MR. FIGEL: Objection.

1 THE WITNESS: You know, as I said, I'm not
2 offering any legal opinions. The judge can
3 decide if what I said about a criticism -- a
4 fundamental criticism in Dr. [REDACTED] methodology
5 because he doesn't distinguish -- among the
6 other fundamental methodological criticisms
7 because he doesn't distinguish in any way the
8 relationship between Ripple and XRP from the
9 relationship between De Beers and diamonds, oil
10 companies and oil, and countless other examples,
11 and he doesn't even claim to.

12 And if you look at his paragraph 30,
13 it's generic. It applies to every single one of
14 the examples that I just mentioned. The judge
15 can decide if that's a valid criticism or not a
16 valid criticism, but that's my opinion.

17 BY MR. HANAUER:

18 Q. Did Ripple pool the money it received
19 from selling XRP to different purchasers?

20 MR. FIGEL: Objection.

21 THE WITNESS: I don't know. I don't have an
22 opinion on that one way or the other.

23 BY MR. HANAUER:

24 Q. Did Ripple deposit the funds it
25 received from selling XRP into a single bank

1 account?

2 MR. FIGEL: Objection.

3 THE WITNESS: I don't know. I have no
4 opinion on that one way or the other.

5 BY MR. HANAUER:

6 Q. Did Ripple separately manage the funds
7 it received from different XRP purchasers?

8 MR. FIGEL: Objection.

9 THE WITNESS: I don't know. I have no
10 opinion on that one way or the other.

11 BY MR. HANAUER:

12 Q. Did Ripple use the money it received
13 from selling XRP to fund its operations?

14 MR. FIGEL: Objection.

15 THE WITNESS: You know, at one point I think
16 I've seen some data on that, on the sources of
17 funds that Ripple had. You know, I guess all I
18 can say is I've seen some funds -- I've seen
19 some data on that, but I haven't really
20 conducted any study of it.

21 BY MR. HANAUER:

22 Q. Did Ripple use the money it received
23 from selling XRP to fund the construction of the
24 Ripple ecosystem?

25 MR. FIGEL: Objection.

1 THE WITNESS: It really would be the same
2 answer. I think I've seen some data on that,
3 but I haven't really studied that question.

4 BY MR. HANAUER:

5 Q. Did Ripple endeavor to increase the
6 range of goods and services that holders of XRP
7 would find beneficial to buy and sell using XRP?

8 MR. FIGEL: Objection.

9 THE WITNESS: Same answer.

10 BY MR. HANAUER:

11 Q. Did the success of the digital asset
12 ecosystem that Ripple built drive demand for
13 XRP?

14 MR. FIGEL: Objection.

15 THE WITNESS: The phrase "drive demand" is
16 too vague, so I'm not sure how to answer the
17 question.

18 BY MR. HANAUER:

19 Q. Well, if Ripple creates a product that
20 uses XRP to make the product work, is Ripple
21 driving demand for XRP by increasing the use of
22 that product?

23 MR. FIGEL: Objection.

24 THE WITNESS: You know, I guess you could say
25 that. But that's exactly the same generic point

1 that doesn't distinguish the relationship
2 between Ripple and XRP from countless other
3 relationships that have nothing to do with
4 securities or allegations about securities.
5 It's just -- presumably when a firm creates a
6 product, it's frequently the case or typically
7 the case that by creating the product the firm
8 is taking steps to increase the demand for the
9 product. So by definition -- because if the
10 product didn't exist, there wouldn't be demand
11 for it.

12 But that's exactly the criticism I'm
13 making of Professor [REDACTED] He has this
14 completely generic test that has nothing to do
15 with anything that distinguishes this
16 relationship from countless other relationships,
17 and he doesn't even claim that it does.

18 And your question is, you know, subject
19 to exactly the same response, that, yes, Ripple,
20 by creating XRP increases the demand for XRP by
21 definition because XRP didn't otherwise exist.
22 And that's true for every single -- maybe
23 overstating slightly -- but as a general matter,
24 that is true for every single creator of a
25 product where the success of the product is

1 based in some way on market acceptance of the
2 product.

3 BY MR. HANAUER:

4 Q. Are you offering any opinion on what
5 drove demand for XRP?

6 MR. FIGEL: Objection.

7 THE WITNESS: Not a separate opinion. But I
8 discuss a lot of different examples of different
9 ways, I guess you could say, in which demand for
10 XRP existed.

11 BY MR. HANAUER:

12 Q. Does Dr. [REDACTED] report offer the
13 opinion that an event study can establish
14 whether or not offers or sales of securities
15 took place?

16 MR. FIGEL: Objection.

17 THE WITNESS: Again, I don't think he uses
18 those words. But as I've tried to indicate,
19 presumably, he didn't go to all this effort to
20 conduct a study that has no relationship to the
21 issues in the case. And one of my fundamental
22 criticisms is exactly that; that his study in no
23 way distinguishes the relationship between
24 Ripple and XRP from countless other
25 relationships that have nothing to do with the

1 facts and circumstances of this case, let alone
2 have nothing to do with the issue whether
3 something is a security.

4 BY MR. HANAUER:

5 Q. And I guess you used the example of an
6 oil company, right?

7 A. As one example, that's right.

8 Q. Does any oil company own the majority
9 of all the oil in existence?

10 MR. FIGEL: Objection.

11 THE WITNESS: Not that I know of.

12 BY MR. HANAUER:

13 Q. Did any oil company or its founders
14 create oil?

15 A. You mean discover oil or you mean
16 chemically create? I'm not sure exactly what
17 you mean.

18 Q. The latter.

19 A. Did they chemically create oil? Not to
20 the best of my knowledge, but I don't really
21 know for certain.

22 Q. Does oil have use independent of
23 trading or speculation?

24 A. Trading or speculation? Yes, it does.

25 Q. Are you offering an opinion in this

1 case whether uses of XRP exist other than for
2 trading or speculation?

3 MR. FIGEL: Objection.

4 THE WITNESS: I'm not -- you know, I assume
5 you're not suggesting any of these questions
6 have anything to do with Dr. [REDACTED] study. I
7 mean, that's what I'm responding to. So I just
8 want to make sure the context of my answers is
9 clear.

10 BY MR. HANAUER:

11 Q. Okay. Can you answer my question?

12 A. I did answer it.

13 Q. Are you offering an opinion in this
14 case on any use of XRP other than for trading or
15 speculation?

16 MR. FIGEL: Objection.

17 THE WITNESS: I would say I have some
18 background familiarity with that issue, but I am
19 not expressing any separate opinion on that
20 issue.

21 BY MR. HANAUER:

22 Q. Are you offering an opinion about the
23 date by which any of Ripple's products that use
24 XRP became commercially operational?

25 MR. FIGEL: Objection.

1 THE WITNESS: No, I'm not.

2 BY MR. HANAUER:

3 Q. Are you offering the opinion that XRP
4 cannot be offered or sold as an investment
5 contract -- let me rephrase.

6 Are you offering the opinion that XRP
7 cannot be offered or sold as an investment
8 contract under any circumstances?

9 MR. FIGEL: Objection.

10 THE WITNESS: That sounds like a legal
11 opinion. I'm not offering any legal opinions on
12 any subject.

13 BY MR. HANAUER:

14 Q. Can I ask you to look at page 12 of
15 your report.

16 A. Okay.

17 Q. So you talk about in paragraph -- in
18 section B of your report, you talk about
19 confounding news or confounding information.

20 A. That's right.

21 Q. And I'm trying to figure out what you
22 mean by "confounding news."

23 Are you talking about public
24 announcements that Dr. [REDACTED] identified but
25 didn't place on one of the 105 event days, or

1 are you talking about announcements from those
2 105 event days that weren't really -- that, in
3 your opinion, weren't really announcements about
4 Ripple's efforts?

5 MR. FIGEL: Objection.

6 THE WITNESS: I don't think either one of
7 those alternatives fairly describes the content
8 of this particular section of my report.

9 BY MR. HANAUER:

10 Q. Okay. Well, then why don't you tell me
11 what you mean by "confounding information" as it
12 pertains to opinion B on page 2 of your report.

13 A. All right. Opinion B has a discussion
14 of two different types of confounding
15 information.

16 One type is a fundamental problem that
17 I described earlier of -- many of Dr. [REDACTED]
18 announcements are not -- to the extent there is
19 a claim of a price reaction that's correlated
20 with those announcements are not solely a
21 product of Ripple's entrepreneurial efforts, but
22 rather are a combination of Ripple's efforts and
23 new information about supply and demand in the
24 marketplace.

25 And as I said earlier, there is

1 basically a continuum from situations where both
2 effects are occurring and it's really difficult
3 or really impossible to disentangle them.

4 In other situations where Professor --
5 excuse me, Dr. [REDACTED] himself recognizes the
6 problem and just states as a matter of fact that
7 it's not clear in some of his examples whether
8 Ripple is even involved in the event itself that
9 Ripple is announcing. That's closer to the
10 example that I gave about the difference between
11 creator of information and reporter of
12 information. So that's one type of confounding
13 information.

14 And the other type really relates to
15 the fact that XRPs are not traded in an
16 efficient market. And when you have information
17 that's not traded in an efficient market, you
18 don't really have a definitive theory of when
19 prices are going to react to that information,
20 whether they're going to react to that
21 information without bias.

22 And, therefore, when you have
23 confounding events, other I should say
24 compounding news because I don't mean to limit
25 myself to Dr. [REDACTED] 105 event days. But when

1 you have other news, even news that's contained
2 in Dr. [REDACTED] -- I think it's Exhibit C with his
3 500-plus announcements -- within a window -- and
4 I describe different windows around the
5 so-called event day -- because you're in a world
6 of inefficient markets, you can't really
7 attribute, even as a correlation, the price
8 reaction to the event that Professor [REDACTED] --
9 excuse me, Dr. [REDACTED] is claiming that there is a
10 correlation because you can't exclude the
11 possibility in an inefficient market.

12 The other news announcements in the
13 different windows of time that I describe in
14 Exhibit 2 also are responsible, at least in
15 part, as well as other announcements in --
16 outside even of the windows that I identified
17 that could have had an effect on the prices that
18 Dr. [REDACTED] claims are correlated with particular
19 announcements -- with announcements on
20 particular event days.

21 Q. Did you perform any work or analysis to
22 quantify the impact of confounding news on XRP
23 prices?

24 MR. FIGEL: Objection.

25 THE WITNESS: Again, I think the whole point

1 of an inefficient market is you can't quantify
2 it because you don't have a theory of how
3 quickly prices react to information. That's one
4 of the characteristics of an inefficient market.

5 So what you can do, what I did do is
6 identify other news that occurred in the same
7 time period in the different windows that I
8 describe in Exhibit 2 at the same time as the
9 information that Dr. [REDACTED] claims as an event day
10 that's correlated with a particular price
11 reaction.

12 And that, as I stated in my report,
13 really underestimates the significance of the
14 fact that XRP's do not trade in an efficient
15 market. Because in an inefficient market, there
16 is no way to say, there is no way to conclude
17 that those confounding announcements also didn't
18 have an effect on the price that Dr. [REDACTED] claims
19 is correlated with a particular announcement on
20 a particular event day.

21 BY MR. HANAUER:

22 Q. If you had wanted, could you have been
23 capable of checking for the -- if you had
24 wanted, could you have been capable of trying to
25 quantify the effect of confounding news?

1 MR. FIGEL: Objection.

2 THE WITNESS: I think under the facts and
3 circumstances of this case, given the fact that
4 XRP is trading in an inefficient market, I think
5 it would be very difficult. I'm not sure how
6 you do it.

7 BY MR. HANAUER:

8 Q. Did you perform any work or analysis to
9 determine whether Dr. [REDACTED] results would
10 change if he excluded confounding news days?

11 A. No, I didn't perform any such analysis
12 since I think -- if you look at the two
13 different types of confounding information, I'm
14 not even sure how you would decide what to
15 exclude.

16 Q. So going back to I think the first of
17 the two definitions you talked about in
18 describing confounding, the one where you said
19 the Ripple news announcement, it's more about
20 supply and demand than Ripple's efforts -- do
21 you understand what I'm talking about or
22 referring to?

23 A. I understand what you're talking about,
24 but that's not an accurate paraphrase of what I
25 said.

1 Q. Okay. You understand which of the
2 versions of confounding I'm referring to?

3 A. Yes, I do understand that.

4 Q. Okay. So for those events, how did you
5 determine whether a Ripple announcement related
6 to, on one hand, Ripple's efforts, or the other
7 information about the supply, demand, or
8 expectation of market participants other than
9 Ripple?

10 MR. FIGEL: Objection.

11 THE WITNESS: Again, that's a
12 mischaracterization of what I said. It's not a
13 matter of one or the other; it's both are
14 occurring simultaneously, in effect. Because an
15 announcement can reveal an effort by Ripple and
16 it can also reveal information about supply and
17 demand in the marketplace. So they can both be
18 occurring at the same time.

19 And, again, it is like the problem of
20 confounding information in more traditional
21 event studies where, when you have confounding
22 information, when you can't disentangle, it
23 makes it impossible to reach a conclusion about
24 the -- what part of the price reaction is
25 attributable to one aspect, one part of the

1 confounding information versus another part.

2 Sometimes there is external sources of
3 information that you can look to to, you know,
4 possibly reach some judgments depending, you
5 know, obviously on the relevant facts and
6 circumstances. But sometimes it's just
7 impossible. And you have to recognize that, and
8 that's something that Dr. [REDACTED] doesn't do.

9 But, again, I want to emphasize,
10 sometimes it's possible to say something
11 stronger than that. And I keep coming back to,
12 you know, the example of an event which produces
13 news that's announced by a third party. And the
14 announcement by a third party can be what causes
15 the price reaction, but it's just disclosing
16 events that are not caused by the party
17 disclosing the information.

18 In a situation like the example that I
19 used before of third parties deciding to allow
20 XRP to trade on their platforms, it's similar to
21 that. Ripple is announcing that other parties
22 are now allowing XRP to trade on their
23 platforms. And Dr. [REDACTED] somewhere has a
24 footnote where it's either that example or some
25 other example where he says it's not even clear

1 that Ripple had any involvement in any of the
2 events that it's announcing.

3 And those type of situations, which are
4 part of Dr. Ripple's [sic] 105 days, the days
5 that he considers relevant as opposed to the 400
6 or so that he, for all practical purposes,
7 ignores, that really highlights the problem,
8 those type of situations. Because those
9 situations are not only compounded, but they
10 really highlight the distinction between, as I
11 said, creating information and reporting
12 information, which professor -- excuse me,
13 Dr. [REDACTED] ignores. And that's the problem.

14 BY MR. HANAUER:

15 Q. So in Exhibit C -- or I'm sorry,
16 Appendix C to Dr. [REDACTED] report, he actually
17 lists all the news announcements he covered in
18 his event study?

19 A. That's my understanding.

20 Q. And did you read the contents of all
21 those news announcements?

22 A. No, I did not.

23 Q. Did you read the contents of any of
24 those news announcements?

25 A. You know, at least parts that Dr. [REDACTED]

1 quoted in his report.

2 Q. Only the ones he quoted in his report?

3 A. I think so. I don't remember doing any
4 kind of systematic investigation of the ones
5 that he either ignored entirely or even the ones
6 that he used as part of event days.

7 I guess I read what he considered
8 relevant.

9 Q. Well, do you know whether Dr. [REDACTED] read
10 the entirety of all those reports?

11 MR. FIGEL: Objection.

12 THE WITNESS: No. You would have to ask him.

13 BY MR. HANAUER:

14 Q. Are you offering any opinions on the
15 efforts Ripple took to increase demand for XRP?

16 MR. FIGEL: Objection.

17 THE WITNESS: Not in isolation, no, I'm not.

18 BY MR. HANAUER:

19 Q. Are you offering any opinions on
20 whether Ripple's efforts affected demand for
21 XRP?

22 MR. FIGEL: Objection.

23 THE WITNESS: I'm not offering a separate
24 opinion on that subject.

25

1 BY MR. HANAUER:

2 Q. Could Ripple take efforts that would
3 increase demand for XRP?

4 A. Yes, obviously.

5 Q. Are you offering any opinions on the
6 efforts Ripple took to impact supply of XRP?

7 MR. FIGEL: Objection.

8 THE WITNESS: Again, I have, you know, some
9 background in my report on what Ripple did with
10 respect to supply of XRP. That's like some of
11 the other questions that you asked, part of
12 background, part of the facts and circumstances
13 of the case. But I'm not offering a separate
14 opinion about it.

15 BY MR. HANAUER:

16 Q. Are you offering any opinions on
17 whether Ripple -- Ripple's efforts actually did
18 affect the supply of XRP?

19 MR. FIGEL: Objection.

20 THE WITNESS: Again, I'm not offering any
21 separate opinions about that. I have discussion
22 of that in the background section of my report,
23 but it's not a separate opinion.

24 BY MR. HANAUER:

25 Q. And all things being equal, from an

1 economics perspective, if demand for an asset
2 stays flat and the supply of that asset goes
3 down, should we expect the price of that asset
4 to go up?

5 MR. FIGEL: Objection.

6 THE WITNESS: Well, it would depend on the
7 shape of the supply curve. But, you know,
8 that's certainly a reasonable assumption that
9 that would happen frequently, I guess. I don't
10 know what else to say.

11 But in any particular situation,
12 obviously you'd have to analyze the relevant
13 facts and circumstances and look at the data to
14 form a conclusion.

15 BY MR. HANAUER:

16 Q. Are you offering any opinions on the
17 efforts Ripple took to increase the price of
18 XRP?

19 MR. FIGEL: Objection.

20 THE WITNESS: No, I'm not, not as a separate
21 opinion.

22 BY MR. HANAUER:

23 Q. Are you offering any opinions on
24 whether any of Ripple's efforts actually did
25 affect XRP's price?

1 A. I think I said earlier that we did try
2 and look at the biggest price reactions of XRP
3 and look at certain disclosures by Ripple at
4 very -- at the same period as the price
5 reactions or very close to the price reactions.

6 And I think I said it seemed
7 reasonable, with respect to that handful set of
8 price reactions, to conclude that there was at
9 least a correlation between the announcements
10 and -- with respect to those few announcements,
11 those announcements and price reactions and
12 even, you know, be stronger than that and, you
13 know, at least as a working hypothesis, you
14 know, conclude that there was likely a causal
15 relationship.

16 Q. Are you offering any opinions on
17 whether Ripple's efforts, independent of public
18 news announcements, affected XRP's price?

19 MR. FIGEL: Objection.

20 THE WITNESS: I'm not offering any separate
21 opinions on that subject.

22 BY MR. HANAUER:

23 Q. Are you offering any opinions on the
24 efforts Ripple took to increase the liquidity of
25 XRP?

1 MR. FIGEL: Objection.

2 THE WITNESS: Same answer.

3 BY MR. HANAUER:

4 Q. Are you offering any opinions on how
5 liquidity of XRP affects its price?

6 MR. FIGEL: Objection.

7 THE WITNESS: No, I'm not.

8 BY MR. HANAUER:

9 Q. Can I ask you to look at paragraph 22
10 of your report.

11 A. Okay.

12 Q. And what do you mean when you say that
13 [as read]: Statistically significant XRP
14 returns are correlated with announcements
15 related to the expected supply and demand for
16 XRP or other market conditions?

17 A. Well, I mean, there's a whole paragraph
18 that describes it. I mean, there's a -- there's
19 a couple of points.

20 One, just like all the questions that
21 you just asked me, the company's associated
22 products want those profits to be successful in
23 terms of whatever it is, increasing demand,
24 increasing liquidity, increasing price,
25 affecting supply.

1 So, again, there's no distinction
2 between any of those outcomes or intentions by
3 companies that in any way is linked to whether
4 or not something is a security.

5 That's like the other things that I've
6 already described, which are completely generic
7 that have nothing to do with whether something
8 is a security. And that's just a continual
9 methodological flaw in Dr. [REDACTED] analysis.

10 Q. I apologize because I think we're --
11 you may not have understood the question or I
12 did a bad job of asking it.

13 Can I just ask you: What did you mean
14 when you were referring to statistically
15 significant XRP returns?

16 A. Okay. That's a completely different
17 question.

18 Q. Yeah, and I'm sorry. That's the one I
19 would like for you to discuss.

20 A. That's fine.

21 I meant returns that, in Dr. [REDACTED]
22 event study, he found to be statistically
23 significant in either a parametric or a
24 nonparametric test in either a one- or a
25 two-tailed test.

1 Q. And are you -- did you do any work or
2 analysis that disputes that finding of
3 statistical significance?

4 A. You mean whether Dr. [REDACTED] calculated
5 statistical significance correctly using the
6 model that he used?

7 Q. Yes.

8 A. And the days that he chose? No, other
9 than, you know, describing the extreme
10 subjectivity of what he did and looking at
11 positive results, not negative results.

12 I mean, there's a lot of criticisms,
13 but the actual calculation that he did of what's
14 a statistically significant return based on the
15 model that he used, I didn't do any work to see
16 whether his regression -- his regression result,
17 given the regression that he used and the data
18 that he used for the regression, that the data
19 that he reported was an accurate description of
20 the data resulting from the regression.

21 Q. And what was your methodology for
22 trying to determine if an announcement related
23 to supply, demand, or expectations of market
24 participants on one hand or Ripple's efforts on
25 the other?

1 A. The methodology was to highlight how
2 various announcements have both effects going on
3 simultaneously. And some of the announcements,
4 as I've said several times, and as Dr. [REDACTED]
5 himself concedes, are announcements about
6 actions by third parties that have very little,
7 if anything, to do with actions by Ripple
8 itself.

9 Q. For Ripple's own announcements, what
10 was your methodology for determining whether the
11 announcement related to supply or demand, as
12 opposed to Ripple's efforts?

13 A. It's basically what I've already said.

14 Q. Can you elaborate?

15 A. Yeah. I just highlighted how various
16 announcements contain information about Ripple's
17 efforts, as well as new information about supply
18 and demand conditions in the marketplace where
19 it's very hard, if not impossible, to
20 disentangle those two.

21 But also, there are certain events that
22 Dr. [REDACTED] includes in his event days where he
23 himself concedes that there's no obvious
24 relationship or any relationship between
25 Ripple's actions and the effect of the

1 announcement that Ripple itself makes.

2 Q. For the announcements that you didn't
3 actually read, what was your basis for
4 determining whether those announcements related
5 to supply or demand as opposed to Ripple's
6 efforts?

7 MR. FIGEL: Objection.

8 THE WITNESS: Because I read how Dr. [REDACTED] in
9 his report characterized them, his justification
10 for why he included them, and how he described
11 them, and was able to reach the conclusions that
12 I reached as described in my report.

13 BY MR. HANAUER:

14 Q. Could another expert reasonably reach
15 the conclusion that the announcements Dr. [REDACTED]
16 analyzed did, in fact, relate to Ripple's
17 efforts as opposed to supply and demand?

18 MR. FIGEL: Objection.

19 THE WITNESS: That's, again, a
20 mischaracterization of my opinion and what I've
21 said. As to what another expert could conclude,
22 you'd have to ask them.

23 BY MR. HANAUER:

24 Q. You talk about how some of the
25 announcements Dr. [REDACTED] looked at related to the

1 expectations of market participants as opposed
2 to Ripple's efforts; is that right?

3 A. You know, I think there is some
4 sentences to that effect, if I remember
5 correctly. But why don't you point me to
6 whatever it is that you're referring to so I can
7 respond directly.

8 Q. So in paragraph 21 of your report.

9 A. Okay.

10 Q. I think in the third sentence you say
11 how information about Ripple's efforts could be
12 confounded about information about the
13 expectations of market participants.

14 MR. FIGEL: Mr. Hanauer, just so the record
15 is clear, would you mind reading the sentence
16 you're referring to?

17 BY MR. HANAUER:

18 Q. The third sentence of paragraph 21 of
19 your report. Do you see that?

20 A. Beginning "Such confounding
21 information"?

22 Q. Correct.

23 A. Okay, I've read it.

24 Q. So the expectations of market
25 participants, is that one of the factors of the

1 Howey test?

2 MR. FIGEL: Objection.

3 THE WITNESS: That's a legal question. I
4 don't have any legal opinions that I'm offering
5 in this case.

6 BY MR. HANAUER:

7 Q. Well, you state in your report a
8 section of Howey and then you say it's referred
9 to as the Howey test.

10 MR. FIGEL: Objection.

11 BY MR. HANAUER:

12 Q. Paragraph seven.

13 A. I say my understanding is that's a
14 description of the Howey test, correct.

15 Q. And one of the factors that you
16 describe the Howey test involves the expectation
17 of market participants?

18 A. Are you saying -- is that contained in
19 what I quoted in paragraph seven? I'm not sure
20 what you're asking me.

21 Q. So I'm guessing -- or I'm asking: Why
22 is it proper to consider Ripple announcements
23 that discuss the expectation of market
24 participants a confounding event if that is one
25 of the factors of a Howey test?

1 MR. FIGEL: Objection.

2 THE WITNESS: Again, that sounds like partly
3 a -- or entirely a legal -- asking for a legal
4 opinion, which I'm not giving.

5 But you're also not focusing or looking
6 at the whole sentence which describes what's
7 meant not in terms of a legal opinion, but in
8 terms of how to interpret price movements.

9 BY MR. HANAUER:

10 Q. Did you do anything to determine
11 whether the expectation of market participants
12 was impacted by their expectation of Ripple's
13 efforts?

14 MR. FIGEL: Objection.

15 THE WITNESS: You know, again, that's too
16 vague a question.

17 But it also, again, is a kind of
18 generic question that does not in any way
19 distinguish the relationship between Ripple and
20 XRP and countless other examples of exactly the
21 same thing that have nothing to do with any of
22 the issues relating to what's -- what is a
23 security, if what you're asking me is, is there
24 any relationship between Ripple's efforts and
25 investors' expectations about XRP. If that --

1 that's the way I understood the question.

2 BY MR. HANAUER:

3 Q. That's not my question.

4 My question is --

5 A. Okay. Then maybe I misunderstood the
6 question.

7 Q. -- is whether you did anything to
8 determine whether the expectation of any market
9 participant was impacted by that participant's
10 expectation of Ripple's efforts?

11 MR. FIGEL: Objection.

12 THE WITNESS: All right. Well, at least to
13 me that's the same question.

14 I didn't do any independent analysis.
15 I don't have any independent opinion on that
16 subject other than to the extent that
17 relationship exists; it is a generic
18 relationship having nothing to do with anything
19 that's specific to the relationship between
20 Ripple and XRP but has to do with the
21 relationship between efforts of firms or
22 companies or founders, whatever the relevant
23 issue that's being -- or situation that's being
24 analyzed, and whatever the firm or product --
25 firm or founder or, again, whatever the

1 situation is that's being analyzed, what they
2 are doing and how that affects expectations of
3 whatever, whether it's a product or an
4 investment, whatever it is.

5 It's a completely generic question
6 that, no matter how it's resolved, has nothing
7 to do with anything specific about the
8 relationship between Ripple and XRP.

9 BY MR. HANAUER:

10 Q. Did you do anything to determine the
11 expectation of any particular market
12 participant?

13 A. No, I did not.

14 MR. HANAUER: What do you say we take a break
15 right now.

16 THE VIDEOGRAPHER: We are going off the
17 record. The time is 3:23 p.m.

18 (Whereupon, a recess was had at
19 3:23 p.m., after which the
20 deposition was resumed at
21 3:23 p.m. as follows:)

22 THE VIDEOGRAPHER: This is the end of media
23 unit two. We are going off the record. The
24 time is 3:23 p.m.

1 (Whereupon, a recess was had at
2 3:23 p.m., after which the
3 deposition was resumed at
4 3:42 p.m. as follows:)

5 THE VIDEOGRAPHER: We are --

6 MR. FIGEL: Before we -- could we just get a
7 time check?

8 THE VIDEOGRAPHER: Oh, I'm sorry. Yeah,
9 we've been on the record for 4 hours and
10 14 minutes.

11 MR. FIGEL: And not holding you to anything
12 Ben, but do you think we're going to go the full
13 whole seven?

14 MR. HANAUER: I hope not.

15 MR. FIGEL: Okay, good.

16 THE VIDEOGRAPHER: All right. We are back on
17 the record. This is the start of media unit
18 three, the deposition of Daniel Fischel. The
19 time is 3:42 p.m.

20 You may proceed.

21 BY MR. HANAUER:

22 Q. Professor Fischel, can I please refer
23 you to paragraph 23 of your report.

24 A. Okay.

25 Q. And do you see in romanette (i) you

1 talk about how announcements about Ripple's
2 equity financing provide information about the
3 state of the market for XRP?

4 A. Yes, I see that.

5 Q. What information do Ripple's financing
6 amount -- I mean financing announcements provide
7 about the state of the market of XRP?

8 A. Well, as the paragraph describes,
9 Ripple has different sources of -- different
10 sources of funds. Equity issuances and selling
11 XRP units are two different sources of funds.

12 So the more Ripple relies on one source
13 of funds, all else equal can communicate
14 information to market participants about their
15 need to use alternative sources of funds, such
16 as selling units of XRP.

17 So I would say that's an example of
18 what -- as the section describes, as a compound
19 announcement. The announcement itself is about
20 an equity issuance by Ripple.

21 But one of the reasons it has a price
22 effect is not because of just the equity
23 issuance by Ripple itself, which does not
24 directly involve XRP, but rather information
25 that it communicates about XRP.

1 And that's, again, an example of what I
2 refer to as a compound announcement because it's
3 an announcement about one thing that has nothing
4 to do with XRP but it communicates information
5 about market conditions for XRP, and, therefore,
6 it's a compound announcement.

7 Q. Did you do anything to determine
8 whether obtaining equity financing actually
9 decreased the supply of XRP?

10 MR. FIGEL: Objection.

11 THE WITNESS: Well, first of all, that's not
12 what the paragraph says. But the answer, did I
13 actually investigate that question, no, I
14 didn't.

15 BY MR. HANAUER:

16 Q. Could Ripple increase its capital
17 expenditures and research and development
18 spending using the newly-obtained equity
19 financing while keeping its XRP sales at the
20 same level?

21 MR. FIGEL: Objection.

22 THE WITNESS: Is that possible? Yes, it's
23 possible.

24 BY MR. HANAUER:

25 Q. Do you know whether or not Ripple did

1 that?

2 A. No, I don't. I didn't investigate that
3 question.

4 But, again, that's not the point of the
5 paragraph.

6 Q. If Ripple ceased to exist as a company,
7 how would that impact the market for XRP?

8 MR. FIGEL: Objection.

9 THE WITNESS: I don't know. One would have
10 to speculate about the future, which is not so
11 easy.

12 And I don't know if it would be
13 possible to give a definitive answer because one
14 doesn't know what could happen in the future.

15 BY MR. HANAUER:

16 Q. Do you have an opinion one way or the
17 other?

18 MR. FIGEL: Objection.

19 THE WITNESS: I don't.

20 BY MR. HANAUER:

21 Q. Does Ripple going out and obtaining
22 equity financing, does that involve efforts by
23 Ripple?

24 A. Well, it's a decision made by Ripple
25 for sure. And what's done to the method for

1 what Ripple -- the steps that Ripple takes to
2 raise equity funds, you just have to investigate
3 that. I can't answer that in the abstract.

4 Q. Do you know how much money Ripple spent
5 to obtain equity financing?

6 A. No, I don't, not from memory.

7 Q. Did you review any documents that would
8 have shed light on how much money Ripple spent
9 to obtain equity financing?

10 MR. FIGEL: Objection.

11 THE WITNESS: Not that I recall.

12 But, again, I wasn't looking for that
13 information, so it's possible that it was in
14 some document that I saw, but I don't recall any
15 discussion of that in any document that I
16 remember reviewing.

17 BY MR. HANAUER:

18 Q. And do you have any understanding of
19 whether the parties that provided equity
20 financing to Ripple, whether those parties
21 sought out Ripple on their own or were they
22 solicited by Ripple?

23 A. I don't know.

24 Q. And in paragraph 23, romanette (i), you
25 mention Ripple's decision to escrow 55 billion

1 XRP tokens?

2 MR. FIGEL: Objection.

3 THE WITNESS: Yes, that's right.

4 BY MR. HANAUER:

5 Q. Was that an effort of Ripple to escrow
6 the 55 billion XRP?

7 A. Well, it was a decision by Ripple, yes,
8 it was.

9 Q. Could that escrowing have occurred
10 without Ripple's efforts?

11 MR. FIGEL: Objection.

12 THE WITNESS: Well, by definition, no, it
13 couldn't.

14 BY MR. HANAUER:

15 Q. And in paragraph 23 (i), you also --
16 or, I'm sorry, paragraph 23 romanette (i), you
17 talk about Ripple receiving New York's first
18 BitLicense.

19 A. Yes, that's right.

20 Q. And did Ripple have to undertake
21 efforts to obtain that license?

22 A. I don't know.

23 Q. Do you know how much money Ripple spent
24 associated with applying for the BitLicense?

25 A. No, I don't.

1 Q. In the next paragraph, paragraph 23,
2 romanette (ii), you talk about the trading
3 platforms.

4 A. Yes, I see that.

5 Q. Do you know what efforts Ripple
6 undertook to get listed on any particular
7 exchange?

8 MR. FIGEL: Objection.

9 THE WITNESS: No, I haven't studied that
10 either.

11 BY MR. HANAUER:

12 Q. Do you know whether Ripple paid money
13 to get listed on any exchange?

14 MR. FIGEL: Objection.

15 THE WITNESS: No, I don't.

16 BY MR. HANAUER:

17 Q. Do you know any particular exchange's
18 reasons for listing XRP?

19 A. No, I don't.

20 Q. If Ripple paid an exchange to list XRP,
21 would that exchange listing of XRP involve
22 Ripple's efforts?

23 A. It would -- yes. If I make that
24 assumption, it would involve Ripple's efforts,
25 but that's not the same as saying that the

1 information communicated would be solely as a
2 result of Ripple's efforts.

3 And even with respect to Ripple's
4 efforts, what I've referred to several times,
5 but I didn't have Dr. [REDACTED] report in front of
6 me, is paragraph 49 -- I'm sorry, footnote 49,
7 where he states -- or at least it's -- or
8 there's a reference to his report Figure 16,
9 where on page 34 of Dr. [REDACTED] report where he
10 acknowledges that the majority of the 11
11 announcements involve Ripple's actions.

12 Q. But did Dr. [REDACTED] actually look to --
13 did Dr. [REDACTED] do anything to determine why any
14 particular exchange listed XRP?

15 MR. FIGEL: Objection.

16 THE WITNESS: You'll have to ask him. I
17 don't know what he did. I know what he
18 acknowledged.

19 BY MR. HANAUER:

20 Q. In that same paragraph 23, romanette
21 (ii), you talk about how other cryptocurrencies
22 such as Bitcoin are listed on platforms without
23 the effort of a company like Ripple.

24 A. Yes, I see that.

25 Q. Do you know what cryptocurrencies other

1 than Bitcoin have been listed on exchanges
2 without the effort of a sponsoring company?

3 MR. FIGEL: Objection.

4 THE WITNESS: No, I don't.

5 BY MR. HANAUER:

6 Q. At the time the first exchange listed
7 Bitcoin, was there a company that owned the
8 majority of Bitcoin in existence?

9 A. I don't believe so.

10 Q. Has there ever been a company that
11 owned the majority of Bitcoin in existence?

12 A. Not as far as I know.

13 Q. So I want to refer you now to the next
14 two subparagraphs, paragraph 23, romanette (iii)
15 and (iv).

16 Do you see those?

17 A. Yes, I see that.

18 Q. Do you know what efforts Ripple
19 undertook to get users to use its products?

20 MR. FIGEL: Objection.

21 THE WITNESS: No, I haven't studied that
22 question.

23 Again, it's like so many questions, one
24 of his completely generic questions having
25 nothing to do with any particular relationship

1 between Ripple and XRP.

2 BY MR. HANAUER:

3 Q. Do you know whether Ripple paid
4 rebates, incentives, bonuses, or other
5 compensation in order to get users to use
6 Ripple's products and software?

7 MR. FIGEL: Objection.

8 THE WITNESS: No, I don't.

9 BY MR. HANAUER:

10 Q. Do you know any particular user's
11 reasons for using Ripple's products?

12 A. Other than they made a decision it was
13 in their interests to do so, no, I don't.

14 Q. If Ripple paid someone to use its
15 products, would that person's decision to use
16 the product involve Ripple's efforts?

17 MR. FIGEL: Objection.

18 THE WITNESS: Yes. But --

19 MR. FLUMENBAUM: Objection.

20 THE COURT REPORTER: He said objection. Got
21 it.

22 MR. FLUMENBAUM: Thank you. I didn't hear
23 Reid.

24 MR. FIGEL: I did object, Marty.

25 MR. FLUMENBAUM: Good.

1 THE WITNESS: I just wanted to finish my
2 answer.

3 The point is not that all these actions
4 had no involvement by Ripple, although some of
5 them apparently did not have any, at least
6 according to Dr. [REDACTED]

7 But the point is that the information
8 content of the announcement was not solely a
9 product of Ripple's actions.

10 And one of the ways that you can tell
11 that is that the actions frequently don't even
12 involve XRP. They involve use of Ripple's
13 software, use of Ripple's equity issuances. But
14 they have a price effect on XRP.

15 Now, why is that? Again, taking
16 Dr. [REDACTED] findings and his analysis at face
17 value, the reason is that the information
18 content of an announcement that has nothing to
19 do with XRP communicates information to market
20 participants about market conditions for XRP
21 and, therefore, there is a price reaction for
22 XRP, at least according to Dr. [REDACTED] a
23 correlation with the price reaction for XRP in
24 connection with an announcement that on its face
25 has nothing to do with XRP.

1 And that's, again, a simple and clear
2 example of why these announcements are compound
3 announcements with respect to explanations of
4 price movements of XRP, even taking Dr. [REDACTED]
5 findings at face value.

6 BY MR. HANAUER:

7 Q. So which of Dr. -- the announcements
8 analyzed by Dr. [REDACTED] which of those
9 announcements had nothing to do with XRP?

10 MR. FIGEL: Objection.

11 THE WITNESS: Announcements that don't refer
12 to XRP but at least what I'm just referring to,
13 announcements that refer to actions by Ripple
14 independent of actions about XRP, such as
15 Ripple's equity issuances and use by customers
16 of Ripple's software.

17 BY MR. HANAUER:

18 Q. Can you name any of the announcements
19 Ripple made about its software that involved
20 software that did not require the use of XRP?

21 MR. FIGEL: Objection.

22 THE WITNESS: It's not whether the software
23 could be used for XRP. That is one of the
24 factors that explains -- or that communicates
25 information about potential increase in demand

1 for XRP.

2 But the point is the announcement is
3 itself -- the announcement itself is about
4 decisions by third parties to use Ripple's
5 software. And that, notwithstanding the fact
6 that the announcement itself is about a decision
7 to use Ripple's software, again, as the
8 paragraph states, that also communicates
9 information about the expected supply and demand
10 for XRP from users of the XRP ledger.

11 BY MR. HANAUER:

12 Q. Do you know which of Ripple's products
13 required the use of XRP?

14 A. No, not without studying the issue.
15 But I don't have any opinion on that.

16 Q. Are you aware that some of Ripple's
17 products and software required XRP to work?

18 A. I think Ripple had a number of
19 different products, some related to XRP, some
20 not, some payment system products not related to
21 XRP.

22 But beyond that, I haven't studied the
23 issue and I certainly don't have an opinion
24 about it.

25 Q. Can we look at Exhibit 2 to your

1 report, please.

2 A. Okay.

3 Q. Who prepared Exhibit 2 to your report?

4 A. This is just like Exhibit 1. We looked
5 at Dr. [REDACTED] backup. He has a series of
6 columns, as I recall, about other announcements
7 in his Exhibit C within certain periods of his
8 event days. And we just took that data that he
9 himself reports and just transferred it to
10 Exhibit 2.

11 Q. I asked who prepared it.

12 A. You mean who -- again, I'm sorry the
13 same question who physically prepared Exhibit 2?

14 Q. Yes.

15 A. I don't know who physically prepared
16 Exhibit 2. It might have been a research
17 assistant.

18 Q. Did you do anything to verify the
19 accuracy of Exhibit 2?

20 A. Well, something. I mean, I looked at
21 the various documents in Dr. [REDACTED] event study
22 to see how the numbers on Exhibit 2 were
23 created. You know, I guess that's what we did.

24 Q. Does Exhibit 2 to your report, does it
25 only identify news announcements that Dr. [REDACTED]

1 identified that were not included in his 105
2 news days?

3 MR. FIGEL: Objection.

4 THE WITNESS: It refers to other
5 announcements on Dr. [REDACTED] Exhibit C
6 surrounding one or more of Dr. [REDACTED] event
7 days. But, frankly, I'm not sure from memory
8 without checking whether any of the confounding
9 announcements were also themselves event days.
10 I would have to check to make sure.

11 BY MR. HANAUER:

12 Q. Did Dr. [REDACTED] determine that the
13 announcements that were not in his five select
14 categories would not be expected to move XRP
15 prices?

16 MR. FIGEL: Objection.

17 THE WITNESS: I think that's what he said in
18 his report.

19 BY MR. HANAUER:

20 Q. And did you do any work or analysis to
21 determine whether the excluded events actually
22 did affect Ripple -- or XRP's price?

23 MR. FIGEL: Objection.

24 THE WITNESS: I didn't. But the point is
25 there is kind of a selection bias, a

1 subjectivity that produces a selection bias.

2 If you want to test the effective
3 announcements on prices, if you start by picking
4 your subjective judgment of the events that have
5 -- are the most likely to have an effect on
6 prices, it's no big surprise that your
7 subjective judgment, if you do it competently,
8 is more likely to produce events that are
9 correlated with price movements because that's
10 your selection criteria.

11 If you select important events, you're
12 going to get a result that reflects your
13 selection bias, that you're starting with
14 important events that you subjectively identify
15 and your results are going to reflect that.

16 It's different than analyzing the
17 number of -- the percentage of statistically
18 significant results and not statistically
19 significant results. If you don't use that
20 selection bias, then you start with all 500
21 days, for example, you would get different
22 results.

23 BY MR. HANAUER:

24 Q. Of the approximately 400 events that
25 Dr. [REDACTED] excluded from his analysis, how many of

1 those news announcements did you read the
2 contents of in their entirety?

3 MR. FIGEL: Objection.

4 THE WITNESS: You know, I would say, unless
5 their results were quoted somewhere, probably
6 none. In terms of the description of them, I
7 certainly read the description provided by
8 Dr. [REDACTED] of them and why he, in his opinion,
9 decided not to include them in his results.

10 BY MR. HANAUER:

11 Q. Are you offering the opinion that any
12 particular of the announcements that Dr. [REDACTED]
13 excluded from his analysis actually confounded
14 or otherwise affected Dr. [REDACTED] analysis?

15 MR. FIGEL: Objection.

16 THE WITNESS: Well, clearly it affected his
17 analysis because he ignored 400 out of the 500
18 days, rounding. Yes, that affects your
19 analysis.

20 If you have a percentage of days with
21 significant results and a percentage of days
22 without significant results, even if you're just
23 talking about correlations, forgetting all the
24 other methodological flaws that I've identified,
25 obviously it affects your results if you throw

1 out 400 days and don't consider them and only
2 look at 100 and of those 100 only look at a
3 small subset of those days when there are
4 statistically -- you find a correlation with
5 statistically significant results. Obviously
6 that affects your results and your analysis.

7 BY MR. HANAUER:

8 Q. Did you perform any work or testing to
9 see how [REDACTED] analysis would have changed if
10 any of the excluded events had, in fact, been
11 included?

12 MR. FIGEL: Objection.

13 THE WITNESS: I think the point is obvious
14 from what I said. Assuming that there was some
15 principal reason for choosing -- selecting the
16 100 events to test and excluding the 400, if you
17 used 500 events, you would get a much lower
18 percentage of statistically significant days
19 relative to 500 days than you do relative to 100
20 days, rounding. I think it's 105 days, but it's
21 the same point.

22 BY MR. HANAUER:

23 Q. But did you actually do any testing
24 that included the events that Dr. [REDACTED] excluded?

25 A. I didn't do any testing. But Dr. [REDACTED]

1 himself states that in his report as the reason
2 why he excluded the 400 other events or the
3 400 -- you know, events have sort of a double
4 meaning in this case. So why he excluded the
5 400 other announcements is probably more
6 accurate.

7 Q. And if I wanted to see how the results
8 would change by including events that Dr. [REDACTED]
9 excluded, would that require doing another
10 iteration of the event study with additional
11 events in it?

12 MR. FIGEL: Objection.

13 THE WITNESS: Well, additional announcements
14 -- and, again, in answering these questions, I'm
15 just accepting Professor -- Dr. [REDACTED] analysis
16 at face value, meaning I'm not focused on the
17 deficiency caused -- deficiencies caused by the
18 fact that you're interpreting -- or Dr. [REDACTED] is
19 interpreting price reactions in relation to
20 announcements in an inefficient market, which,
21 you know, creates serious problems of its own.

22 But putting that all to one side, it
23 would be possible to duplicate what Dr. [REDACTED]
24 did, accepting all of his conditions, selection
25 criteria, and putting to one side all the

1 methodological flaws associated with doing that,
2 and do the exact same announcements with -- the
3 exact same analysis with 500 announcements as he
4 does with 100 announcements, again rounding the
5 500 and the 100.

6 BY MR. HANAUER:

7 Q. It would be possible to do that
8 testing?

9 A. Yes, absolutely it would be possible.

10 Q. Did you or Compass, in fact, do that
11 testing?

12 A. No, for the reason that I stated. And
13 it's also described by Dr. [REDACTED] himself as part
14 of his methodology and the reasons why he used
15 that methodology.

16 Q. I would ask you to assume that Dr. [REDACTED]
17 was correct, that the excluded events should not
18 be included in his testing.

19 If we were to accept that assumption,
20 would Exhibit 2 still support the opinion that
21 the announcements Dr. [REDACTED] analyzed may be
22 confounded by other contemporaneous
23 announcements?

24 MR. FIGEL: Objection.

25 THE WITNESS: Yes. The point would still

1 apply.

2 BY MR. HANAUER:

3 Q. And why is that?

4 A. Because you don't have to have a
5 statistically significant price reaction to have
6 an effect on prices. And particularly in an
7 inefficient market, you cannot confidently, even
8 as a matter of correlation, associate particular
9 price movements with particular announcements.
10 And if you have multiple announcements, you
11 can't tell if the, for example, the announcement
12 that you are calling statistically significant
13 is only statistically significant because it's
14 partly reflecting the effects of another
15 announcement in the same window, you know, just
16 as an example.

17 It's just another illustration of --
18 about Dr. [REDACTED] recognizing that he's dealing
19 with an inefficient market but not appreciating
20 the significance and the consequence and the
21 implications of that admission.

22 Q. Did you look at any news announcements
23 beyond the 504 -- 514 identified by Dr. [REDACTED]

24 A. Not that I recall.

25 Q. Do you consider repetitive news as

1 value relevant news that should be considered
2 separately for measuring price impact?

3 MR. FIGEL: Objection.

4 THE WITNESS: Again, it depends entirely on
5 the relevant facts and circumstances. It is
6 certainly possible that information that would
7 generally be referred to as stale, the price
8 reaction to that would have to be interpreted in
9 light of the fact that the information is stale.

10 On the other hand, sometimes repetition
11 of the same information makes the information
12 more important, not less important. It just
13 depends on the relevant facts and circumstances.

14 BY MR. HANAUER:

15 Q. Did you do any work or analysis to
16 determine whether any of the events identified
17 by Dr. [REDACTED] were stale or were repetitive?

18 MR. FIGEL: Objection.

19 THE WITNESS: No, I didn't. I saw what
20 Dr. [REDACTED] did as a justification for excluding
21 certain announcements. As I said, there is a
22 lot of subjective decision making by Dr. [REDACTED] as
23 to which announcements counted, which
24 announcements don't count.

25 It's one thing to interpret results in

1 a particular way. It's another thing to
2 subjectively decide which observations need to
3 be included in terms of analyzing what the
4 results of a particular study show.

5 And I think one always needs to be
6 careful, again, as a lot of support for this in
7 the academic literature about subjectively
8 including or excluding which announcements or
9 which events you include in a particular
10 analysis absent a principal basis for doing so.

11 BY MR. HANAUER:

12 Q. Is there an objective way to determine
13 which news should be included in Dr. [REDACTED]
14 analysis?

15 MR. FIGEL: Objection.

16 THE WITNESS: Well, you know, I guess one
17 starting point is you could report results for
18 all 514 announcements. That would be a good way
19 to start.

20 BY MR. HANAUER:

21 Q. Do the figures on your table in
22 Exhibit 2 to your report, do those figures
23 include repetitive or stale news?

24 A. I don't know without looking. But,
25 again, to say something is repetitive is not the

1 same thing as saying that it's stale.

2 And, again, that's a function of
3 interpretation depending on the relevant facts
4 and circumstances. Sometimes the repetition of
5 an announcement can have a smaller or no effect
6 because the effect of the announcement was
7 earlier.

8 Other times you can have exactly the
9 reverse, that a particular announcement, when
10 it's made the first time, has a very small or no
11 effect, but when it's made the second time has a
12 big effect precisely because it's being
13 repeated.

14 And, therefore, to arbitrarily exclude
15 announcements because they've been in one's
16 subjective judgment made at an earlier or
17 something similar has been made at an earlier
18 point in time is really an error. Because the
19 fact that information is repeated doesn't tell
20 you by itself whether that -- whether the
21 repetition makes the information more important
22 or less important.

23 That's just another methodological flaw
24 in what Dr. [REDACTED] did.

25 Q. Can you please pull out Dr. [REDACTED]

1 report.

2 A. Okay. I have it.

3 Q. And look at page 29.

4 A. Okay, I have it.

5 Q. Look at footnote 67, please.

6 A. Okay. Just give me a second to look at
7 it.

8 Okay, I've looked at it.

9 Q. And do you see how Dr. [REDACTED] writes [as
10 read]: On May 16, 2017, Ripple announces its
11 plan to escrow 55 billion XRP tokens. A
12 newsroom article from May 26, 2017, again
13 reports Ripple's plan to escrow 55 billion XRP
14 tokens. I exclude the May 26, 2017, event from
15 my analysis as stale?

16 A. Yes, I see that.

17 Q. Should the May 26, 2017, event
18 referenced in that footnote, should that be
19 considered as confounding news for the May 16th
20 announcement?

21 A. Confounding news? I wouldn't call it
22 confounding news.

23 Q. Would the May 26, 2017, announcement
24 show up within the ten -- plus or minus ten-day
25 window on Exhibit 2 to your report?

1 MR. FIGEL: Objection.

2 THE WITNESS: It might and it should.

3 BY MR. HANAUER:

4 Q. Why is that when you just said that the
5 May 26th announcement would not be confounding
6 news?

7 MR. FIGEL: Objection.

8 THE WITNESS: Because previously we were
9 using the term to be situations where
10 confounding news was information either -- in my
11 report, either information that communicated
12 information about Ripple's efforts, if there
13 were efforts, and new information about supply
14 and demand conditions, as well as multiple
15 announcements within a particular event window
16 and different event windows that you cannot
17 exclude the possibility, have an effect on
18 price, particularly because of the
19 acknowledgement that XRP is trading in an
20 efficient market.

21 So let's take this particular example
22 of excluding 5/26. One of the things that I've
23 written about in my own articles about event
24 studies is the need to avoid "I know it when I
25 see it" tests to decide what's important or not

1 important just based on your own subjective
2 judgment, as opposed to doing the analysis
3 yourself, looking at the price reaction and
4 deciding whether or not the price reaction
5 demonstrates that the announcement, in this
6 case, the second announcement, relative to the
7 first announcement is bigger, smaller, what --
8 or the same.

9 That's the proper methodology to use.
10 You don't know without looking based on an "I
11 know it when I see it" test what the
12 relationship is between the price effects of
13 these two different announcements. And because
14 what's involved is an inefficient market, there
15 is no theory for when information is reflected
16 in prices in an information market.

17 So it may be that some of the price
18 reaction on the one announcement, either one of
19 them, is a product of other information from the
20 other announcement just not being reflected in
21 prices on that day but on the other day or
22 they're combined in some way. There is no way
23 to know without actually doing the analysis and
24 actually looking at the effect on prices or the
25 correlation, to be more precise, using

1 Dr. [REDACTED] term, as opposed to making a
2 subjective judgment and arbitrarily including
3 some announcements but not other announcements.

4 Again, I just think that's a basic
5 methodological error.

6 BY MR. HANAUER:

7 Q. On Exhibit 2 you say that the events
8 Dr. [REDACTED] included may have been confounded
9 without actually doing any analysis to determine
10 the impact of potentially confounding
11 announcements?

12 MR. FIGEL: Objection.

13 THE WITNESS: I wouldn't say there is no
14 analysis. The announcement is the proximity in
15 time and the significance of the proximity in
16 time, particularly in a situation where you're
17 dealing with an inefficient market when there is
18 no theory for what time period information is
19 reflected in prices, when that occurs and
20 whether it occurs without bias, and if there is
21 bias when the bias disappears.

22 That's the point of Exhibit 2.

23 BY MR. HANAUER:

24 Q. Did you do any analysis or testing to
25 make a quantitative determination on the impact

1 of any particular piece of potentially
2 confounding news?

3 MR. FIGEL: Objection.

4 THE WITNESS: You know, again, I've tried to
5 make this point several times. It's very hard
6 to do really and sometimes impossible to do in
7 an inefficient market because you don't know
8 when the price effects of any particular
9 announcement, when they are reflected in prices
10 or when they're fully reflected in prices, when
11 they're reflected in prices without bias.

12 If you have an efficient market, you
13 have a premise for stating that for certain
14 types of information there is empirical support
15 for those types of announcements in an efficient
16 market, what the speed of price adjustment is to
17 new information.

18 In fact, that is one of the key
19 provisions in the Cammer factors that we
20 discussed earlier.

21 But with an inefficient market you
22 don't have a theory of the speed of price
23 adjustment to new information. And that's why
24 the existence of multiple announcements in a
25 particular window is particularly important in

1 creating, at a minimum, caution in attributing a
2 correlation between a price -- between a
3 particular announcement and a price movement
4 when there are other announcements in the same
5 window as the announcement that, in this case,
6 Dr. [REDACTED] is attributing correlation to. And
7 that's what Exhibit 2 is meant to illustrate.

8 BY MR. HANAUER:

9 Q. Are you offering any opinion as to the
10 quantitative impact of any potentially
11 confounding news?

12 MR. FIGEL: Objection.

13 THE WITNESS: I would say no for the reasons
14 that I just described.

15 BY MR. HANAUER:

16 Q. How many -- besides the May 26, 2017,
17 example, how many other news repetitions are
18 included in your analysis on Exhibit 2 to your
19 report?

20 MR. FIGEL: Objection.

21 THE WITNESS: Well, first of all, I'm not
22 sure about the premise of your question.

23 When you said that the May 26th
24 announcement is included -- it might be -- but I
25 don't have a way of knowing that for sure as I

1 sit here --

2 BY MR. HANAUER:

3 Q. Well, you included all of Dr. [REDACTED]

4 514 announcements, right?

5 MR. FIGEL: Just to -- just so the record is

6 clear, Dr. Fischel, Professor Fischel, did you

7 finish your answer before Mr. Hanauer asked a

8 clarifying question?

9 THE WITNESS: No. I was trying to finish my
10 answer.

11 MR. FIGEL: Do you want the court reporter to
12 read back the question on where you were?

13 THE WITNESS: No, I remember the question.

14 What I was about to say is, as I said,
15 you might be right in what you said about the
16 May 26th announcement. But I don't have the --
17 I have the number of other announcements within
18 the same windows as what's reflected in
19 Exhibit 2, but I don't have the list of
20 announcements themselves in front of me.

21 So I can tell you what Exhibit 2 says,
22 but I cannot say with certainty which specific
23 announcements are included because I don't have
24 them in front of me.

25

1 BY MR. HANAUER:

2 Q. Do you know how many repetitive or
3 stale announcements are included on Exhibit 2?

4 A. That's what I was trying to answer.

5 I don't -- first of all, a repetitive
6 announcement is not the same as a stale
7 announcement for reasons that I've said several
8 times. A repetitive announcement may have a
9 much bigger effect than the initial
10 announcement.

11 So to assume that they're stale and
12 they have no effect and you can ignore them,
13 that's a fundamental error in an event study
14 analysis.

15 So let me just start there.

16 Apart from that, I don't know which
17 announcements you're considering to be
18 repetitive or stale; so, therefore, I do not
19 know how many of whatever you're considering to
20 be repetitive or stale, even for the moment
21 ignoring the error in equating repetitive with
22 stale, how many of what you are defining in a
23 particular category, how many of those
24 announcements are included in Exhibit 2.

25 Q. Did you do any work to determine

1 whether -- strike that.

2 Did you do any work to determine the
3 amount, if any, of repetitive or stale events
4 included in Exhibit 2?

5 MR. FIGEL: Objection.

6 THE WITNESS: I would say no because that
7 would not be relevant for purposes of the
8 analysis that I did in Exhibit 2.

9 BY MR. HANAUER:

10 Q. So the title of Exhibit 2 is [as read]:
11 Event days analyzed in Dr. ██████ select
12 categories test may be confounded by other
13 announcements on or near the event day.

14 A. That's right.

15 Q. And that's your opinion?

16 A. That's right, particularly in the
17 context of identifying characteristics of
18 inefficient markets and the implications of what
19 an inefficient market means.

20 Q. Are you offering an opinion that goes a
21 step further than that, that the events analyzed
22 in Dr. ██████ select categories' test are
23 confounded by other announcements?

24 MR. FIGEL: Objection.

25 THE WITNESS: I think what I've said multiple

1 times is in inefficient markets when there's no
2 theory of when information is reflected in
3 price, it is impossible to know, if you have
4 multiple announcements in a particular time
5 period, what price reactions can be confidently
6 attributed to one announcement as compared to
7 both announcements or even compared to neither
8 announcement. That's the point.

9 BY MR. HANAUER:

10 Q. So do you have any specific examples of
11 news events from Dr. [REDACTED] analysis that were
12 confounded on the same day with other news?

13 A. I'd have to check. That's a good
14 question. I'd have to check to be sure.

15 I don't know --

16 Q. You don't know --

17 A. I don't know without checking.

18 I mean, it's in the data, but I -- from
19 memory, I don't remember.

20 Q. So on Exhibit 2 to your report, can we
21 look at row number one.

22 A. I'm sorry, this is [REDACTED]

23 Okay, I have it.

24 Q. And how many days are in the windows
25 reflected in row number one?

1 A. Ten days, plus or minus, from the event
2 day.

3 Q. So is that 21 days total?

4 A. Yes, that would be 21 days total.

5 Q. And what is the fourth row, the row
6 titled Average? What does that represent?

7 A. That means if you look at all of the
8 event days and look at all of the other
9 announcements within that event window and you
10 average them all from, again, a minimum of zero
11 to a maximum of 14 with a median of 4, you get
12 an average of 5.

13 Q. And from Exhibit 2, can we tell if
14 those average of five other announcements are in
15 the first ten days of the 21-day window?

16 A. No, you can't.

17 Q. Do you know -- can you tell how many of
18 the average of five events are on the last ten
19 days of the 21-day window?

20 A. I mean, you could by checking, but you
21 can't tell just looking at this exhibit.

22 Q. Is it fair to say that to reach the
23 conclusion from Exhibit 2 to your report, that
24 event days analyzed in Dr. [REDACTED] category may
25 be confounded by other announcements, that to

1 reach that conclusion, it doesn't matter if the
2 other announcements are before, on, or after the
3 event day analyzed by Dr. [REDACTED]

4 MR. FIGEL: Objection.

5 THE WITNESS: I don't know if I'd say it
6 doesn't matter. Although, one of the articles,
7 I actually discuss it in my report, on the
8 existence or lack of existence of an efficient
9 market, does exactly what is in this exhibit of
10 looking at arbitrage opportunities both before
11 and after particular events.

12 So there's support in the academic
13 literature for analyzing the issue the way I
14 did. But you -- on the exhibit itself, you
15 cannot tell whether the announcements are before
16 or after, or most before or most after.

17 BY MR. HANAUER:

18 Q. Does it affect your analysis?

19 A. For this purpose, no, it does not
20 affect my analysis.

21 Q. Does Exhibit 2 to your report
22 distinguish between announcements in Dr. [REDACTED]
23 select categories on one hand and announcements
24 in Dr. [REDACTED] other categories on the other?

25 MR. FIGEL: Objection.

1 THE WITNESS: You know, you asked me that
2 before, and I said I'd have to check.

3 I think most of the -- if I remember
4 correctly, most of the other announcements
5 around the event day are not in Dr. [REDACTED]
6 select categories, but I don't remember if all
7 of them are.

8 BY MR. HANAUER:

9 Q. Does it matter for your analysis?

10 A. No.

11 Q. Did you test if any of the news
12 announcements outside of the five categories
13 analyzed by Dr. [REDACTED] were associated with
14 statistically significant price returns?

15 MR. FIGEL: Objection.

16 THE WITNESS: Did I specifically test that?
17 No, I don't think I did.

18 BY MR. HANAUER:

19 Q. Did you test how quickly the effect of
20 news announcements were incorporated into XRP's
21 price?

22 MR. FIGEL: Objection.

23 THE WITNESS: I mean, that's -- one of the
24 characteristics of an inefficient market is you
25 don't really have a theoretical basis for

1 analyzing that question.

2 BY MR. HANAUER:

3 Q. So the answer is no?

4 A. There's no test that you can conduct
5 that can definitively answer that question if
6 it's an inefficient market.

7 You can have shorter event windows,
8 larger event windows, there's tradeoffs with
9 respect to both of those strategies. And the
10 reason why you have different event windows is
11 because you can't answer the question
12 definitively and there's no theoretical basis
13 for doing so.

14 That's the reason to have different
15 event windows.

16 Q. When you perform an event study, do you
17 always look for confounding news and make
18 adjustments to account for confounding news?

19 MR. FIGEL: Objection.

20 THE WITNESS: Again, every case depends on
21 the relevant facts and circumstances. But when
22 you're dealing with an efficient market, again,
23 one of the definitions of an efficient market is
24 publicly available information is reflected
25 quickly and without bias in prices. And there

1 has been a number of studies of how quick that
2 is, whether or not there's bias.

3 So there is a framework in the academic
4 literature for what the logical length of time
5 to look at to determine the effect of a piece of
6 publicly available information, whether from an
7 announcement or otherwise.

8 And that doesn't exist in inefficient
9 markets. And that's why there are these
10 different trading windows -- trading event
11 windows in the study that is -- I discuss in my
12 report about arbitrage opportunities before and
13 after particular events demonstrating market
14 insufficiently with cryptocurrencies.

15 BY MR. HANAUER:

16 Q. That's the Joo paper?

17 A. No. I think that's the -- I just want
18 to look just to make sure that what I just said
19 is accurate. But it's not the Joo paper, I
20 don't believe.

21 Q. Would it be the Feng paper then?

22 A. Yeah, it's footnote 71.

23 MR. HANAUER: Do you mind if we take a quick
24 break?

25 MR. FIGEL: Not at all.

1 MR. HANAUER: Off the record, please.

2 THE VIDEOGRAPHER: We are going off the
3 record. The time is 4:45 p.m.

4 (Whereupon, a recess was had at
5 4:45 p.m., after which the
6 deposition was resumed at
7 5:11 p.m. as follows:)

8 THE VIDEOGRAPHER: We are back on the record.
9 The time is 5:12 p.m.

10 You may proceed.

11 BY MR. HANAUER:

12 Q. Professor Fischel, in other of your
13 testifying expert engagements, have you prepared
14 reports that test the market efficiency for a
15 specific security?

16 A. Certainly I analyzed that question.
17 I'm trying to remember if any of my reports on
18 that issue were ever filed.

19 MR. HANAUER: Exhibit 12.

20 THE WITNESS: And I'd have to check.
21 Certainly, I filed a number of reports concluding
22 that markets were efficient.

23 (Whereupon, Deposition
24 Exhibit DF-12 was marked for
25 identification.)

1 BY MR. HANAUER:

2 Q. Is Exhibit DF-12 a copy of the expert
3 report you submitted in a case called Shah
4 versus Zimmer Biomet Holdings, Inc., in the
5 Northern District of Indiana?

6 A. Yes, it appears to be.

7 Q. And in the Shah case, did you test the
8 market efficiency of a specific security?

9 A. You know, I actually don't remember
10 very well, but let me just look and I can answer
11 that question.

12 Yes, I did.

13 Q. And was one of the ways you tested for
14 market efficiency in the Shah case was by
15 performing an event study?

16 A. Yes.

17 Q. In this case did you perform an event
18 study to test the efficiency of the XRP trading
19 markets?

20 A. No, for the reasons that I've stated.

21 Q. Did you perform any work or analysis to
22 assess XRP price movement independent of
23 Bitcoin?

24 MR. FIGEL: Objection.

25 THE WITNESS: I would say no unless one of

1 Dr. [REDACTED] different 20 regression
2 specifications, you might be able to draw
3 inferences about that question by looking at his
4 different regressions and the explanatory power
5 of different independent variables.

6 But in terms of any independent
7 analysis, no, I didn't.

8 BY MR. HANAUER:

9 Q. Did you perform any work or analysis to
10 assess XRP price movement independent of any
11 other digital asset other than Bitcoin?

12 MR. FIGEL: Objection.

13 THE WITNESS: Really, the same answer as I
14 just gave.

15 BY MR. HANAUER:

16 Q. When you're defining market efficiency,
17 is it a black-and-white issue where markets can
18 only be efficient or not efficient?

19 MR. FIGEL: Objection.

20 THE WITNESS: I think it depends. Define for
21 what purpose. For purposes of interpreting
22 price movements in an event study, I think
23 market efficiency and satisfying the conditions
24 for semi-strong market efficiency, I think
25 that's quite important.

1 I would say more generally market
2 efficiency in a pure economic sense without
3 consideration of the context of how market
4 efficiency is either being used or not used,
5 it's probably more accurate to say that markets,
6 depending on which market you're talking about,
7 it's probably more accurate to talk about a
8 continuum of market efficiency to complete
9 inefficiency to somewhere in between.

10 BY MR. HANAUER:

11 Q. So that continuum you just discussed,
12 does that apply to market efficiency as it
13 relates to event studies?

14 A. Not so much. I mean, that -- that's
15 what I was describing a second ago, that if you
16 want to attribute correlation, let alone
17 causation, between a particular event and a
18 particular price movement, you need some
19 empirical basis, some theoretical and empirical
20 basis generally from existing academic
21 literature, but also tests that you yourself can
22 perform, that gives you a basis for concluding
23 that particular events or announcements can be
24 confidently associated with or correlated with
25 particular price movements.

1 Q. For -- as they relate to -- as it
2 relates to event studies, what's the difference,
3 if any, between a market being less efficient
4 and a market being not efficient?

5 A. Not very much in terms of the way event
6 studies are usually used for purposes of
7 analyzing the relationship between public
8 announcements or events and price movements.

9 Q. So are you saying that -- can an event
10 study be performed to accurately test the impact
11 between news announcements and prices when the
12 market is less efficient but not not efficient?

13 MR. FIGEL: Objection.

14 THE WITNESS: Well, again, I'm trying to
15 distinguish between how event studies can be
16 used in ways that you have confidence about the
17 results versus how they could potentially be
18 used.

19 So, for example, if you try and do an
20 event study with an asset that's never traded,
21 then it would be -- that's really one end of the
22 spectrum of inefficiency, but then you get all
23 kinds of intermediate cases that can exist where
24 you still cannot confidently establish
25 correlation between particular events and

1 particular price movements, again, depending on
2 the event and depending on the price movement
3 because there may be things that you know from
4 other sources that allow you to -- in
5 particular, the situations reach inferences
6 whether or not the market is efficient.

7 And that's -- that's the logic in these
8 academic studies of having all kinds of
9 different windows, short windows, medium
10 windows, long windows. But, again, there's
11 tradeoffs because let's say with a market that
12 is not efficient but it's not like the market
13 where nothing ever trades, and so you don't
14 really have a basis for knowing how quickly
15 prices react to new publicly available
16 information.

17 And the way you deal with that, the way
18 a number of academic studies do, is you extend
19 the event window. So instead of one day, you
20 look at ten days or seven days.

21 And that's a way to try and compensate
22 for the fact that you don't really have a basis
23 or a theory for why the effect should be
24 immediate. But the problem when you do that is
25 you introduce the possibility that other things

1 are occurring in the seven days or the ten days
2 that are also having an effect other than what
3 it is that you're measuring.

4 And it's very hard to basically solve
5 both things at the same time, to expand event
6 windows before and after to try and capture the
7 fact that you don't know how quickly information
8 is being reflected in prices and at the same
9 time not introduce the possibility that you're
10 also taking -- now taking into account -- or
11 possibly taking into account the effect of other
12 events that may have an influence on price but
13 are not the events that you're trying to
14 measure.

15 So that's the basic reality. And
16 that -- lengthening those event windows might be
17 the best you can do, but then you have to
18 interpret the results in the context of the
19 tradeoffs that exist and the limitations that
20 occur when you're in that position, something
21 that Dr. [REDACTED] did not do.

22 So, you know, I guess that's what I
23 would say.

24 BY MR. HANAUER:

25 Q. So is it Dr. [REDACTED] opinion that the

1 XRP markets are less efficient than the stock
2 market or is it that they're not efficient at
3 all?

4 MR. FIGEL: Objection.

5 THE WITNESS: Well, you have to ask him. I
6 assume he would not say that they're not
7 efficient at all; because if they were not
8 efficient at all, then price movements would
9 just be completely random in relation to
10 announcements or events. And I assume he
11 doesn't believe that. So if --

12 BY MR. HANAUER:

13 Q. Do you believe that?

14 A. Do I believe that the XRP market was
15 completely inefficient, meaning there's no
16 relationship between announcements and price
17 movements? No, I don't believe that.

18 Q. Did you do any work in this case to
19 determine whether the XRP trading markets were
20 less efficient as opposed to not efficient?

21 MR. FIGEL: Objection.

22 THE WITNESS: You know, I reviewed a lot of
23 academic literature, peer-reviewed literature on
24 this question, as well as looking at Dr. [REDACTED]
25 own analysis. You know, you're coming up with

1 categories that are not really typical.

2 But I wouldn't say that I have an
3 opinion or there's a finding in the academic
4 literature that there's no connection of any
5 kind between announcements and price movements,
6 no correlation ever. I wouldn't say that no
7 correlation ever exists because that would be
8 too strong.

9 BY MR. HANAUER:

10 Q. Are you offering the opinion that the
11 XRP trading markets are not sufficiently
12 efficient to perform an event study that
13 accurately measures the impact of news
14 announcements on price?

15 MR. FIGEL: Objection.

16 THE WITNESS: Yes. I'm saying one of the
17 characteristics of an inefficient market, which
18 is what the academic literature finds and what
19 Dr. [REDACTED] concedes, is it has implications for
20 how confident you can be, that you're accurately
21 measuring the effect or the correlation between
22 particular events or announcements and
23 particular price movements. That's the meaning
24 of an inefficient market.

25

1 BY MR. HANAUER:

2 Q. Does Dr. [REDACTED] concede that XRP does not
3 trade in an efficient market?

4 MR. FIGEL: Objection.

5 THE WITNESS: Well, you'd have to ask him.
6 But when he reports the findings of academic
7 studies which conclude that when he talks about
8 the existence of serial correlation and comes up
9 with attempted statistical tests to try and
10 correct for the existence of serial correlation,
11 which is itself a violation of a random walk and
12 even weak form of efficient markets, so I would
13 say, yes, he does, by the literature that he
14 cites and the tests that he performs, and his
15 analysis of the nature of price movements in
16 cryptocurrency markets.

17 So yes, I would say he does acknowledge
18 the general finding, as far as I'm aware, in
19 every academic study that considers the question
20 that cryptocurrency markets, in general, and
21 XRP, in particular, do not exhibit the
22 characteristics of an efficient market.

23 BY MR. HANAUER:

24 Q. Does he -- does Dr. [REDACTED] say anywhere
25 in his report that XRP does not trade in an

1 efficient market?

2 A. Does he use those words? I'd have to
3 look but the characteristics of price movements
4 that he describes and the empirical tests that
5 he does and the literature that he cites all
6 demonstrate a recognition on his part that, from
7 his own analysis of price movements as well as
8 the academic literature that he relies on, that
9 cryptocurrency markets, in general, and XRP, in
10 particular, do not -- that neither of those --
11 or XRP as an example of cryptocurrency markets
12 trade in efficient market.

13 In fact, as I mentioned, the Joo
14 article, if I remember correctly concludes that
15 XRP is one of the least efficient cryptocurrency
16 markets.

17 BY MR. HANAUER:

18 Q. Does the Joo article say that the XRP
19 markets are insufficiently efficient such that
20 you can't accurately measure the impact of news
21 announcements on XRP prices?

22 MR. FIGEL: Objection.

23 THE WITNESS: Well, again, I don't recall
24 exactly what they say. But what the -- the
25 purpose of the article is to do a test of market

1 efficiency, to conclude one way or the other
2 whether cryptocurrency markets, and XRP in
3 particular, trades in an efficient market. And
4 the conclusion of the article is that they
5 don't. Crypto markets generally don't trade in
6 an efficient market, and crypto -- and XRP
7 specifically does not trade in an efficient
8 market.

9 In fact, it's farther away from an
10 efficient market than other cryptocurrencies.

11 BY MR. HANAUER:

12 Q. In an efficient market are stock price
13 increases associated with positive relevant news
14 announcements?

15 MR. FIGEL: Objection.

16 THE WITNESS: Not necessarily.

17 BY MR. HANAUER:

18 Q. When an -- when the market is
19 efficient, when are stock price increases
20 generally -- strike that.

21 In an efficient market, are stock price
22 increases generally associated with positive
23 relevant news announcements?

24 MR. FIGEL: Objection.

25 THE WITNESS: Well, statistically significant

1 price increases are, by definition, positive.
2 Whether they are associated with positive
3 announcements generally is too vague of a
4 question. You need a definition of what a
5 positive announcement is. Is it the language is
6 positive? That certainly is not the case.
7 There are many positive-sounding announcements
8 that have big negative stock price consequences.

9 So it just depends. You have to look
10 at the actual data. And as I said in my answers
11 a few minutes ago, you can't just rely on a "I
12 know it when I see it" test.

13 You have to actually look at what
14 happens with a particular announcement and what
15 the price reaction is in relation to that
16 announcement.

17 BY MR. HANAUER:

18 Q. In an efficient market, does the price
19 of a security react to news that is not
20 material?

21 MR. FIGEL: Objection.

22 THE WITNESS: The price reflects all publicly
23 available information. So in that sense, the
24 answer is yes.

25 Whether that reaction is statistically

1 significant, that's a different question, and
2 whether you can exclude the possibility that the
3 price reaction is attributable to chance alone,
4 that's also a different question.

5 But the definition of a semi-strong
6 efficient market is that prices react to all
7 publicly available information, whether material
8 or not, it's just you can't tell whether the
9 movement also is random and, therefore,
10 something that you can't reject the hypothesis
11 that the movement is attributable to chance
12 alone.

13 BY MR. HANAUER:

14 Q. When did securities markets become
15 sufficiently efficient for event studies to
16 accurately measure the impact of news
17 announcements on stock prices?

18 MR. FIGEL: Objection.

19 THE WITNESS: Well, that's a pretty broad
20 question. You know, I'm not sure there is a
21 clear answer to it in terms of a dividing line
22 chronologically.

23 You know, a lot of the famous articles
24 about market efficiency I think started
25 appearing in the '70s and then, you know,

1 continued since then.

2 BY MR. HANAUER:

3 Q. Were securities markets sufficiently
4 efficient for event studies to accurately
5 measure the impact of news announcements on
6 stock prices before the advent of the internet?

7 MR. FIGEL: Objection.

8 THE WITNESS: I think many of the main
9 studies of market efficiency on which event
10 studies relied occurred before the advent of the
11 internet.

12 BY MR. HANAUER:

13 Q. Same question but instead of internet,
14 what if I were to -- well, I'll just ask the
15 question.

16 Were securities markets sufficiently
17 efficient for event studies to measure the
18 impact of news announcements on stock prices
19 before CNBC or Bloomberg were widely available?

20 MR. FIGEL: Objection.

21 THE WITNESS: Well, part of my problem is I
22 don't know when CNBC and Bloomberg were widely
23 available. But in terms of the academic
24 literature on the efficiency of prices, I
25 don't -- I haven't reviewed them recently with

1 that -- or ever with that question in mind, you
2 know. So I -- I would think the answer to that
3 is yes, but I would have to investigate it a
4 little bit further to -- I don't know if
5 Bloomberg was available in -- well, I guess
6 Bloomberg is because of Bloomberg. I don't
7 know. He's -- I don't know how old he is, so I
8 don't know the answer to your question.

9 I would say probably, but I'd want to
10 investigate more, for sure.

11 BY MR. HANAUER:

12 Q. Are the cryptocurrency markets more or
13 less efficient over the past five years than the
14 stock market was in the 1980s?

15 MR. FIGEL: Objection.

16 THE WITNESS: You know, it's an odd
17 comparison.

18 MR. FLUMENBAUM: It's way beyond the scope,
19 too. I mean, I don't understand this line of
20 questioning. It has nothing to do with his
21 report.

22 MR. HANAUER: Anything else, Counsel?

23 MR. FLUMENBAUM: No.

24 THE WITNESS: I started to say, it's sort of
25 a very odd question of comparing one against the

1 other in different markets with different types
2 of claims. I don't know if that specific
3 question has ever been studied.

4 BY MR. HANAUER:

5 Q. Have you ever studied that question?

6 MR. FIGEL: Objection.

7 THE WITNESS: No. I would say the one thing
8 that I have done is used event studies using
9 data from the 1980s based on literature,
10 academic literature on the efficiency of markets
11 at that time. And I don't think there's a
12 similar academic literature about
13 cryptocurrencies in the last five years. So I
14 haven't studied that question. I don't want to
15 express an opinion about that question.

16 But to the extent I have a reaction to
17 the question, it's what I just said.

18 BY MR. HANAUER:

19 Q. Going back to the Cammer factors that
20 you referenced earlier today, what's the
21 methodology for determining whether a market is
22 efficient or not when certain of the Cammer
23 factors support efficiency but certain don't?

24 MR. FIGEL: Objection.

25 THE WITNESS: Well, that's partly a legal

1 question again, and I'm not expressing a legal
2 opinion. But I think there is a general
3 understanding that certain factors are more
4 important than others.

5 BY MR. HANAUER:

6 Q. And which are the most important
7 factors?

8 A. Well, again, it might, you know, depend
9 on the relevant facts and circumstances that are
10 at issue. But, generally, it's the extent that
11 one can say that the -- that price reactions to
12 particular events occur quickly and without
13 bias. I think that's generally regarded as
14 probably the most important factor; certainly
15 the most important economic factor. And I -- so
16 that's what I would say.

17 Q. So beyond the Cammer factors to
18 determine the efficiency of a market for a
19 digital -- or I'm sorry.

20 To determine the efficiency of a market
21 for a particular asset, can you also
22 appropriately consider a company's
23 capitalization?

24 MR. FIGEL: Objection.

25 THE WITNESS: Yes, I think you can

1 appropriately consider a company's
2 capitalization.

3 BY MR. HANAUER:

4 Q. What about bid/ask spread?

5 A. That's another factor that has
6 sometimes been considered certainly by courts.

7 Q. What about percentage --

8 A. And bid/ask spread is a measure of
9 liquidity, and liquidity can be correlated with
10 the speed of price adjustment to new
11 information.

12 Q. Are you offering any opinion as to the
13 liquidity of the XRP markets?

14 A. No, I'm not.

15 Q. Did you perform any work or analysis to
16 determine the period of time by which
17 information is fully incorporated into XRP
18 prices without bias?

19 A. Well, that's part of the problem; you
20 don't know that. That's, again, one of the
21 characteristics of the inefficient market. I'm
22 just going to repeat again what I just said.
23 That's the logic of using different event
24 windows because you don't know, so you increase
25 the event window hoping that the effect of a

1 particular or a -- that a particular event is
2 correlated with a price movement within a
3 certain period of time, so you have short event
4 windows and then longer event windows.

5 But, first of all, you don't even know
6 with the longer event window that that fully
7 captures the -- what the price reaction that's
8 correlated with a particular event.

9 But, again, even if you could solve
10 that problem, you introduce another problem,
11 which is you start introducing unrelated events.
12 And, again, that just creates another problem in
13 figuring out how much of a price reaction is
14 correlated with a particular disclosure or
15 event.

16 Q. Did you perform a Cammer analysis in
17 this case?

18 A. I think I answered that question a
19 number of hours ago. I suggested that it would
20 be interesting to do, in some sense knowing the
21 answer, but I'm not sure whether the people that
22 I was working with actually implemented the
23 analysis as opposed to just something we
24 discussed.

25 Q. Are you offering the opinion then on

1 the outcome of any Cammer analysis as it relates
2 to XRP?

3 A. I do not --

4 MR. FLUMENBAUM: Objection.

5 THE WITNESS: I wouldn't say I'm offering an
6 opinion about it. I haven't offered an opinion
7 about it. But I think the implication of the
8 conclusion and all of the academic studies as
9 well as in Dr. [REDACTED] report that XRP does not
10 trade in an inefficient market means that XRP
11 would not satisfy the Cammer factors.

12 BY MR. HANAUER:

13 Q. How does XRP's daily trading volume
14 compare to that of smaller stocks on the S&P 500
15 index?

16 MR. FIGEL: Objection.

17 MR. FLUMENBAUM: Objection.

18 THE WITNESS: I don't know. I would have to
19 look.

20 BY MR. HANAUER:

21 Q. Is XRP covered by investment
22 professionals?

23 MR. FIGEL: Objection.

24 MR. FLUMENBAUM: Objection.

25 THE WITNESS: I'm sure there are some

1 investment professionals who try and follow
2 price movements of XRP.

3 BY MR. HANAUER:

4 Q. Do you know the extent of coverage of
5 XRP by investment professionals?

6 MR. FIGEL: Objection.

7 THE WITNESS: I haven't specifically studied
8 that question.

9 BY MR. HANAUER:

10 Q. Are there market makers that make a
11 market in XRP?

12 MR. FLUMENBAUM: Objection.

13 THE WITNESS: I haven't specifically studied
14 that question either.

15 BY MR. HANAUER:

16 Q. Are you aware of the allegation in the
17 amended complaint that Ripple paid market makers
18 to make a market in XRP?

19 MR. FLUMENBAUM: Objection.

20 THE WITNESS: You'd have to show it to me.

21 BY MR. HANAUER:

22 Q. How does Ripple's capitalization
23 compare to smaller stocks on the -- smaller
24 companies included in the S&P 500 index?

25 MR. FIGEL: Objection.

1 MR. FLUMENBAUM: Objection.

2 THE WITNESS: I haven't studied that
3 question.

4 BY MR. HANAUER:

5 Q. Have you studied the bid/ask spread in
6 the XRP markets?

7 MR. FIGEL: Objection.

8 THE WITNESS: No, I haven't.

9 BY MR. HANAUER:

10 Q. Have you studied the percentage of XRP
11 tokens held by the public?

12 MR. FIGEL: Objection.

13 THE WITNESS: No, I haven't.

14 BY MR. HANAUER:

15 Q. Are you able to provide specific
16 examples of Ripple news announcements that you
17 think were not fully incorporated into XRP's
18 price within three days?

19 MR. FIGEL: Objection.

20 MR. FLUMENBAUM: Objection.

21 THE WITNESS: You know, it's the same problem
22 because the stock -- not the stock, excuse me --
23 because XRP does not trade in an efficient
24 market. There is no way to know whether the
25 price effect is fully incorporated within three

1 days or any other time period.

2 And by the way, that is why the price
3 reaction test is generally considered to be the
4 most important test that determines whether a
5 stock trades in an efficient market and the
6 Cammer factors as well.

7 BY MR. HANAUER:

8 Q. Isn't that sort of circular, that
9 you're saying you need to establish in the
10 Cammer factors a cause-effect relationship
11 between news announcements and stock price
12 movement, but that you can't make that
13 determination until you establish the Cammer
14 factors?

15 MR. FIGEL: Objection.

16 THE WITNESS: It's not circular because one
17 of the things that the academic studies do is,
18 you know, for example, look for serial
19 correlation, look for arbitrage opportunities,
20 things that would not exist if prices fully
21 reflected the effects of particular
22 announcements or other types of publicly
23 available information. If that were true, then
24 there would be no arbitrage opportunities, there
25 wouldn't be serial correlation, you wouldn't

1 need to have these different studies looking at
2 different event windows, et cetera.

3 So, you know, that's why the Cammer
4 factors are a way to look at a series of
5 different factors to determine whether, in the
6 case of the Cammer factors, a stock or other
7 security trades in an efficient market.

8 But with respect to cryptocurrencies
9 and XRP, based on the academic literature, based
10 on Dr. [REDACTED] own findings, you already know it
11 doesn't trade -- XRP doesn't trade in an
12 efficient market and, therefore, you know it
13 wouldn't satisfy the Cammer factors, which are
14 intended to be a test of whether a particular
15 security or financial asset trades in an
16 efficient market.

17 BY MR. HANAUER:

18 Q. Did Ripple have policies that
19 contemplated the public announcements about
20 Ripple or the XRP protocol could affect the
21 decision to buy or sell XRP?

22 MR. FIGEL: Objection.

23 THE WITNESS: I don't know.

24 BY MR. HANAUER:

25 Q. Did Ripple have policies that

1 contemplated that certain announcements by
2 Ripple could significantly affect the trading
3 price of XRP?

4 MR. FIGEL: Objection.

5 MR. FLUMENBAUM: Objection. He's not a fact
6 witness. He's not testifying --

7 MR. HANAUER: Speaking objection, Counsel.

8 MR. FLUMENBAUM: You're way beyond what
9 you're allowed to ask him --

10 MR. HANAUER: Speaking objection, Counsel.

11 MR. FLUMENBAUM: -- as an expert.

12 MR. HANAUER: Can you reread the question,
13 please?

14 (Whereupon, the record was read
15 as requested.)

16 MR. HANAUER: I'll restate it.

17 BY MR. HANAUER:

18 Q. Did Ripple have policies that
19 contemplated that certain announcements by
20 Ripple could significantly affect the trading
21 price of XRP?

22 MR. FIGEL: Objection.

23 MR. FLUMENBAUM: Objection.

24 THE WITNESS: I don't know.

25

1 BY MR. HANAUER:

2 Q. Did Ripple advise its employees that
3 Ripple's news announcements become generally
4 known two days following an announcement?

5 MR. FIGEL: Objection.

6 MR. FLUMENBAUM: Objection, improper
7 question.

8 THE WITNESS: I don't know.

9 BY MR. HANAUER:

10 Q. Have you reviewed any of Ripple's
11 internal codes of conduct?

12 A. No.

13 Q. Have you reviewed any of Ripple's
14 insider trading policies?

15 A. No.

16 Q. Are you aware whether or not Ripple has
17 insider trading policies or ever did?

18 MR. FLUMENBAUM: Objection.

19 THE WITNESS: I don't recall one way or the
20 other.

21 MR. HANAUER: One moment please while I
22 confirm with counsel.

23 MR. FIGEL: Could we also get a time check?

24 THE VIDEOGRAPHER: Yeah, we've been on the
25 record a little over six hours.

1 MR. FIGEL: So we have one hour left to get
2 to seven?

3 THE VIDEOGRAPHER: I believe so, yeah. A
4 little over six hours.

5 MR. HANAUER: Let's go off the record and
6 take a very short break, please.

7 THE VIDEOGRAPHER: We are going off the
8 record. The time is 5:55 p.m.

9 (Whereupon, a recess was had at
10 5:55 p.m., after which the
11 deposition was resumed at
12 5:58 p.m. as follows:)

13 THE VIDEOGRAPHER: We are back on the record.
14 The time is 5:58 p.m.

15 You may proceed.

16 MR. HANAUER: Thank you, Professor Fischel.
17 The SEC has no further questions at this time.

18 MR. FIGEL: No question from Ripple Labs.

19 THE COURT REPORTER: Anybody on the phone?

20 MR. FIGEL: Mr. Flumenbaum?

21 THE VIDEOGRAPHER: Are we on mute?

22 THE COURT REPORTER: No.

23 MR. FLUMENBAUM: No questions.

24 THE COURT REPORTER: I think we have standing
25 orders for you guys on this case?

1 MR. HANAUER: In terms of delivery and all
2 that?

3 THE COURT REPORTER: Yeah.

4 MR. HANAUER: We can go off the record.

5 THE VIDEOGRAPHER: This is end of media unit
6 three. This concludes the deposition of Daniel
7 Fischel. The video will be retained by
8 Gradillas Court Reporters.

9 We are going off the record. The time
10 is 5:59 p.m.

11 (Whereupon, the witness was
12 excused.)

13 (The proceedings concluded at
14 5:59 p.m.)

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CERTIFICATE OF WITNESS

I, DANIEL R. FISCHEL, do hereby declare under penalty of perjury that I have read the entire foregoing transcript of my deposition testimony, or the same has been read to me, and certify that it is a true, correct and complete transcript of my testimony given on February 28, 2022, save and except for changes and/or corrections, if any, as indicated by me on the attached Errata Sheet, with the understanding that I offer these changes and/or corrections as if still under oath.

_____ I have made corrections to my deposition.

_____ I have NOT made any changes to my deposition.

Signed: _____
DANIEL R. FISCHEL

Dated this _____ day of _____ of 20____.

Sworn to and Subscribed before me,
this _____ day of _____, 20____.

Notary Public My commission expires: _____

1 STATE OF ILLINOIS

2 COUNTY OF COOK

3
4 I, CHERYL L. SANDECKI, a Certified
5 Shorthand Reporter within and for the State of
6 Illinois, do hereby certify that heretofore,
7 to-wit, on February 28, 2022, personally
8 appeared before me, at 110 North Wacker Drive,
9 Chicago, Illinois, DANIEL R. FISCHER, in a cause
10 now pending and undetermined in the United
11 States District Court, Southern District of New
12 York, wherein Securities and Exchange
13 Commission is the plaintiff and RIPPLE LABS,
14 INC., BRADLEY GARLINGHOUSE, and CHRISTIAN LARSEN
15 are the Defendants.

16 I further certify that the said
17 DANIEL R. FISCHER was first administered an oath
18 to testify the truth, the whole truth and
19 nothing but the truth in the cause aforesaid;
20 that the testimony then given by said witness
21 was reported stenographically by me in the
22 presence of the said witness, and afterwards
23 reduced to typewriting by Computer-Aided
24 Transcription, and the foregoing is a true and
25 correct transcript of the testimony so given by

1 said witness as aforesaid.

2 I further certify that the signature to
3 the foregoing deposition was reserved by counsel
4 for the respective parties and that there were
5 present at the deposition the attorneys
6 hereinbefore mentioned.

7 I further certify that I am not counsel
8 for nor in any way related to the parties to
9 this suit, nor am I in any way interested in the
10 outcome thereof.

11 IN TESTIMONY WHEREOF: I certify to the
12 above facts this 1st day of March, 2022.

13
14
15
16
17
18 _____
19 CHERYL L. SANDECKI, RPR, CLR
20 CERTIFIED SHORTHAND REPORTER
21 IL CSR NO.: 084-03710
22 ID NO.: SRL-1145
23 NJ CCR NO.: 30XI00241500
24 TN NO.: 823
25 WA CCR NO.: 22001795

ERRATA SHEET

Deposition of: DANIEL R. FISCHEL
Date taken: FEBRUARY 28, 2022
Case: SEC v. RIPPLE LABS, INC., et al.

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Exhibit 35

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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK
- - - - -x
SECURITIES AND EXCHANGE
COMMISSION,

 Plaintiff,

 against Case No.
 20-cv-1 (AT) (SN)

RIPPLE LABS, INC., BRADLEY
GARLINGHOUSE, and CHRISTIAN A.
LARSEN,

 Defendants.
- - - - -x

VIDEOTAPED DEPOSITION OF [REDACTED] Ph.D.

New York, New York

Friday, February 18, 2022

Reported by

JEFFREY BENZ, CRR, RMR

JOB NO. 206137

February 18, 2022

9:16 a.m.

Videotaped Deposition of [REDACTED] Ph.D.,
taken at Debevoise & Plimpton LLP, 919 Third
Avenue, New York, New York, before Jeffrey Benz, a
Certified Realtime Reporter, Registered Merit
Reporter and Notary Public of the State of New
York.

A P P E A R A N C E S:

FOR THE PLAINTIFF:

U.S. SECURITIES AND EXCHANGE COMMISSION

175 West Jackson

Chicago, Illinois 60604

BY: ROBERT MOYE, ESQ.

-and-

200 Vesey Street

New York, New York 10281

BY: MARK SYLVESTER, ESQ.

BENJAMIN HANAUER, ESQ (remotely)

DAPHNA WAXMAN, ESQ. (remotely)

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2 A P P E A R A N C E S: (Ctd.)

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4 FOR DEFENDANT RIPPLE LABS:

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8 BY: REID FIGEL, ESQ.

9 CLAYTON MASTERMAN, ESQ.

10 KYLIE KIM, ESQ.

11 COLLIN WHITE, ESQ. (remotely)

12 BETHAN JONES, ESQ. (remotely)

13 GAVAN GIDEON, ESQ. (remotely)

14 ELIANA PFEFFER, ESQ. (remotely)

15 JUSTIN BERG, ESQ. (remotely)

16 -and-

17 DEBEVOISE & PLIMPTON

18 919 Third Avenue

19 New York, New York 10022

20 BY: DANIEL MARCUS, ESQ. (remotely)

21 -and-

22 801 Pennsylvania Avenue NW

23 Washington, District of Columbia 20004

24 BY: MATT HIRSCH, ESQ.

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10 FOR DEFENDANT CHRISTIAN A. LARSEN:

11 PAUL, WEISS, RIFKIND, WHARTON & GARRISON

12 1285 Avenue of the Americas

13 New York, New York 10019

14 BY: MARTIN FLUMENBAUM , ESQ. (remotely)

15 EMILY GLAVIN, ESQ. (remotely)

16
17 ALSO PRESENT:

18 MATTHEW CHIN-QUEE, Videographer

19 DEBORAH McCRIMMON, Ripple Labs, Inc. (remotely)

20 KYLE E. CHERMAK, Debevoise & Plimpton (remotely)

1 [REDACTED]
2 THE VIDEOGRAPHER: We're now on the
3 record. This is the start of Tape Number 1
4 of the videotape deposition of [REDACTED]
5 in the matter Securities and Exchange
6 Commission v. Ripple Labs, Inc., et al., in
7 the United States District Court, Southern
8 District of New York, Number 20-CV-1
9 (AT) (SN).

10 The deposition's being held at
11 919 Third Avenue, New York, New York, on
12 February 18, 2022, at approximately
13 9:16 a.m.

14 My name is Matthew Chin-Quee, from
15 TSG Reporting, and I'm the legal video
16 specialist. The court reporter is Jeffrey
17 Benz, in association with TSG Reporting.

18 Will counsel please introduce
19 yourselves.

20 MR. FIGEL: Reid Figel, with Clayton
21 Masterman and Kylie Kim, representing
22 defendant, Ripple Labs, Incorporated.

23 MR. MOYE: Robert Moye and Mark
24 Sylvester here for the SEC.

25 MR. FIGEL: And we have an agreement

1 [REDACTED]
2 that counsel who's participating by video
3 conference, appearances are already noted
4 for the court reporter record, and the --
5 deemed included in the video record.

6 THE VIDEOGRAPHER: Thank you.

7 Will the court reporter please swear
8 in the witness.

9 [REDACTED] Ph.D.,
10 called as a witness, having been first
11 duly sworn by Jeffrey Benz, a Notary
12 Public within and for the State of New
13 York, was examined and testified as
14 follows:

15 EXAMINATION BY MR. FIGEL:

16 Q. Good morning. Could you state your
17 name for the record, please.

18 A. [REDACTED]

19 Q. And, Mr. [REDACTED] do you prefer to be
20 called Mr. [REDACTED] or Dr. [REDACTED]

21 A. I suppose for this setting, why don't
22 we say Dr. [REDACTED]

23 Q. You understand you're testifying under
24 the same oath that you would take if you were
25 testifying in a courtroom --

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[REDACTED]

A. I understand.

Q. And you also understand that the two reports that you submitted in this litigation are also submitted under oath?

A. I understand.

Q. Any reason today that you can't give your best truthful and accurate testimony?

A. No reason.

Q. Have you ever been deposed before?

A. Yes, I have.

Q. How many times?

A. One time.

Q. In what matter?

A. [REDACTED].

Q. And have you ever testified in any other proceeding in any context?

A. No. I've submitted written testimony in that matter, I've been deposed, but that's the extent of my testimony experience.

Q. No personal litigation in which you were a testifying witness?

A. Correct.

Q. You submitted both an expert report and a rebuttal report in connection with this

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case. Is that correct?

A. Yes, that's correct.

Q. I'd like to show you what's been
marked as -- we'll start with Exhibit 1.

(Amended expert report of [REDACTED]
was marked Exhibit 1 for identification, as
of this date.)

MR. FIGEL: This is for the court
reporter.

THE COURT REPORTER: That's very nice
but it's not necessary.

MR. FIGEL: All right.

MR. FLUMENBAUM: Excuse me. It's hard
to hear Dr. [REDACTED] if he could speak up,
please.

THE WITNESS: Is this mic doing
anything?

THE VIDEOGRAPHER: It's just for the
video.

MR. FIGEL: Why don't we --

THE VIDEOGRAPHER: Maybe I can put
that --

THE WITNESS: Is this better?

MR. FIGEL: Mr. Flumenbaum, are you

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[REDACTED]

able to hear Dr. [REDACTED] now?

MR. FLUMENBAUM: Is he talking now?

THE WITNESS: Testing, testing. Is this satisfactory?

MR. FLUMENBAUM: Thank you.

Q. I show you what's been marked as [REDACTED] Exhibit 1. Do you recognize that document?

A. I do. It appears to be my opening report in this matter.

Q. And does Exhibit 1 set forth all the affirmative opinions you intend to offer in this case?

A. I believe so, yes.

Q. And does it contain the bases for all of the opinions that you intend to offer?

A. Well, I have opinions also expressed in my rebuttal report.

Q. We'll get to that. I'm just talking about in your open report.

A. My opening report represents the opinions of my opening report.

Q. And you understand that that Exhibit 1 is also submitted under penalty of perjury, correct?

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A. Yes, I understand.

Q. And nothing was omitted from that report that you deemed to be necessary to support the opinions that you express in that report; is that correct?

A. I believe that's correct. Yes.

Q. I'd like to now show you what we'll mark as ██████ Exhibit 2.

(Rebuttal report of ██████ was marked Exhibit 2 for identification, as of this date.)

Q. Do you recognize this document, Dr. ██████

A. I do. This appears to be my rebuttal report in this matter.

Q. And does your rebuttal report include all the rebuttal opinions you intend to offer in connection with this litigation?

A. Well, I have been directed by the SEC to do some additional analysis in response to the reports of Dr. Marais and Professor Fischel. Those are not yet contained in this rebuttal report.

MR. FIGEL: Let me inquire of

1 [REDACTED]
2 Mr. Moye. Do you intend to seek leave of
3 the court to submit additional expert
4 reports from Dr. [REDACTED]

5 MR. MOYE: The plan, what we expect to
6 do is to supplement within the expert
7 discovery period, so in other words, the
8 few additional comments that we believe are
9 appropriate to make based on the rebuttal
10 report will be included in a very short
11 supplement under 26(e).

12 MR. FIGEL: All right. Just so the
13 record's clear, we have not yet been
14 provided with a copy of any supplemental
15 reports of Dr. [REDACTED] I don't think it's
16 fair for us to be expected to examine him
17 based on his prognostication about what may
18 be included in those reports so we --

19 MR. MOYE: We agree.

20 MR. FIGEL: -- we reserve our rights
21 to call Dr. [REDACTED] back in the event you
22 submit a supplemental report.

23 MR. MOYE: We agree, and we'll discuss
24 that, and we'll be happy to make him
25 available for a reasonable amount of time.

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Q. With respect to your rebuttal report, Dr. [REDACTED] as you sit here today, do you have any opinions about the matters contained in your rebuttal report, other than what's set forth in the report?

A. No. The rebuttal report stands complete as of today.

Q. Okay. And your rebuttal report includes all the facts and data that you considered in support of the opinions you expressed in Exhibit 2, correct?

A. I believe so, yes.

Q. All right. Other than --

MR. FIGEL: And, Mr. Moye, what I propose that we do is we will treat whatever engagement that he is working on now as postdating the dates of his two reports.

MR. MOYE: Sure.

MR. FIGEL: So none of my questions are going to go to any other opinions you may be working on now. Fair enough?

But we reserve our rights with respect to any supplemental or subsequent opinions

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you provide.

Q. Other than what's set forth in Exhibits 1 and 2, and other than whatever you may be working on prospectively, were you asked to analyze any issues in this case that are not discussed or reflected in either Exhibit 1 or Exhibit 2?

MR. MOYE: So I'm going to object to that question to the extent that it would require Dr. ██████████ to disclose any conversations he had with counsel for the SEC because that would infringe on work product.

Q. Do you understand Mr. Moye's instruction?

A. I believe so.

Q. All right. Without revealing any communications you may have had with the SEC, in the course of your engagement for this matter, have you or people working under your direction performed any work that's not reflected in either Exhibit 1 or Exhibit 2?

A. That's a very broad question, have they done any work.

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I -- that's so broad that I don't think I can -- I can -- I can say no, that nobody did any work.

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Q. Tell me what work you're aware of, as you sit here today, that is not -- in the -- in the context of this engagement, in this litigation, that's not reflected in Exhibits 1 and 2.

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A. I can't think of any examples. But if you're asking me to testify whether somebody in my support team may have done something, they may have done something, but I'm not aware, I cannot -- sitting here today, I cannot think of any work that was done that's not reflected in either of these two reports, setting aside ongoing work.

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Q. Are you aware of any models that anyone working under your direction in this case tested or considered in connection with the preparation of your report?

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MR. MOYE: Same objection as before.

Please make sure your answer does not reveal any communications that you've had with SEC attorneys about this matter.

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[REDACTED]

A. Again, that's so very broad.

I expect that in the ordinary course of doing research, we may have considered some alternative parameterizations of some econometric models.

As I say, I -- that's -- that's -- I consider that routine and normal and ordinary.

So I'm not going to say that -- that there are no alternative models which may have been run at any point.

Q. Are you aware of any?

A. Well, as an example, when considering the estimation period behind the econometric models, we settled on a 180-day window ending three days prior to an event date to be tested. We may have considered models ending one day prior to the event date being tested. We may have considered models ending five days prior.

Again, that's -- that's -- the ordinary -- the ordinary course of doing research. That -- that's one example that I can think of. But I --

Q. Other than the endpoint for the periods tested, can you think of any other

1 [REDACTED]
2 models or regressions or consideration of events
3 or categorizations that you or your staff
4 considered that's not reflected in the report?

5 MR. MOYE: Same objection as before.

6 A. We may have experimented with
7 volume-weighted indices at one point.

8 But that would be -- that's --
9 that's -- sitting here today, that's about all I
10 can remember, is something -- an alternative we
11 may have considered that is not in these
12 reports.

13 Q. Did you consider any other estimation
14 models other than the ones set forth in your
15 opening report?

16 MR. MOYE: Same objection, work
17 product.

18 A. Again, beyond sort of the ordinary
19 flow as we've already discussed, no. I can't
20 remember any.

21 Q. When you said that you -- just a
22 second.

23 When you say you experimented with
24 volume-weighted indices, what do you mean?

25 A. Well, we have data on -- we have

1 [REDACTED]
2 pricing data for several digital tokens. From
3 those pricing data, we can construct returns.
4 And one can build an index of those returns, in
5 a number of different ways.

6 Two easy ways or two common ways are
7 what's called an equal-weighted index, where one
8 simply takes the simple average return across
9 different tokens. And another one would be some
10 sort of volume-weighted index, where those
11 digital tokens that have, for example, a larger
12 market cap get greater weight in the
13 construction of that index.

14 In the case of digital tokens, bitcoin
15 is so overwhelmingly dominant in a volume sense
16 that, as a practical matter, there's very little
17 difference between a volume-weighted index and
18 simply bitcoin.

19 So after some normal experimentation,
20 I decided that there was -- there was no utility
21 in a volume-weighted index in the context of
22 these kinds of assets that we're discussing
23 because bitcoin just dominates everything.

24 So we settled, I think, fairly quickly
25 on considering just equal-weighted indices.

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Q. If I understand your answer, in substance, what you're saying is that if you look at the dollar volume of cryptocurrencies traded on various exchanges, the vast majority of that is dominated by bitcoin, correct?

A. Correct.

Q. And that the amounts of both volume and, call it dollar value of Ether lumens is trivial in comparison to the information that's available about bitcoin? Correct?

A. Well, I mean, "trivial" is a word. Again, just as an arithmetic fact, a volume-weighted index, again, just arithmetically, is simply not going to be very different from bitcoin's return.

Q. And did you elect to use equal-weighted indices as opposed to volume-weighted indices or bitcoin, representation-weighted indices, because the weighted indices undermined the force of the conclusions that you're expected -- that you have expressed in your report?

A. No, not at all.

We have one -- some of the models that

1 [REDACTED]
2 are here are based only on bitcoin. Others have
3 bitcoin plus Ether. Some have bitcoin plus
4 Ether plus lumens.

5 And then when it came time to add some
6 of the other tokens that -- whose history begins
7 much later, at that point, we -- I switched to
8 an equal-weighted index. But there are results
9 here, which are -- which consider only bitcoin,
10 for example, as an alternative driver.

11 So I -- I simply felt that a
12 volume-weighted index was effectively redundant,
13 to a bitcoin-based model.

14 Q. All right. Now, if you turn to
15 paragraph 11 on page 2 of Exhibit 1.

16 You'll see that you reserve the right
17 to modify or to supplement this report?

18 A. Yes. I see that.

19 Q. Just so the record is clear, is there
20 anything today that you would like to modify or
21 supplement about the information contained in
22 Exhibit 1?

23 A. Well, as we've discussed, I'm -- I am
24 continuing to work on a supplemental analysis.

25 Q. Well, a -- are you finished with your

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answer?

A. Yes.

Q. As I understood your prior testimony, the supplemental analysis went to rebuttal issues. Do you intend to provide a supplemental analysis to any of the opinions or data or other information that's set forth in your opening report, Exhibit 1?

A. The -- if I -- if I had to characterize it, I suppose the more helpful characterization is that it is a supplement to Exhibit 1 in the sense that it is primarily addressing issues that were raised in some rebuttal reports which were written in response to Exhibit 1.

That's why I say the rebuttal -- it's a rebuttal analysis in a sense. But if -- if I have to characterize and -- and pick one and say whether I'm supplementing my first report or my second report, I suppose the better characterization is that I am supplementing the first report.

Q. And let's make sure that we're making a clear record here. When you say "supplement,"

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[REDACTED]

I want to make sure that -- withdrawn.

With respect to whatever work you're doing that may lead to additional reports, is there anything that is in Exhibit 1 that, as you sit here today, you believe is inaccurate or incomplete?

A. No, not at all.

Q. All right. Same question with respect to Exhibit 2. Is there -- putting aside whatever it is you're doing prospectively, is there anything in Exhibit 2, as you sit here today, that you believe is inaccurate or incomplete?

A. I don't believe so, no.

Q. According to your resume, you spent a lot of time working in the private sector at [REDACTED]; is that correct?

A. I worked at [REDACTED] for approximately 15 years. I think it was a little over 15 years.

Q. Why did you decide to leave [REDACTED]?

A. To pursue other career -- a different career direction.

Q. And what was that different career

1 [REDACTED]
2 direction that you decided to pursue when you
3 left [REDACTED]

4 A. I decided to become an economic
5 consultant.

6 Q. How long have you been an economic
7 consultant?

8 A. I joined my first consultancy, I
9 believe, in [REDACTED].

10 Q. [REDACTED]?

11 A. [REDACTED].

12 Q. And why did you leave your prior
13 consulting firm [REDACTED]?

14 A. Discussions with [REDACTED] and decided
15 that it would be a -- a good environment to --
16 to join.

17 Q. In connection with why your current
18 employment [REDACTED], obviously the
19 SEC is one of your clients, correct?

20 A. The SEC has engaged me, yes.

21 Q. Have they engaged you on any other
22 litigation or matter or investigation other than
23 this one?

24 A. Yes, they have.

25 Q. Approximately how many other

1 [REDACTED]
2 engagements do you have with the SEC with
3 respect to litigation other than this
4 litigation?

5 A. I have two other engagements that --
6 that I consider litigation engagements, in
7 addition to this one.

8 MR. FIGEL: Mr. Moye, just so we can
9 avoid a spat, are those engagements
10 confidential?

11 MR. MOYE: So [REDACTED] obviously is
12 not.

13 I don't believe the others are public.

14 A. Nothing has been -- I haven't filed
15 any reports in the other one.

16 MR. MOYE: So until the filing of the
17 report, we would consider those
18 confidential.

19 Q. Do you have any clients or are you
20 doing work for any entity other than the
21 Securities and Exchange Commission, currently?

22 A. I -- I support other experts at
23 [REDACTED] in helping them to prepare reports and
24 conduct analyses for a variety of clients.

25 As -- as an expert witness, I'm not

1 [REDACTED]
2 currently doing work for any entity besides the
3 SEC.

4 Q. Have you ever done any work with you
5 as the expert for any entity while employed at
6 [REDACTED] other than the SEC?

7 A. Serving as the expert, no.

8 Q. So the only person or entity that's
9 retained you as an expert since you've joined
10 [REDACTED] is the SEC. Correct?

11 A. That is correct.

12 Q. What is the area of expertise that you
13 claim you have that you believe allows you to
14 offer expert testimony in this case?

15 A. Well, I have a Ph.D. in economics,
16 with focus on [REDACTED].

17 I've been a practicing economist for
18 20-some years, focused on -- primarily on
19 empirical economic research. I've conducted
20 event studies as part of my employment. I've
21 testified on event studies on one occasion.

22 And I believe I have adequate
23 credentials to offer opinions in this matter.

24 Q. Okay. Other than in the field of
25 economics and econometrics, do you claim any

1 [REDACTED]
2 expertise that would allow you to express an
3 opinion, an expert opinion, in this case?

4 A. I --

5 MR. MOYE: I'm sorry. Can I clarify
6 that question? Did you mention statistics
7 or just econometrics?

8 In your question.

9 MR. FIGEL: My question -- wait a
10 second.

11 -- was limited to the field of
12 economics and econometrics.

13 MR. MOYE: Okay. I'm going to object
14 to the extent that you mischaracterize his
15 prior testimony.

16 A. Well, as I define the words "economics
17 and econometrics," which would include
18 statistics, my opinions -- I would characterize
19 my opinions as being offered within that broad
20 umbrella. I'm not offering, for example, legal
21 opinions, and I -- I'm not a software engineer.

22 Q. Do you claim to be an expert in
23 statistics?

24 A. I am an expert in econometrics, which
25 is the application of statistics to economic

1 [REDACTED]
2 data and economic problems.

3 Q. You don't consider statistics to be a
4 separate discipline for which one could or could
5 not be qualified from being an economist or an
6 econometrician?

7 MR. MOYE: Objection. Argumentative.

8 A. I recognize that one can get a degree
9 purely in statistics.

10 Q. And you don't have one, correct?

11 A. I -- I do not have a degree purely in
12 statistics.

13 Q. And you never practiced as a
14 statistician, have you?

15 A. Statistics is integral to the work
16 that I've done professionally for 20 years.
17 I've described myself as an economist. I do not
18 describe myself as a statistician, but
19 statistics is, as I said, an integral part of
20 the work I've been doing professionally for
21 20 years.

22 Q. So the answer to my question is no,
23 you've never practiced as a statistician,
24 correct?

25 A. The only way I can address that

1 [REDACTED]
2 question is to say I haven't personally
3 described myself as a statistician.

4 However, in my professional work, I
5 routinely use statistics as part of my work. So
6 in the sense that my practical work requires and
7 utilizes statistics, the answer's yes.

8 Q. Have you ever held an academic
9 position?

10 A. No, I have not.

11 Q. Now, you said you've only testified
12 once in any proceeding in -- in litigation
13 anywhere during your lifetime. Correct?

14 A. I believe that's true.

15 Q. And have you ever been found qualified
16 by a court to offer expert opinion testimony?

17 MR. MOYE: Objection to the extent
18 you're asking him for a legal opinion.

19 A. All I can say is that my testimony,
20 or -- no part of my testimony has ever been
21 disqualified.

22 Q. I'm asking a different question. I'm
23 asking the question whether a court has ever
24 found you competent and qualified to offer
25 expert opinion testimony.

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[REDACTED]

MR. MOYE: It's the same objection.

A. I -- I don't know how to answer the question. If -- if you're asking have I ever received a letter from the court saying, Congratulations, you're qualified, no, I haven't.

I have -- I've submitted written testimony, I've submitted deposition testimony. The matter is still pending and outstanding. That's all I can say.

Q. Has Judge Torres in the [REDACTED] -- Judge Torres is the presiding judge in the [REDACTED] case, correct?

A. I'll take your word for it. I'm not very good with names.

Q. To your knowledge, have you been qualified to offer expert opinion testimony in the [REDACTED] case?

MR. MOYE: Same objection as before.

A. I have not -- all I can say is I have not been disqualified. My -- my testimony is still pending. The matter is still pending. The trial has not yet been scheduled. As far as I know, I will be testifying at trial.

1 [REDACTED]
2 Q. So to your knowledge, if you're found
3 to be competent and qualified to offer an
4 opinion in this case, it will be the first time,
5 to your knowledge, that you've ever been
6 qualified as an expert, correct?

7 MR. MOYE: Objection. Argumentative
8 and vague.

9 A. I -- I apologize, Mr. Figel. I mean,
10 I am -- I've only been doing consulting for a
11 couple of years. If -- if there is some
12 affirmative step in which somebody says, You're
13 qualified, that affirmative step has not yet
14 happened.

15 Based on the schedule, it's more
16 likely to happen first in the [REDACTED] matter,
17 simply because that's so much further along than
18 in this matter.

19 Q. And isn't it true that your testimony
20 in the [REDACTED] matter is subject to a
21 disqualification motion?

22 A. Yes. They've filed motions against
23 me, and I believe -- I think we filed motions
24 against them, and those motions are still
25 pending.

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Q. So it hasn't been decided whether
you're qualified to give opinion testimony in
the ██████████ case, correct?

MR. MOYE: Objection to the extent
you're asking for a specific legal opinion.

A. To the best of my knowledge, the judge
has not ruled on any of those motions.

Q. What academic background, if any, do
you have about the cryptocurrency markets?

A. Cryptocurrencies were not a subject of
my formal academic training. I would say they
didn't exist yet.

Q. So the answer is none?

A. I would say that's fair.

Q. And you said you've never held an
academic position, correct?

A. Correct. Beyond maybe a teaching
assistantship in college, but not -- not a
professorship.

Q. So you've never taught a course about
the digital asset market, correct?

A. Correct.

Q. Have you ever published a paper that
addressed digital assets or cryptocurrency in

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[REDACTED]

any way?

A. I don't believe so, no.

Q. Have you ever given a public talk that discussed digital assets or cryptocurrency in any way?

A. No, I have not.

Q. Other than in this case, have you ever conducted an event study that related to the cryptocurrency market?

A. No.

Q. Other than in this case, have you ever conducted an event study that applied to digital assets in any respect?

A. No.

Q. Other than in this case, have you ever done an event study that applied to the pricing of digital assets or cryptocurrencies?

A. No.

Q. Are you claiming to be off-- to be qualified to offer an expert opinion about the functionality or capabilities of various digital assets?

A. If you're asking about what I would describe as the software, software engineering,

1 [REDACTED]
2 exactly how blockchains work, that's not my
3 domain of expertise. My domain of expertise
4 relates to economics, asset pricing and the
5 matters that I'm offering opinions on.

6 Q. Are you claiming to be qualified to
7 offer an expert opinion about the uses of
8 various digital assets?

9 A. Consistent with how an economist might
10 understand how people use assets and invest, I
11 suppose so. If -- if -- again, if you're asking
12 about -- expert opinion on whether the consensus
13 algorithms of XRP, how those compare to bitcoin,
14 then no.

15 Q. What training or prior work have you
16 done that would allow you to express an opinion
17 on how people use digital assets or invest in
18 digital assets?

19 MR. MOYE: I'm going to object to the
20 extent that you're mischaracterizing his
21 prior answer.

22 Go ahead.

23 A. Well, economists study markets. They
24 study market prices. They study transactions in
25 markets.

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To the extent that we're discussing prices of digital tokens and markets around digital tokens, I feel that as an economist, I'm qualified to offer opinions related --

MR. FLUMENBAUM: If you lean back, I can't hear him anymore.

THE WITNESS: Sorry.

MR. FIGEL: Why don't we go off the record for just a second, do an experiment and try and move the mic closer to Dr. ██████████ That might --

THE VIDEOGRAPHER: We're going off the record at 9:49 a.m.

(Discussion off the record.)

THE VIDEOGRAPHER: We're back on the record at 9:54 a.m.

Q. Dr. ██████████ I'm not sure you finished your answer. Do you remember the question?

A. No, I'm sorry, I don't.

MR. FIGEL: Maybe we could ask the court reporter to read back the last question and Mr. ██████████ answer up to the point where he stopped speaking.

(The record was read back.)

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A. -- thereto.

Q. As I understand your testimony, the only study of markets or market prices that you've done that relate to digital assets or cryptocurrency occurred in connection with your engagement in this case. Is that correct?

A. That's correct, yes.

Q. So the entirety of your background as it relates to the digital assets or crypto-- cryptocurrency markets relate to the work you did in connection with your engagement in this case. Correct?

A. Sorry, could you repeat the question?

MR. FIGEL: Would you mind reading back.

(The record was read back.)

MR. MOYE: Objection. Argumentative.

A. I -- I -- I just don't -- I just don't think I can accept -- I don't think that's a fair characterization.

The entirety of my background as a -- both my academic training and my professional work as an economist has equipped me, I believe, to address economic issues in this market and

1 [REDACTED]
2 many other markets.

3 I -- I have not conducted empirical
4 analyses of digital token prices outside of the
5 work I've done in this matter.

6 Q. So is it your testimony that expertise
7 in one market qualifies you to offer expert
8 opinion testimony about another market?

9 MR. MOYE: Objection to the extent
10 that mischaracterizes his answer.

11 A. I don't think that's what I said.
12 Economists study prices and study markets.

13 An economist could discuss stock
14 prices, bond prices, commodity prices, could
15 discuss the price of oil, could discuss the
16 price of bitcoin, has econometric tools to
17 investigate and apply to data from a variety of
18 different markets.

19 That's routine in the ordinary course
20 of being an economist.

21 Q. Let me just see if I can break up your
22 answer, Dr. [REDACTED] We agree you have never
23 studied digital assets or the cryptocurrency
24 market other than in connection with your
25 engagement in this case. Correct?

1 [REDACTED]
2 A. I'll repeat my prior testimony. I
3 have never conducted an empirical analysis of
4 digital token prices outside of the work I've
5 done in this case.

6 Q. So your testimony is that whatever
7 work you've done in other markets and in other
8 cases qualifies you to express an expert opinion
9 about the use of digital assets, trading in
10 digital assets, pricing in digital assets in the
11 cryptocurrency and in digital asset markets,
12 correct?

13 MR. MOYE: Objection. Asked and
14 answered. Objection to the extent you're
15 mischaracterizing his prior testimony
16 instead of asking a new question. And
17 argumentative.

18 MR. FIGEL: Mr. Moye, we've had a very
19 collegial relationship; but I think the
20 standing rule is you get to say, Objection
21 to form. Speaking objections are really
22 not permitted, and I view that as coaching
23 the witness.

24 So if we could have an agreement, in
25 the future you'll just say, "Objection,"

1 [REDACTED]
2 I'll either reformat my question or I'll
3 ask him to answer.

4 MR. MOYE: I'm sorry, Reid. I'm not
5 trying to be difficult. I don't believe
6 that's been our prior stipulation, and I
7 certainly don't want to coach the witness.
8 But I don't know how you can correct a
9 question if I don't give you some
10 information about what I think the problem
11 with the form is.

12 MR. FIGEL: If I have a question about
13 your problem with the form of my question,
14 I'll ask you; but, otherwise, I would
15 prefer if you could just say, "Objection."

16 MR. MOYE: No. I understand that.
17 But if there's an issue some day about the
18 transcript and whether it's acceptable and
19 I've only objected to form because of your
20 instruction, I feel like you would have cut
21 me off from explaining in the moment what I
22 thought was wrong with the answer.

23 I certainly don't want to belabor the
24 objection -- the record with things that I
25 don't need to say.

1 [REDACTED]
2 MR. FIGEL: My request would be that
3 if you have an objection to form, you just
4 say, "Objection," and not have a speaking
5 objection, which I view as an effort to
6 coach the witness.

7 MR. MOYE: Well, I'll consider your
8 request, and I'll try to be helpful. But I
9 cannot agree that I -- that I will not give
10 a proper form objection. And
11 "argumentative" is proper form objection,
12 in my experience.

13 Q. Mr. [REDACTED] -- Dr. [REDACTED] did you
14 understand my question?

15 A. Could we repeat the question, please.

16 MR. FIGEL: I can read it back.

17 Q. So your testimony is that whatever
18 work you've done in other markets and in other
19 cases qualifies you to express an expert opinion
20 about the use of digital assets, trading in
21 digital assets, pricing in digital assets in the
22 cryptocurrency and digital asset markets,
23 correct?

24 A. I believe I'm qualified to offer the
25 opinions that I've offered in this matter. I've

1 [REDACTED]
2 conducted numerous event studies in different
3 markets, on different type of assets. There
4 is -- I can apply that same methodology and
5 technique and analytical background to this
6 market.

7 Q. In connection with any of the opinions
8 expressed in Exhibits 1 or Exhibit 2, did you
9 make any assumptions about any connection
10 between XRP and Ripple?

11 A. That's an interesting question.

12 Q. Thank you.

13 A. The -- the way I would answer that
14 question is, the experimental analytical design
15 of primarily my -- my opening report, the -- now
16 I'm going to sound like an economist. But the
17 null hypothesis that's being tested is that
18 there is no connection between Ripple Labs and
19 XRP markets. That's the hypothesis to be
20 tested. And I go about testing that hypothesis.

21 So from a statistical point of view,
22 the assumption is that Ripple Labs and XRP
23 markets are independent of each other.

24 Q. My question is, as you applied your
25 judgment and your background to the opinions you

1 [REDACTED]
2 reached in your report, did you make any
3 assumptions about the relationship between
4 Ripple and XRP?

5 A. I can't think of any particular
6 assumption I made. If -- at least as I'm
7 thinking about that question. For example, I
8 did not assume that Ripple could do things that
9 would move XRP prices.

10 I did not assume that that was true.

11 Q. We'll come back to that.

12 Let me direct your attention now to
13 paragraph 24 of your report.

14 Are you with me?

15 A. My -- paragraph 24 of my opening
16 report?

17 Q. Yes.

18 A. Yes.

19 Q. And you write, Ripple has sold more
20 than 1.4 billion worth of XRP tokens through
21 various channels.

22 A. Yes. That's what's written here.

23 Q. Was that an assumption you made about
24 the relationship between Ripple and XRP?

25 A. I wouldn't characterize that as an

1 [REDACTED]
2 assumption about the relationship. I -- that's
3 a summary of data that we took from certain
4 Ripple reports.

5 Q. And let me direct your attention now
6 to Figure 6 on page 13.

7 You with me?

8 A. Yes.

9 Q. This reflects data that you included
10 in your report that set out what you believe to
11 be the total amount of Ripple sales of XRP by
12 quarter. Is that correct?

13 A. This summarizes the sales of XRP as
14 reported in Ripple's XRP market reports.

15 Q. And did you prepare this?

16 A. It was prepared at my direction.

17 Q. When you say it was prepared at your
18 direction, what do you mean?

19 A. I had a team working with me at
20 Brattle, and I directed them to prepare certain
21 exhibits or conduct some analysis. And this was
22 an -- this was an exhibit that I asked them to
23 prepare.

24 Q. And when you say you have a team, how
25 large is your team?

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[REDACTED]

A. I don't know precisely. I would say at any one time, on the order of four, five, or six people, maybe sometimes more, maybe sometimes less.

Q. And did you review Figure 6 for accuracy before you included it in your report?

A. I did not personally audit the numbers in the exhibit. I asked that this exhibit, as all other exhibits in this report, go through standard practices of audit and confirmation.

Q. Did you write your report?

A. I'm certainly responsible for my report. I wrote -- some sections may have been initially drafted by other parties. But in all cases, I reviewed and edited and assumed responsibility for the report in its entirety.

Q. Which parties drafted portions of your report, other than you?

A. We're going back in time. But -- well, for example, this -- I -- a principal at Brattle who was working with me named [REDACTED] -- that's [REDACTED] -- was working with me and may have prepared the first draft of some portions or -- some portions of the report.

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[REDACTED]

Q. Anyone else other than people at
Brattle?

A. No.

Q. Let me direct your attention to
paragraph 25.

Your report states, with a typo, As
show in Figure 5, Ripple reported that it raised
approximately 1.4 billion from sales of XRP,
through the fourth quarter of 2020.

Do you see that?

A. I do see that.

Q. What do you mean by "raised" in that
sentence?

A. I mean sold from its inventory of XRP
tokens into the market and received proceeds of
approximately 1.4 billion.

Q. When you say "proceeds," what do you
mean?

A. They -- they sold or perhaps, through
market makers, directed to be sold tokens in
exchange for U.S. dollars, and the amount of
U.S. dollars was approximately 1.4 billion.

Q. And you observe in paragraph 26 that
Ripple reported its sales of XRP on its

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financial statements in two categories.

Correct? Programmatic sales and OTC sales?

A. I see that, yes.

Q. And in paragraph 26(a), you talk about
programmatic sales of XRP on digital asset
trading platforms?

Correct?

A. I see that written there, yes.

Q. So those are cash sales?

A. My understanding is that the tokens
were sold for cash.

Q. And in paragraph 26(b), you talk about
OTC sales were negotiated, block sales of XRP,
to large purchasers, including wealthy
individuals, hedge funds, other investment
firms, and financial institutions. Correct?

A. Yes, I see that.

Q. And those were also cash sales?

A. Well, I -- depending on what you mean
by "cash sales," I believe they were sold in
exchange for U.S. dollars. Whether that was --
I doubt very much it was delivered in slips of
green paper to the door. But I -- my
understanding is they were sold for U.S.

1 [REDACTED]
2 dollars.

3 Q. And as you state in paragraph 27,
4 referring to Figure 6, your opinion is that
5 these two categories, approximately 745 million
6 in programmatic sales and approximately
7 698 million in OTC sales, which total about
8 1.5 billion, are the two components of the
9 1.4 billion in sales of XRP that you identified
10 in your report? Is that correct?

11 A. Yes, that's correct.

12 Q. Why did you include Ripple's sales or
13 alleged sales of XRP in your report?

14 A. This section is a background section
15 on Ripple Labs, its -- its businesses, its
16 products and some data on its finances. This is
17 simply intended as a -- as a background section
18 to provide some context and information.

19 Q. In what respects do you think that
20 this background is relevant to the opinions you
21 express in Exhibits 1 and 2?

22 A. I -- it's included to be helpful to
23 the reader to provide some context to know what
24 Ripple Labs is, the products that it engages in,
25 which, of course, I do discuss later,

1 [REDACTED]
2 analytically.

3 I -- there's nothing -- there --
4 there's nothing in this section which was
5 intended to be here which I had any reason to
6 believe was in any way controversial. It's a
7 reporting of data from Ripple's own reports.

8 Q. And did you rely on the dollar value
9 of these sales in connection with any of the
10 econometric models that you performed that led
11 to the opinions you express in Exhibits 1 and 2?

12 A. No. The econometric models and
13 econometric analysis that I conduct does not
14 incorporate information of Ripple's sales of
15 XRP.

16 Q. So what's the relevance, in your mind,
17 to the observations that you make about Ripple's
18 sales to the opinions you express?

19 A. Again, I can only repeat my prior
20 testimony. This section was meant to be a brief
21 background section on Ripple Labs, its
22 businesses, some financial information.

23 I consider this a routine type of
24 section, when analyzing a company, to simply
25 provide some basic information, hardly

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[REDACTED]
exhaustive, of what that company does and some
information about its finances.

I -- that was -- that was the
intention of this section.

Q. Well, in your mind, aren't
transactions over an exchange or through the OTC
market the transactions that -- the source data
that you rely on for your opinion? In other
words, you're -- you're -- withdrawn.

You -- you -- one of the variables
that you look at is the price impact of XRP.
Correct?

A. Of the variables -- I -- I --

Q. The dependent variable in your
study --

A. The dependent variable are -- I'm
sorry. Please continue.

Q. The dependent variable in your study
is the price of XRP. Correct?

A. Strictly speaking, the change in the
log of the price of XRP. But, yes.

Q. And so transactions, either
programmatically sale transactions or OTC
transactions are relevant to the price impact

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that you purport to measure, correct?

A. To the extent that they -- these transactions moved the price, that would be reflected in the price data that I use.

To the extent that Bob selling XRP to Alice impacts the price, that price is reflected in the data that I use.

Q. And your understanding is, is that the 1.4 billion of sales that you identify in Exhibit 6 are the transactions in which Ripple sold XRP that would be the part of the data that you relied on in your modeling and reports, correct?

A. I -- I'm sorry, could you repeat the question?

Q. I'll withdraw it.
Did you review any of the contracts by which Ripple sold or transferred XRP to any third party?

A. No, I have not reviewed any such contracts.

Q. Why not?

A. It wasn't pertinent to the opinions that I was offering in this matter.

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Q. You're not a certified public accountant, are you?

A. No, I am not.

Q. Are you claiming to be an expert in financial accounting?

A. I'm familiar with financial accounting. I've used financial accounting in my professional work for many years. I'm not a certified public accountant, and I don't believe I'm offering any accounting opinions in this matter.

Q. If you'd listen to my question, Dr. [REDACTED] Do you consider yourself to be an expert in financial accounting?

A. I can -- I can only restate my answer. I'm not a certified public accountant. As a professional practicing economist, I utilize financial accounting, and I believe I understand the basic principles. I'm not offering any accounting opinions in this matter.

MR. FIGEL: Can we get Tab 3, please.

Q. I show you what's been marked as Exhibit 3. And I will represent to you that this is a copy of the consolidated financial

1 [REDACTED]
2 statements of Ripple Labs, Incorporated, for the
3 year ending December 31, 2019.

4 (Copy of consolidated financial
5 statements of Ripple Labs, Incorporated,
6 for year ending December 31, 2019, was
7 marked Exhibit 3 for identification, as of
8 this date.)

9 A. Okay.

10 Q. Have you seen this document before,
11 Dr. [REDACTED]

12 A. It looks familiar.

13 Q. It's not listed as one of the
14 documents that you considered, in the appendix
15 to your report. Do you recall reviewing this in
16 connection with the preparation of your report?

17 A. I recall reviewing some financial
18 data. If this was not among it, I -- I don't
19 have the list memorized.

20 Q. Well, if you had reviewed it, would
21 you have included it on the list of items
22 considered?

23 A. Well, I believe that the list is items
24 relied upon, not items considered.

25 Q. Why don't we go to Exhibit 1, if you

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would.

MR. MOYE: Appendix B?

MR. FIGEL: Appendix B, yes, thank
you.

Q. So -- I see what you're saying,
Dr. ██████████

So your Appendix B is only the
documents you relied on. Is that correct?

A. That's my understanding of what
Appendix B is meant to reflect.

Q. And so it doesn't reflect all the
documents you considered in connection with the
preparation of your report, correct?

A. Correct.

Q. So there are documents that you
considered that are not included on Exhibit B;
is that right?

A. Exhibit B is not intended to be an
exhaustive list of every document that I may
have looked at, no.

Q. That's not my question.
My question was, there are documents
that you considered in the preparation of your
report that are not included on Exhibit B; is

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[REDACTED]

that correct?

A. There -- there are documents that I reviewed that may not be listed in Appendix B if I didn't rely on them to form the opinions in this report.

Q. Do you recall any documents that you considered but didn't rely on in connection with the preparation of your report?

MR. MOYE: Initial report?

MR. FIGEL: Initial report, yes.

Thank you.

A. Well, I remember reading a -- a Wells Submission from Ripple Labs. It's a document that I looked at but I ultimately didn't rely upon in any way to form my opinions.

Again, I think that I've looked at some financial statement data, maybe just briefly, but didn't consider myself relying on it to form any of the opinions in my report.

That's what comes to mind sitting here.

Q. And you think you may have considered Ripple's 2019 financial statement?

A. I -- I seem to recall looking at

1 [REDACTED]
2 documents like this. Whether this was
3 particularly one that I ever looked at, I -- I
4 simply can't say.

5 Q. Could you take a look at page 3 of
6 Exhibit 3, and it bears the Bates number
7 RPLI_SEC 0301117.

8 Can you tell me what --

9 A. I'm sorry. So it's -- is that page 1
10 that's page 2 and that's page 3?

11 MR. MOYE: No, at the bottom.

12 THE WITNESS: Oh, page 3 on the bottom
13 of the page.

14 Q. Yes. It's easier if you go by Bates
15 numbers. The one ending in 117.

16 Are you with me?

17 A. Yes.

18 Q. Can you tell me what information's
19 reflected on this page.

20 A. Well, it appears to be some statements
21 of operations for the years ending December 31,
22 2019, 2018. Some information on revenues,
23 costs, with some detail provided.

24 Q. Let me direct your attention to the
25 two line items under "Revenues."

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[REDACTED]

Do you see that?

A. I see "Revenues," yes.

Q. And do you see that under "Revenues" there's XRP transactions and nonmonetary XRP transactions?

A. I see that.

Q. Can you explain the difference between XRP transactions and nonmonetary XRP transactions?

MR. MOYE: Objection. Foundation.

A. Sitting here right now, I'm not exactly sure what they mean by XRP transactions and nonmonetary transactions.

Q. In your opinion, do they both reflect Ripple's sales of XRP?

A. At -- at the moment, I -- I can't say. This is 2019 and 2018.

Let me try to do a little quick math in my head, which is always dangerous.

Q. I have a calculator if you'd like one.

A. Well, I -- I -- let's see. All right, 2019.

251. Let's do it this way.

22330.

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718.

3

I -- well, maybe with the calculator.

4

I -- I don't -- I don't know if these

5

two numbers sum to be the programmatic sales

6

that are reported in my report.

7

Q. Do you know what a Hewlett-Packard 12C

8

is?

9

A. I think so. If you would like me to

10

use it.

11

Q. If you would like to. I just don't

12

want you to restrict your answer because you

13

don't have a calculator. You said you needed

14

one.

15

A. Okay. This is old school.

16

All right. So what are we doing?

17

Okay. How do you work your

18

calculator?

19

Let me use -- well, I don't have my

20

phone.

21

Q. Yeah. Why don't we move on. Yeah,

22

let's do that.

23

A. So you're asking if -- I suppose

24

you're asking if these numbers correspond to

25

what's in my report. I don't know offhand. If

1 [REDACTED]
2 that was your question.

3 Q. It was. Let's -- let me direct your
4 attention now to page 6 of Exhibit 3.

5 First of all, can you tell me what a
6 consolidated statement of cash flows is in a
7 financial statement?

8 A. Well, it's a statement that summarizes
9 cash flows, generally from operating activities
10 of a company. These would be revenues collected
11 and costs of operation.

12 Q. What do "cash flows" mean?

13 A. Well, it can to be on an accrued basis
14 or a collected basis. But these are dollars in
15 and dollars out in the operation of the
16 business.

17 Q. By "dollars," you mean -- I don't mean
18 greenbacks --

19 A. I don't mean green slips of paper,
20 but --

21 Q. Let's not talk over each other.

22 Give me just one second, Dr. [REDACTED] I
23 was about to ask you a question.

24 And by "dollars," you don't mean green
25 slips of paper. You mean cash transactions that

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are recorded in bank and accounting ledgers,
correct?

A. Correct. I certainly don't mean green
slips of paper handing back and forth.

Q. All right. Now, let me direct your
attention to the first line under cash flows
from the operating activities.

Do you see that?

A. Uh-huh.

Q. And do you see the net income line?

A. Yes.

Q. And do you recognize that as, the
[REDACTED], approximately, as the net income
amount on page 3?

A. Yes. They're the same number.

Q. Okay. And if you go down the next --
the first line under net income is adjustments
to reconcile net income to net cash providing
by -- provided by operating activities.

Do you see that?

A. Uh-huh.

Q. What's your understanding of what that
adjustment refers to?

A. Well, generally, you have income

1 [REDACTED]
2 statements and cash flow statements, balance
3 sheet statements. This might be an adjustment
4 to reconcile an income statement to a cash
5 statement.

6 Q. What's the difference between income
7 and cash in the context of this item?

8 A. Well, income statements, you have --
9 income statements are -- reflect the operation
10 of the business, as moneys come in and go out,
11 very often on an accrued basis.

12 Cash statements represent an
13 accounting of final cash balances at the end of
14 the fiscal year. Sometimes those two things may
15 not line up because you might be -- on your
16 income statement, you might be reflecting
17 moneys, for instance, that have been billed but
18 not yet received or costs that have been charged
19 but not yet paid. And so you may have to do a
20 reconciliation to bring them into balance.

21 Q. Basically an adjustment from noncash
22 to cash items; is that correct?

23 A. Correct.

24 Q. And you'll see -- on the first line
25 under that adjustment, you'll see realized and

1 [REDACTED]
2 unrealized gains on XRP derivatives.

3 Do you see that?

4 A. I do.

5 Q. And you see that's a negative

6 [REDACTED] number?

7 A. Yes. It appears to be.

8 Q. And what's your understanding of what
9 the net-income-to-cash adjustment of [REDACTED]
10 for realized and unrealized gains on XRP
11 derivatives relates to?

12 MR. MOYE: Objection. Foundation.

13 A. Well, I -- I mean, I haven't reviewed
14 these statements in anywhere the sort of detail
15 that we're doing here today.

16 Presumably, Ripple Labs had some
17 derivative position on XRP; and perhaps on a
18 mark-to-market basis, there were gains on losses
19 to those positions. But in -- I have spent
20 essentially -- I spent very little time with
21 these documents. I just don't want to speculate
22 out of turn.

23 Q. Does it cause you to question the
24 statements in your opening report that Ripple
25 had 1.4 billion of cash sales during the

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timeframe reflected in your Figure 6?

A. No. My Figure 6, I think, is based --
is simply a restatement of their own market
reports. I'm simply tabulating data from the
XRP market reports.

Q. Let me direct your attention now to
page 11 of Exhibit 3.

A. Uh-huh.

Q. Are you familiar with notes to
financial statements?

A. Generally, yes.

Q. Fair to say that's where an issuer, a
company describes some of the line items on
their financial statements?

A. Correct.

Q. Before you signed your opening report,
did you read the footnote in which Ripple
described the difference between XRP
transactions, nonmonetary XRP transactions?

Do you see that?

A. I see this note. I had not read this
note prior to signing my opening report.

Q. Could you read the sentence under XRP
transactions into the record, please?

1

2 A. XRP transactions revenue consists of
3 sales of XRP for fixed monetary consideration
4 and is recognized upon delivery of XRP to the
5 customer.

6 Q. What's your understanding of that
7 explanation in the note under XRP transactions?

8 A. Well, I take it to mean that this --
9 this refers to proceeds collected upon the
10 delivery of XRP to some customer in exchange for
11 money.

12 Q. And can you read for me the first
13 sentence under nonmonetary XRP transactions?

14 A. Nonmonetary XRP transactions revenue
15 consists of transactions where the company
16 delivers XRP to customers for consideration
17 other than cash or other monetary consideration
18 and is recognized upon delivery of XRP.

19 Q. What's your understanding of that
20 sentence?

21 A. I believe it's describing situations
22 where Ripple delivers XRP tokens in exchange for
23 something other than money.

24 Q. And do reading these two explanations
25 of the footnote cause you to reconsider the

1 [REDACTED]
2 statements you made about Ripple's sales of
3 1.4 billion between the first quarter of 2017
4 and the fourth quarter of 2020?

5 A. By themselves, no. What I report in
6 Figure 6, the numbers there are taken simply
7 from XRP markets reports.

8 Q. And you think those are sales of XRP
9 for cash? Correct?

10 A. Combination of programmatic sales and
11 over-the-counter sales expressed in a certain
12 value.

13 Q. And when we talk about cash, I'm using
14 the definition that Ripple used in its notes,
15 fix monetary consideration.

16 So just to be clear, you are not
17 modifying, based on the information I showed
18 you, the statements you made that Ripple sold
19 1.4 -- 42.45 billion in XRP for a fixed monetary
20 consideration. Correct?

21 MR. MOYE: Objection. Asked and
22 answered.

23 A. The value of the XRP that Ripple sold,
24 as reported in their markets reports, represents
25 a certain amount -- a certain value that's put

1 [REDACTED]
2 on it. If we're now parsing whether that was --
3 whether they received a hundred dollars or
4 whether they received services that they valued
5 at a hundred dollars, that's not a distinction
6 that -- that was important to me in creating
7 Figure 6, which, again, is just a tabulation of
8 data from Ripple's XRP market reports.

9 Q. So even understanding that some not --
10 withdrawn.

11 Even understanding the large
12 percentage of the sales that you have in
13 Figure 6 were sales for something other than
14 fixed monetary consideration, that doesn't
15 change the relevance of the information in
16 Figure 6 to your study. Correct?

17 MR. MOYE: Same objection.

18 A. Correct. Figure 6 is simply a
19 tabulation of data from market reports
20 indicating the value of XRP tokens that Ripple
21 released. I -- with this information and --
22 perhaps jogging my memory, it might be that
23 sometimes they collected a hundred dollars in
24 money, and sometimes they collected services
25 worth a hundred dollars. I'm not sure that

1 [REDACTED]
2 that's a -- necessarily an important
3 distinction.

4 But in any event, this data is not
5 part of the econometric analysis that I
6 conducted. This is provided simply for
7 informational and background purposes.

8 Q. Now, you testified earlier, I believe,
9 that you never conducted, other than in this
10 case, an event study involving digital assets.

11 Correct?

12 A. Correct.

13 Q. Right. And apart from your work in
14 this case, do you know of any event study
15 involving a digital asset that's been used to
16 support the argument that a digital asset is a
17 security?

18 A. To support -- well, the -- generally,
19 that sounds like a -- a legal issue, whether
20 something is a security or not.

21 I'm personally not aware of other
22 legal proceedings, but I -- I wouldn't
23 necessarily be aware of other legal proceedings.

24 Q. Well, do you know of anyone else,
25 other than you, that's conducted an event study

1 [REDACTED]
2 involving a digital asset for the purpose of
3 demonstrating that the digital asset was a
4 security?

5 A. Well, I don't even know that I've done
6 what you just said. I conducted an event study
7 for the purpose of determining whether there is
8 a connection between Ripple Labs and the XRP
9 market, and I found that there is. That's
10 the -- the -- that's my analysis and that's my
11 opinion.

12 Q. So --

13 A. How that relates to a legal question
14 is not for me to say.

15 Q. So as far as you know, the event study
16 that you conducted is not relevant to the
17 question of whether XRP is a security. Correct?

18 MR. MOYE: Objection. Argumentative.

19 A. That's certainly not what I said.

20 Q. Well, let me ask you the question. In
21 your mind, is the event study that you conducted
22 as reflected in your report, in Exhibit 1,
23 relevant to the question of whether XRP is a
24 security?

25 A. I -- I -- you seem to be asking me for

1 [REDACTED]
2 my legal opinion, which I'm fully -- which I'm
3 not qualified to -- to offer. I'm not offering
4 any legal opinions.

5 I was engaged by the SEC to conduct an
6 analysis, and I conducted the analysis to the
7 very best of my ability.

8 Q. Dr. [REDACTED] I'm asking you for your
9 opinion, as an economist, as to whether you
10 believe the event study that you prepared is
11 relevant to the question of whether XRP is a
12 security.

13 A. As an economist opining on a legal
14 question? I'm not sure I -- I -- I understand
15 your question.

16 Q. So I take it you don't have an
17 opinion?

18 A. The question of whether Ripple Labs
19 impacted the XRP market is -- as far as I
20 understand, was in dispute. I was asked to
21 conduct an analysis, and I conducted an analysis
22 and prepared my opinions and wrote a report
23 about them.

24 Q. Let's go back to precedents of using
25 an event study for the purpose of supporting an

1 [REDACTED]
2 argument that a digital asset is a security.

3 Are you with me? I'm ask-- the
4 question I'm asking is, are you aware of anyone
5 else who's ever done an event study for the
6 purpose of demonstrating that a digital asset is
7 a security.

8 MR. MOYE: Objection. Asked and
9 answered.

10 A. Again, as I've -- as I've tried to
11 explain, the question of whether it is or is not
12 a security is a legal question.

13 An event study is not going to answer
14 a legal question. It may provide information
15 which might be useful to the finder of fact
16 who's ultimately going to settle the legal
17 question. But an event study is not a legal
18 test.

19 Q. Are you aware of any academic
20 literature that supports the use of an event
21 study to demonstrate that a digital asset is a
22 security?

23 A. No, I'm not aware of any academic
24 literature on that point. That's again, a --
25 generally a legal question, and I would be --

1 [REDACTED]
2 it's a -- it's ultimately a legal question.

3 Q. So I may be able to save everybody in
4 the room a little bit of time then, Dr. [REDACTED]
5 So fair to say that all of the academic
6 publications that you cite in your report, in
7 your mind, do not support the use of an event
8 study to support an argument that a digital
9 asset is a security. Correct?

10 MR. MOYE: Objection. Argumentative.

11 A. With respect to that -- I -- I need to
12 hear that back. That was very convoluted.

13 Q. Let me -- give me just a second.

14 You agree that none of the academic
15 literature cited in your report, either report,
16 endorses the use of an event study to support an
17 argument that a digital asset is a security.
18 Correct?

19 A. The academic literature applies the
20 event study methodology to the digital token
21 markets, including the XRP market.

22 Those event studies resolved around
23 the question of whether a set of events was
24 associated with an increase in -- in digital
25 token -- and sometimes decrease, in digital

1 [REDACTED]
2 token prices.

3 I applied that well-accepted,
4 peer-reviewed methodology to the matter at hand,
5 as I was asked to investigate a question by the
6 SEC.

7 MR. FIGEL: We've been going about an
8 hour and 20 minutes. I'm happy to keep
9 going, but if you'd like to take a short
10 break, I'm happy to do that, too.

11 MR. MOYE: Why don't we take a short
12 break.

13 MR. FIGEL: Yeah.

14 THE VIDEOGRAPHER: We're going off the
15 record at 10:40 a.m.

16 (A recess was taken from 10:40 to
17 10:59.)

18 THE VIDEOGRAPHER: We're back on the
19 record at 10:59 a.m.

20 Q. Dr. [REDACTED] before we broke, you made an
21 observation about the academic literature that
22 you relied on.

23 Apart from your work in this case, are
24 you aware of any event study that's been used to
25 evaluate whether news events published by a

1 [REDACTED]
2 company had an impact on the market price of a
3 digital asset?

4 A. Whether -- whether news events -- I'm
5 sorry, just one more time?

6 Q. Sure.

7 Apart from your work in this case, are
8 you aware of any event study that's been used to
9 evaluate whether news events published by a
10 company had an impact on the market price of a
11 digital asset?

12 A. Yes.

13 Q. What study is that?

14 A. The -- the Joo, et al. study. I
15 believe -- and maybe it's the Gerritsen. I
16 might be confusing them.

17 But one of those studies, in its set
18 of events for XRP, included -- perhaps among
19 other things, but I remember that it included
20 the BitLicense being awarded to Ripple.

21 There may be other examples, but that
22 one comes to mind.

23 Q. And you consider the BitLicense being
24 issued to Ripple to be a news event published by
25 a company?

1

2 A. Well, Ripple published -- published
3 that event. Other people may have also, but
4 Ripple certainly announced the event.

5 Q. Well, that would -- that would
6 identify a correlation between the award of a
7 BitLicense and the market -- the impact on
8 market price. Correct?

9 A. Correct.

10 Q. And the Joo study that you refer to
11 didn't identify the source of the publication of
12 the award of the BitLicense, correct?

13 A. It probably wasn't pertinent to them.

14 Q. But you're --

15 A. Sorry, go ahead.

16 Q. My question is, are you aware of an
17 event study that sought to evaluate the impact
18 on the market price of a digital asset from a
19 news event announced by a specific company?

20 A. They may have sourced the news event
21 from Ripple's own announcement. I don't know
22 where they sourced the news event. I don't see
23 what difference it would make.

24 Q. You don't see a difference --

25 A. No.

1

[REDACTED]

2

Q. Let me finish.

3

A. Sorry.

4

Q. Thank.

5

You don't see a difference between --

6

a correlation between the fact of an event and

7

a -- and a market price of a digital asset and

8

an announcement by a company on the digital

9

price of a -- on the market price of a digital

10

asset?

11

A. You're parsing distinctions that I

12

just don't follow.

13

An event that is unannounced and

14

unknown presumably will not have any impact.

15

Therefore, whenever we talk about the impact of

16

an event, we are really invariably talking about

17

the impact of the announcement of the event.

18

And that is -- that's just one that I

19

happen to remember. There may be others, I --

20

but that's just one that happens to come to mind

21

of an event that was announced by Ripple -- may

22

have also been announced by other people -- that

23

was included in an event study in peer-reviewed

24

academic literature on the XRP market.

25

Q. I want to make sure I understand your

1 [REDACTED]
2 answer, Dr. [REDACTED]

3 And let -- bear with me for a second.
4 Let's take the BitLicense event that you
5 identified.

6 A. Uh-huh.

7 Q. As I understand the Joo and -- I
8 believe it's Nishikaw and others study, one of
9 the things they looked at was a correlation
10 between the award of the BitLicense and the
11 market price of digital assets. Correct?

12 A. Just to be clear, I don't remember if
13 it was the Joo study or the Gerritsen study.
14 I -- I -- I might be conflating the two.

15 So I don't know if we want to keep
16 referring to it as the Joo study. May have
17 been.

18 But one of those two studies had a set
19 of events that it considered relevant to XRP,
20 and the BitLicense was among those events.

21 Q. Correct. But in your mind, it doesn't
22 matter, when you're measuring market impact of
23 an event, whether the event is announced by one
24 source or 50 source. Correct?

25 A. Generally -- and -- and with the

1 [REDACTED]
2 caveat that one can -- with any rule, one might
3 be able to think of an exception, but as a
4 general proposition, no, it doesn't matter to me
5 whether it was announced by one or several.

6 Q. Did the events that you used in your
7 event study as reflected in Exhibit 1 make a
8 distinction between whether the event was
9 announced by one source or by multiple sources?

10 A. That is not a distinction that I drew
11 in my analysis. Nor is it a distinction that --
12 no, it was not a distinction that I drew in my
13 analysis.

14 Q. All right. Could we go to Exhibit 1,
15 please. Paragraph 30.

16 A. Yes.

17 Q. Could you read for me the first
18 sentence in paragraph 30.

19 A. In the matter at hand, I understand
20 that the XRP token is not a claim on the assets
21 or earnings of Ripple Labs, and that Ripple Labs
22 maintains that market participants do not view
23 Ripple Labs' efforts as relevant to the XRP
24 market price.

25 Q. Are you aware of an event study that

1 [REDACTED]
2 sought to determine whether news events about a
3 company had an impact on the market price of an
4 asset that did not have a claim on the assets or
5 earnings of the company?

6 A. Yes. I -- the same study that we've
7 been discussing, whether that's Gerritsen or
8 Joo.

9 Q. All right. Other than that study, are
10 you aware of any other event study that sought
11 to determine whether news events about a company
12 had an impact on the market price of an asset
13 that did not have a claim on the assets earnings
14 of the company?

15 A. I don't have the -- the list of events
16 from those studies memorized. There may have
17 been other events of that type. Offhand,
18 sitting higher today, I can't think of another
19 event study in the digital token market that did
20 that, but I haven't done an exhaustive search on
21 that question.

22 Q. Can you take a look at paragraph 46,
23 please.

24 A. Uh-huh.

25 Q. Could you read into the record,

1 [REDACTED]
2 please, the second sentence in paragraph 46.

3 A. The question, therefore, is not
4 whether a particular Ripple action or event is
5 associated with a particular XRP price response,
6 as is the case in many event study disputes, but
7 instead whether Ripple actions or events are
8 collectively associated with significant XRP
9 price reactions.

10 Q. And what are the disputes you're
11 referring to when you use the phrase "many event
12 study disputes"?

13 A. What I had in mind when I wrote that
14 was, other litigation contexts which, in my
15 experience, often focus around a particular
16 event. For example, a corrective disclosure of
17 earnings and the impact that that may or may not
18 have had on the stock price.

19 Q. And you say the question in this case
20 is whether Ripple action or events are
21 collectively associated with significant XRP
22 price reactions.

23 Do you see that?

24 A. Yes.

25 Q. What do you mean by "collectively

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associated"?

A. I'm testing a -- I'm testing whether there is a correlation or association between Ripple Labs and some of its events or actions and XRP prices.

Q. And what do you -- what's the definition of "collective association" or "collectively associated"?

A. I would think of that in the context of a joint test of significance, testing whether a set is jointly significant as opposed to looking at any one event.

Q. And is -- can we call that collective association? Is that a fair description of what you just described?

A. That's what was in my mind when I wrote the words. It's -- a more rigorous statistical discussion would probably speak in terms of joint significance, but I'm happy to use the language that's here.

Q. Is collective association a term of art in econometrics?

A. Not especially, as I just described. What I meant there was the sort of joint

1 [REDACTED]
2 significance. That would be in a more -- in an
3 academic paper, we would probably speak about
4 whether the set of events was jointly
5 significant.

6 I meant the phrase in that spirit.

7 Q. So the record is clear, let's just
8 make sure we have an agreement on the term. Do
9 you want to use "joint significance" or
10 "collective association"?

11 A. I suppose with the formality of these
12 proceedings, maybe we should speak about joint
13 significance.

14 Q. Are you aware of any peer-reviewed
15 articles that assess whether many events,
16 jointly have significance with a significant
17 price impact on a digital asset?

18 A. Yes.

19 Q. Which ones?

20 A. Papers that I've referred to in my
21 report, Gerritsen and Joo. That's -- they both
22 do that. They have a set of events, and they
23 test whether that set of events is jointly --
24 that set of events is jointly significant.

25 Q. Other than the articles that you cite

1 [REDACTED]
2 in your two reports, are you aware of any other
3 academic literature that you rely on to support
4 your claim that there are other event studies
5 that collectively -- that measure whether there
6 are collective events associated with
7 significant market impact on digital assets?

8 A. The -- the event study -- the academic
9 peer-reviewed event studies that I rely on are
10 the ones that I cite in my report and include in
11 my list of documents relied upon.

12 Q. You're not aware of any others?

13 A. Sitting here today, I -- no. Those
14 are the ones that I recall.

15 Q. All right. In this case, you
16 initially identified 514 news events. Is that
17 correct?

18 A. That -- that sounds correct.

19 I'm sure I say that somewhere. But
20 that sounds correct.

21 Sorry. I'm just -- yes, 514 events,
22 from paragraph 49.

23 Q. And you only tested 105 of those
24 events; is that correct?

25 A. No, no, that's not correct.

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Q. Let's go to paragraph 98.

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A. Uh-huh.

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Q. Well, maybe I should give you a chance to explain.

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7

Let me rephrase my question. You only tested events occurring on 105 days. Correct?

8

A. No, that's not correct.

9

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Q. How many event days did you test in your methodology?

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12

A. In total, I don't know the number offhand. But what you're -- if I, maybe some assistance.

13

14

Q. Feel free.

15

16

A. You're missing the other categories that I discuss previously, for instance, office and staff announcements, the noncommercial XRP initiative announcements. That's -- that would need to be added to the 105, to get the total number of days that I ever tested.

17

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Q. Didn't you effectively exclude the office and staff announcements in the noncommercial XRP events --

22

23

24

A. I tested them. Sorry. I don't mean to speak over you. I apologize.

25

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2 Q. And you found no correlation, correct?
3 Or no statistically significant correlation?

4 A. That's correct.

5 Q. So you can't look to those events to
6 support an opinion that actions by Ripple Labs
7 had a statistically significant impact on the
8 market price of XRP. Correct?

9 A. Those events do not -- those events do
10 not provide statistical evidence of an
11 association between Ripple Labs and XRP prices.
12 I agree.

13 And I'm sorry. I'm really not trying
14 to be difficult, but your question was how many
15 I had tested. I just wanted to be clear that I
16 tested more than this final set here.

17 Q. So how many event days did you test in
18 your regression analysis?

19 A. Again, I -- I don't have the -- the
20 total offhand. There -- I -- but 105-plus
21 unique days in -- among the sets of news
22 categories that we've just discussed, which
23 was -- on the -- I mean, 20, another 20, another
24 30. I don't know.

25 There may be some overlap in days. I

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[REDACTED]

don't know.

But 105-plus.

Q. The aspect of the study that you're -- you conducted, that's described in paragraph 98, which is a combination of the categories for which you found statistical significance, was limited to 113 unique relevant events on 105 days. Correct?

A. Almost correct. Section F is based on 113 unique events on 105 days.

What I'm -- just want to make sure we're clear on is you said, categories for which I found significant correlation. I believe that was part of your question.

And this set of 113 events on 105 days includes a category called acquisition and investments, which in isolation, I do not find a statistically significant correlation.

So it's not a combination of subsets, each of which by themselves produced a correlation. Most of them did. One of them in isolation did not. I put them all together, and in Section F studied that superset of 113 events on 105 days.

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Q. And this is the portion of your event study that you primarily rely on to support your observations about whether there is a collective association between actions by Ripple and a market impact on XRP. Correct?

A. Well, I -- I'm not sure about your use of the word "primarily."

It is -- it is a set on which I do a great deal of testing and robustness testing, and it is certainly part of my opinion that there is an association between Ripple Labs and XRP prices.

Q. And that combination, reflects a reduction from the 14 categories that you initially identified as important events, correct?

A. I wouldn't characterize it that way. I did not identify them as important events. Those were news found in -- among Ripple Labs' curated news sources.

So whether I had an opinion that they were important or not is not how that set was formed.

Q. Didn't you select -- withdrawn.

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[REDACTED]

Let's just talk about your methodology
so the record is clear.

A. Sure.

Q. You started off, with respect to your
effort to identify events, by pulling events
that were reported by Ripple on its website and
in other publications of Ripple, sponsored.
Correct?

A. Taking all of them. Yes. Right.

Q. And you assumed that Ripple would not
have put them on there unless Ripple thought
that they were important. Correct?

A. I assumed that Ripple Labs would
presumably have some basis for identifying some
things and not other things, yes.

Q. And that yielded an initial selection
of almost 700 news events, correct?

A. 700 articles, yes.

Q. And you then, with some adjustments,
categorized all of those events into 14
categories. Correct?

A. Yes. That is correct.

Q. And then with respect to the aspect of
your study that's reported or that you describe

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in paragraph 98, you excluded 9 of those 14 categories. Correct?

A. I just want to refresh.

Q. I think that's right, 14 minus 5 is 9, I believe.

A. The analysis in Section F is based on five and, therefore, not based on nine, that's correct.

Q. So for the study that you did in paragraph 98 --

A. Yeah.

Q. -- you excluded nine categories --

A. Yes.

Q. -- correct?

A. That sounds right.

Q. And in those nine categories were approximately 400 Ripple news events, correct?

A. That's -- that sounds correct.

Q. Are you aware of any academic studies that support the exercise of subjective judgment that reduces the number of events studied by more than 80 percent?

A. Of course.

Q. And tell me why -- what you mean by

1 [REDACTED]
2 "of course."

3 A. I mean, I'm tempted to say
4 "obviously."

5 Well, many event studies can be
6 conducted on a single event and, therefore, are
7 not considering dozens or hundreds or maybe
8 thousands of other events.

9 It -- a -- a routine part of the event
10 study methodology is the selection of events.
11 That's how an event study methodology begins, is
12 with a selection of events.

13 Q. Would the results of your test of
14 collective events be different if you tested or
15 included all of the 514 news events in all of
16 the 14 categories that you initially identified?

17 MR. MOYE: Objection. Calls for
18 speculation.

19 A. I -- I don't know the answer. It's
20 not -- it's not pertinent to my opinions what
21 the answer to that question is.

22 I don't believe I ever tested all
23 events because it just wasn't -- it wasn't a
24 relevant or pertinent exercise to undertake.

25 Q. Would you agree with this statement

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that mathematically, a set of events is more likely to be jointly significant than individual events? Correct?

Well, why don't I rephrase that.

A. Yeah, please.

Q. Mathematically, a set of events is more likely to be jointly significant than an individual event. Correct?

A. I -- I apologize. The question just doesn't really make a great deal of sense to me. A single event is a single event. A set of -- a set of events, you can test the joint significance of a set of events.

By definition, you cannot test the joint significance of a single event. So I -- I'm just struggling with the question.

Q. Well, let's make it probabilistic. In what circumstance are you more likely to find a statistically significant correlation, randomly picking one of your 514 news events from Ripple and testing whether that event had a statistically significant market impact, or testing a larger number of Ripple events, to test whether it has a statistically significant

1 [REDACTED]
2 market impact? And by "market impact," I mean
3 on XRP.

4 A. I -- I simply cannot engage with that
5 question. I don't understand it.

6 I'm sorry. I don't understand it.

7 Q. You don't think your odds of finding a
8 statistically significant correlation is greater
9 if you pick 105 news events than if you pick a
10 single one?

11 A. Absolutely not. There's no reason to
12 believe that it is.

13 Q. All right. Let me show you what we'll
14 mark as -- apologies. Where are we?

15 MR. MASTERMAN: 4.

16 MR. FIGEL: Thanks. Tab 4, and that's
17 the "Litigation Services Handbook, The Role
18 of a Financial Expert."

19 (Litigation Services Handbook, The
20 Role of a Financial Expert, was marked
21 Exhibit 4 for identification, as of this
22 date.)

23 Q. Are you familiar with this document,
24 Dr. [REDACTED]

25 A. I don't think so.

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MR. MOYE: Can you clarify whether
you're talking about the entire handbook or
just the section you've got here?

MR. FIGEL: Fair question.

Q. Why don't we start with the caption,
which is "Litigation Services Handbook." Are
you familiar with that publication?

A. I think I've heard of it.

Q. What context?

A. I don't know. Discussions.

Q. Would you agree this is a widely
accepted handbook that discusses the application
of economics and econometrics to litigation?

MR. MOYE: Objection. Foundation.

A. I -- I don't know that I'm in a
position to characterize it that way. It may
be.

Q. You don't know one way or the other?

A. No.

Q. All right. If you could -- the page
number's a little awkward here, but if you go to
the upper left-hand corner, you'll see something
that looks like 19 Bullet Point 2.

A. Uh-huh.

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Q. And there's a section that says a romanette a, "Overview of the Event Study Technique."

Do you see that?

A. Uh-huh.

Q. Can you read the first sentence into the record for us.

A. Event studies of the type used in litigation rely on two well-accepted principles. First, the semi-strong version of the efficient market hypothesis, which states that stock prices in an actively traded security reflect all publicly available information and respond quickly to new information.

Second, the price of an efficiently traded stock is equal to the present value of the discounted future stream, a free cash flow.

Q. Do you agree with the statement in the Litigation Services Handbook that, Event studies used in litigation should be based on a finding of the existence of the semi-strong version of the efficient market hypothesis?

A. As an absolute rule? No, I don't agree.

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[REDACTED]

Q. Why not?

A. I think it depends very much on the context and the question being addressed.

I -- I would not be surprised that in many contexts, that assumption is necessary.

But I don't think that in all contexts that assumption is necessary.

Q. Do you believe that assumption is necessary with respect to an event study that seeks to prove the correlation between press announcements by Ripple Labs and impact on the market price of XRP?

A. Sorry, could you repeat the question?

Q. Do you believe that assumption, i.e., that you need a semi-strong version of the efficient market hypothesis, is necessary to identify, with reliability, the correlation between press announcements by Ripple Labs and any impact on the market price of XRP?

MR. MOYE: Objection. Compound.

A. May I restate the question back just to make sure I understood it?

Q. Well, why don't -- yes, go ahead.

A. You're asking do I believe that the

1 [REDACTED]
2 market must be -- or we must -- we must assume
3 semi-strong efficiency to identify the
4 correlation between set of events and an impact
5 on market prices? Is that the question?

6 Q. No, it's broader than my question. So
7 I'll withdraw my question and try again.

8 Do you believe you need to have
9 evidence of a semi-strong efficient market in
10 order to conduct the event study that you
11 conducted in this case?

12 A. No.

13 Q. Why not?

14 A. Well, again, following the accepted
15 methodology and peer-reviewed literature, we
16 don't need the semi-strong hypothesis to hold to
17 conduct the event study of the type that I did.

18 Q. But you agree that the semi-strong
19 version of the efficient market hypothesis is
20 not present with respect to the market for XRP.
21 Correct?

22 A. Yes. I discussed this at length in my
23 report. The received evidence and the economic
24 literature, consistent with my own analysis, is
25 that the XRP digital token market was likely not

1 [REDACTED]
2 semi-strong efficient during the period of
3 interest.

4 Q. So if the Litigation Services Handbook
5 is correct that you need a semi-strong version
6 of the efficient market hypothesis to do an
7 event study of this nature, then the conclusions
8 of your event study would not be reliable,
9 correct?

10 A. You've -- you've put together a lot of
11 things in that question.

12 The semi-strong efficient hypothesis
13 is necessary to draw certain inferences from an
14 event study.

15 Those are not the inferences that I'm
16 drawing from my event study. They're not the
17 inferences that the Joo article draws from its
18 event study or Gerritsen or any other article.

19 If, if you conduct an event study, and
20 you find that there is no statistically
21 significant reaction in price following an
22 event -- so let's just -- let's just have an
23 example to fix ideas.

24 XYZ Enterprises issues a corrective
25 disclosure on January 1, and the question is,

1 [REDACTED]
2 Well, did that corrective disclosure cause the
3 stock price to drop. Or change.

4 You conduct an event study, and you
5 find no statistical evidence that stock prices
6 moved in the statistically significant way
7 following January 1.

8 Okay?

9 Question is what inference do you draw
10 from that lack of movement. If you want to say,
11 Well, because the price did not move, therefore,
12 the corrective disclosure was not important, if
13 you want to draw that inference from that
14 statistical result, you can only draw that
15 inference if you've established semi-strong
16 efficiency of the market.

17 Because otherwise, you're left
18 wondering, Well, perhaps the stock price simply
19 hasn't moved yet, perhaps we need to wait,
20 perhaps it will move next week.

21 The semi-strong efficient hypothesis
22 allows you to draw an inference from an absence
23 of movement.

24 I am not drawing inferences from the
25 absence of movement in this case, as the

1 [REDACTED]
2 peer-reviewed academic literature that applies
3 my event study methodology to markets, including
4 XRP, are not drawing inferences of that type.

5 So, that hypothesis, while necessary
6 in many contexts, is not necessary for the
7 purposes of the analysis that I'm conducting
8 here.

9 Q. Dr. [REDACTED] how do you know, if you
10 don't have a efficient market, that the price
11 impact that's reflected and that you are
12 correlating isn't due to an event -- another
13 event that predated the event you're measuring?

14 A. That's a very good question. And in
15 my opinion, one has to conduct some robustness
16 checks to reject that possibility. So, for
17 example, I conducted an analysis to see if there
18 was any correlation between events and price
19 movements three days before the announcement.
20 And I found across all of my models that there
21 was no correlation.

22 I've -- I've conducted robustness
23 checks on the length of the event window that I
24 considered. The report focuses on three days.
25 But I also conducted a robustness check on one

1 [REDACTED]
2 day and as long as seven days.

3 So, taken all together, it seems clear
4 to me that the prices were not moving before
5 this news was released, and yet began to move
6 even in a few hours of the news being released,
7 which is why I'm comfortable with the
8 conclusions and opinions that I've offered.

9 This, again, is consistent with the
10 accepted methodologies that you'll find in the
11 literature.

12 Q. What was the data that you relied on
13 to support the statement you just made that you
14 observed a statistically significant market
15 impact on XRP within hours of a news event?

16 A. It's -- it would be in, I think,
17 Appendix E of my report, if we can flip there.
18 I don't remember exactly -- I don't remember the
19 table number. But if you allow me to flip
20 through it, I'll point you to it.

21 I have a lot of appendices there. So
22 I just need to -- I just need to find it.

23 (Witness reviewing document.)

24 A. I'm getting my pages confused. Hang
25 on one second.

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[REDACTED]

Q. Do you want to take a break and collect your thoughts?

A. No, no. It will just take a second. I'm just -- I'm turning the pages, and I just don't want to get everything out of order.

I'm getting there. Too many tables.

That's the three days early.

Here it is. Page 15 of Appendix E.

This is the significance of the correlation between --

Q. Give me just a second. I want to make sure I am with you. I'm sorry. You said page 15 of Appendix E?

A. Page 15 of Appendix E.

Q. Okay.

A. So that's the significance of correlation between XRP price increases and announcements in a one-day event window. That means we're comparing -- so, again, suppose the news comes out on January 1. We're comparing the price at the end of the day on January 1, with the price at the end of the day on December 31, meaning with the news released at some point in between, the markets had a few

1 [REDACTED]
2 hours to react to the event.

3 Q. Well, how do you know -- what data do
4 you have to support the claim that the markets
5 reacted within a few hours?

6 24 hours is the most you can say;
7 isn't that right?

8 A. Well, no. The news is -- 24 hours is
9 the longest it could be; one minute is the
10 shortest it could be. So, presumably, we're
11 talking about some time period in the interval
12 between one minute and 24 hours.

13 Q. Did you have data that allowed you to
14 measure the time between the release of the
15 press release and the market impact?

16 A. Yes, because when we review the time
17 stamps on our events, there is a UTC hour and
18 minute.

19 Q. And what about the price data?

20 A. The price data is taken at the end of
21 the day UTC time.

22 Q. So it's somewhere between 24 hours --

23 A. And one minute.

24 Q. -- and one minute. But you can't say
25 more specifically --

1

2 A. I could. I mean, I'd have to go --

3 Q. Let me finish my question, please,

4 Dr. [REDACTED]

5 You can't say more specifically than
6 you believe you observed a price impact between
7 the release of event and the market price, other
8 than somewhere within one minute and 24 hours.
9 Correct?

10 A. Well, if this -- I could, because we
11 have the time stamps on the articles. So we
12 could go article by article, and we could
13 calculate the elapsed time between the
14 publication of that article and the -- and the
15 close of the day.

16 Q. Did you do that study, Dr. [REDACTED]
17 I know you -- I know you say you
18 could. My question is, did you do it?

19 A. No, I did not do that.

20 Q. You don't have a basis to say that the
21 observed price impact on the market for XRP
22 occurred within hours of a news event unless you
23 mean within 24 hours, correct?

24 A. No, that's not correct. Of course, I
25 have a basis for that, I looked at those UTC

1 [REDACTED]
2 times, they were not all 12:01 a.m. of day.

3 Many of them were in the afternoon;
4 some were in the morning. So, yes, I have a
5 basis to know that in many cases, the close of
6 the day is just within a few hours of the
7 publication of the news.

8 Q. Did you control for number of minutes
9 or number of hours between release of an event
10 and an observed price impact?

11 A. That is not a control variable in
12 these regressions, no.

13 Q. So if I understand your testimony,
14 you're contending that your study with the
15 one-day event window is sufficient to overcome
16 the absence of an efficient market. Correct?

17 A. No, that's not my testimony.

18 Q. Well, are you contending that the fact
19 that you used a one-day event window in some of
20 your robustness studies is sufficient to remove
21 any reliability issues from the fact that XRP
22 does not trade in a weak form or semi-strong
23 form efficient market?

24 A. No, that was not my testimony either.

25 Q. Let's be clear about it.

1 [REDACTED]
2 What, if anything, are you saying
3 about the fact that you conducted a one-day
4 event -- a one-day event window, and the absence
5 of what you concede is the lack of an efficient
6 market for XRP?

7 A. I pointed to a number of robustness
8 tests and studies that I did as part of my
9 research. So one possible view, which as a
10 logical matter cannot be precluded a priori, is
11 that when we see price reactions on these days,
12 it might possibly be due to something that
13 happened before the event in question. If the
14 market is not semi-strong efficient, one cannot
15 say in principle that that's impossible. It
16 could be true.

17 So to test that hypothesis, I
18 looked -- I looked at the question. I said,
19 well, were prices -- is there a correlation
20 between the news and price movements in the days
21 leading up to the news?

22 And answer was no. In addition to
23 that, I looked at a very short window, a one-day
24 horizon, which in many cases is only allowing a
25 few hours of response. And I found a

1 [REDACTED]
2 correlation that was yes.

3 This plus the other work that I did
4 allows me to reach the opinion that what we are
5 seeing in the prices is due to events on the day
6 in question and not due to events prior to that
7 or after that.

8 Q. And my question is, you believe that
9 that methodology that you just described allows
10 you to reach a reliable conclusion conceding
11 that XRP does not trade in an efficient market.
12 Correct?

13 A. Correct. Because the methodology that
14 I'm applying, again, is found -- it's
15 well-accepted methodology found in the
16 literature where the -- where the -- academics
17 studying a different set of events, but
18 essentially investigating a similar question,
19 asking does this set of events move XRP prices,
20 those studies acknowledge the relative
21 inefficiency of this market, they apply the
22 methodology, and they reach their inclusions.

23 Q. Just so the record is clear, you're
24 not contending that the -- that proof of an
25 efficient market is necessary for you to reach

1 [REDACTED]
2 those conclusions, correct?

3 MR. MOYE: Objection. Asked and
4 answered.

5 A. I -- as I've testified my report
6 acknowledges that this market is almost
7 certainly not as informationally efficient as
8 the stock market. Academic studies acknowledge
9 the same thing. They then proceed to apply a
10 methodology, which I apply to the matter at
11 hand. They apply it to the XRP market as I
12 apply it to the XRP market. And the inferences
13 that we draw are perfectly valid, even in the
14 absence of semi-strong market efficiency.

15 Q. All right. If we could now go to
16 Tab 5, which is the binder article that you cite
17 in your report.

18 MR. MOYE: Are you marking a new
19 Exhibit 5?

20 MR. FIGEL: Yes. Yes. I think we're
21 up to 5.

22 (Academic Paper titled "The Event
23 Study Methodology Since 1969" was marked
24 Exhibit 5 for identification, as of this
25 date.)

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[REDACTED]

Q. You're familiar with this academic paper, correct?

A. I am.

Q. And you cite it in your report?

A. Uh-huh.

MR. MOYE: You have to say yes or no.

A. Yes.

Q. If you could read into the record the portion of this article beginning at the -- near the bottom of the first full paragraph under "introduction," beginning with "event study" and ending with "securities holders."

A. I'm sorry. The -- in the second paragraph below --

Q. The first -- well, the first -- I'm sorry. Second -- yeah, there is a paragraph there. The second paragraph under "introduction." Right after Footnote 1, just read the -- the sentences to the end of the paragraph, beginning with "event study."

A. The event study methodology has, in fact, become the standard method of measuring security price reaction to some announcement or event.

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[REDACTED]

Want me to continue reading?

Q. Yes. Continue to the end the paragraph, if you would.

A. In practice, event studies have been used for two major reasons: To test the null hypothesis that the market efficiently incorporates information (See Fama 1991 for a summary of this evidence); and, two, under the maintained hypothesis of market efficiency, at least with respect to publicly available information, to examine the impact of some event on the wealth of the firm's security holders.

Q. All right. And what's your understanding of what Binder says is the first reason for conducting an event study?

A. So the -- the event study, meaning the -- the statistical analysis of regression and the interpretation of the results, can be used to test whether prices adjust quickly to certain announcements such as earnings announcements.

That can be part of an investigation into whether or not a particular market is efficient.

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Q. And you didn't do that study in connection with the opinions expressed in your two reports in this case. Correct?

A. I didn't -- I didn't conduct that particular study, no.

Of course, I reviewed the academic literature on efficiency and digital token markets. And I did conduct another type of econometric test of efficiency to satisfy myself that I agreed with those academic results.

But I didn't conduct precisely the test that's described in this first point here.

Q. And the point of that test is to determine whether the market is efficient. Correct?

A. As described here, yes, that -- that could be a use of the event study methodology.

Q. And you didn't do that because we are in agreement that the market for XRP is not efficient. Correct?

A. It is certainly -- or I say "certainly." There's a significant amount of evidence that this market is less informationally efficient than, say, the U.S.

1 [REDACTED]
2 stock market. I don't dispute that.

3 Q. And you just gave us a long exegesis
4 on all the reasons why you thought that proof of
5 an efficient market was not necessary in order
6 for you to reach a reliable conclusion, correct?

7 MR. MOYE: Are you describing his
8 prior -- his prior answers? When you say
9 long exegesis?

10 MR. FIGEL: Yes, that's what I mean.

11 MR. MOYE: Thanks.

12 A. You're asking me whether it's correct
13 that it's been a long exegesis, or --

14 Q. I think that's undisputed.

15 No, I'm asking you whether the
16 takeaway from your long answers was that you did
17 not believe that it was a prerequisite to the
18 reliability of the opinions you're expressing
19 that XRP traded in an efficient market, correct?

20 A. Sure, right.

21 Consistent with the peer-reviewed
22 academic literature, that's correct.

23 Q. All right. And then going on back to
24 Mr. Binder, you'll see he says that the second
25 reason for using an event study assumes, in his

1 [REDACTED]
2 words, the maintained hypothesis of market
3 efficiency.

4 And in your study, you have not -- you
5 do not have an assumed hypothesis of market
6 efficiency with respect to the market for XRP,
7 correct?

8 A. Correct.

9 Q. And under Point 2 in Mr. Binder's
10 study, he refers to market efficiency, and he
11 describes it as, At least with respect to
12 publicly information -- publicly available
13 information. Correct?

14 A. Correct.

15 Q. And that's economist code for
16 semi-strong efficiency?

17 A. That's how I would interpret that,
18 yes.

19 Q. Let's go to what I'll ask to be marked
20 as Exhibit 6, and directing your attention to
21 the work you did in the [REDACTED] case.

22 A. Uh-huh.

23 (Sworn declaration of Dr. [REDACTED]
24 in [REDACTED] case was marked Exhibit 6 for
25 identification, as of this date.)

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[REDACTED]

A. Yes.

Q. All right.

Just take moment. This is a -- copy
of your declaration in [REDACTED]
case?

A. It appears to be, yes.

Q. And give us the context in which you
prepared this declaration.

A. Well, that might be another long
answer. But -- if that's okay.

Q. All right. I withdraw it. I'm sorry.

A. No, it's -- you want me to answer the
question?

Q. No, I don't, not if it's going to be a
long answer.

Let's go to page 11. I'm sorry,
paragraph 11.

A. Page 11 only has my signature.

Q. I'm sorry, it's paragraph 11 on
page 6.

A. Got it.

Q. Can you read -- read the whole
paragraph for us.

A. Excuse me.

1 [REDACTED]
2 Statistical results such as the output
3 of a regression model are necessary but not
4 sufficient to conduct a complete analysis of the
5 type I present in my reports concerning the
6 ADRs. Assessing market efficiency is necessary
7 to support certain conclusions and form certain
8 opinions.

9 Q. And this was a sworn declaration,
10 correct?

11 A. Correct.

12 Q. So in substance what you're saying is
13 that assessing market efficiency is necessary to
14 form certain opinions reached through conducting
15 an event study, correct?

16 A. Yes, that's correct.

17 Q. And is it correct, in your opinion,
18 that an assessment of market efficiency was
19 necessary to conclude that Ripple's news events
20 had an impact on the market price of XRP?

21 A. I'm sorry, could you repeat it?
22 Sorry.

23 Q. And is it correct that in your
24 opinion, an assessment of market efficiency was
25 necessary to conclude that Ripple's news events

1 [REDACTED]
2 had an impact, a statistically significant
3 impact, on the market price of XRP?

4 A. So, I -- I thought you were going to
5 ask about [REDACTED] but you're asking about
6 Ripple.

7 Q. Uh-huh.

8 A. So the question is, in my opinion, was
9 an assessment of market efficiency necessary to
10 form an opinion?

11 Q. Uh-huh.

12 A. That was the -- that was the question?

13 Q. Reliable opinion.

14 A. Well, as I -- as I've testified, it
15 depends on the nature of the opinion. It -- the
16 market -- the XRP market does not need to be
17 semi-strong efficient in order for -- in order
18 to draw the inferences and reach the conclusions
19 that I did for XRP and that other academics have
20 in the XRP market.

21 The -- it comes down to what inference
22 are you trying to draw from the statistical
23 result. And I -- I don't know what I'm allowed
24 to talk about in [REDACTED] but let's just say
25 hypothetically -- and maybe I don't even have

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to -- I don't know -- I don't know the rules.

Hypothetically, it's possible that you could be arguing about the meaning of a non-result; in other words, the price does not move statistically. And so what does that mean?

Well, depending on the inference you want to draw from that null result, you may need to have established at least semi-strong market efficiency.

Q. The opinion you expressed in your declaration in ██████████ was that assessing market efficiency was necessary to support certain conclusions and form certain opinions, correct?

A. Certain conclusions and certain opinions, yes.

Q. Okay. And my question was, was an assessment of market efficiency necessary, in this case, in Ripple -- in the Ripple case, to support the conclusions and opinions that you reached?

A. Well -- so I've testified about this a few times now. Your -- your question now is a little bit different.

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[REDACTED]

I think it is important to assess the efficiency, yes, because understanding whether the market is, let's say, as informationally efficient as the stock market or if it is less informationally efficient than the stock market, understanding that could inform how you conduct the test.

For instance, do you only look at a one-day event window, do you look at a three-day event window, so on, so forth.

So I do think it is important, and, of course, I did it to assess the efficiency. However, establishing that the market is semi-strong efficient is not necessary to reach the opinions that I've reached in the Ripple matter.

Q. So I understand your testimony, you said that market efficiency is not relevant to reaching an opinion about the absence of market impact. Correct?

Is that a fair summary of what you said?

A. I don't know.

I'm trying to go through the

1 [REDACTED]
2 negatives.

3 I apologize, just walk -- could you
4 repeat it?

5 Q. As I understood your testimony, you
6 said market efficiency is not necessary to
7 conduct an event study that proves the absence
8 of market impact.

9 A. No.

10 If you're going to draw an inference
11 from a single event, which, of course, is not
12 what we're doing in the Ripple matter, but may,
13 for instance, have been something that was being
14 done in the [REDACTED] or other matters, if
15 you're going to draw an inference from a single
16 event which presents a statistical result that
17 prices do not appear to react in a statistically
18 significant way, if you then want to draw an
19 inference, Well, then, therefore, this event did
20 not impact this price, that inference requires
21 establishing semi-strong market efficiency.

22 Other types of inferences do not
23 necessarily require establishing semi-strong
24 efficiency.

25 Q. Does the presence or absence of market

1 [REDACTED]
2 efficiency effect a result in which you are --
3 you are rejecting a null hypothesis?

4 A. Does the presence or absence -- I'm --
5 please, one more time.

6 Q. Sure. Does the presence or absence of
7 market efficiency -- sorry.

8 I've got a glitch here on the
9 LiveNotes.

10 No, this -- I think I've got it now.

11 All right. Does the presence or
12 absence of market efficiency effect a result in
13 which you reject a null hypothesis?

14 A. Does it effect a result in which you
15 reject a null hypothesis? Which null hypothesis
16 are we rejecting?

17 Q. Whichever one you posit.

18 MR. MOYE: Objection. Compound.

19 A. Let me try and -- let me try and
20 understand this question.

21 The null -- so I'll just tie it to the
22 null hypothesis that was at issue in my analysis
23 in this case.

24 The null hypothesis is that
25 Ripple Labs and its actions and news about its

1 [REDACTED]
2 actions is independent of the XRP market price.
3 That's the null hypothesis.

4 All right. Assuming that that is
5 true, assuming that they are independent,
6 certain things follow. If those things do not
7 follow to a statistically significant extent,
8 one can reject the hypothesis of independence.

9 Q. I'm sorry. One can or cannot?

10 A. Can.

11 All right. So -- so if it's
12 independent, certain things should be true. If
13 those things are not true, in the sense of they
14 are so unlikely, then that allows a researcher
15 to reject the null hypothesis of independence.

16 The analysis that I conducted did
17 not -- did not and does not require that the XRP
18 market be semi-strong efficient, just as the
19 academic studies we've been talking about this
20 morning do not require semi-strong efficiency to
21 reject the hypotheses that they reject.

22 Q. Go back to your [REDACTED] declaration,
23 paragraph 16. You mention a 10-factor review
24 you did to market efficiency for the bond market
25 for -- in [REDACTED], correct?

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A. All right. Not to the bond market,
but to the ADR -- ADR market.

Q. Did you conduct a 10-factor analysis
of the efficiency of the market for XRP in this
case?

A. No, I did not. I didn't see any need
to.

Q. All right. If we could go to
Appendix F of Exhibit 1.

A. Yes.

Q. Why did you include Appendix F in your
report?

A. A couple reasons.

It -- it may have been, probably was,
adequate to cite to the academic literature on
the relative inefficiency of the XRP market.
But nevertheless, I wanted to conducted at least
a -- a simple analysis of that question.

Probably more importantly, I wanted to
explain why half -- why my statistical models or
at least half of them correct for serial
correlation in the XRP market. Since I'm going
to maker that correction, I thought I should
show the evidence that the serial correlation is

1 [REDACTED]
2 present at least at some times in the history of
3 the XRP market.

4 So it was with those two objectives
5 that I included Appendix F.

6 Q. And with respect to market efficiency,
7 what you found was -- and I'm going to use rough
8 numbers here -- approximately 50 percent of the
9 days, you found that the market for XRP was not
10 even weak-form efficient, correct?

11 A. I don't -- you may be right. I don't
12 remember the 50 percent of days.

13 Q. I'm eyeballing it based on Figure 1.

14 A. Yeah, I mean, I might agree with your
15 eyeball. It might be about 50 percent the days.
16 It's certainly not just one.

17 Q. And just so the record is clear -- I
18 think it's clear from your report -- you put an
19 orange dot --

20 A. Right, where it's significantly
21 different --

22 Q. Let me just finish my question.

23 You put an orange dot on the graph to
24 reflect those days in which, based on your
25 autocorrelation study, you found that the market

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was not -- was not even weak-form efficient,
correct?

A. Yes, that's correct.

Q. Did you calculate an autocorrelation
study for Figure 1 using a period other than
180-day rolling window that you reference in
paragraph 5?

A. I don't -- I don't remember if I did
anything other than 180 days.

To me, it was enough that with 180-day
window, you'd find evidence of serial
correlation. That was enough to motivate me to
make sure that I used regression models that
correct for autocorrelation.

MR. FIGEL: It's noon. This is really
just -- you're the -- you're the person on
the hot seat. Would you like to take a
break and go to 1:00? Do you want to break
for lunch now? I'm indifferent to whatever
your preference is.

THE WITNESS: How long have we been
going since our last break.

MR. FIGEL: Hour and 20 minutes --

THE WITNESS: I suppose that's

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appropriate. Why don't we --

MR. MOYE: Let's take lunch break now.

MR. FIGEL: Lunch break now. Okay.

THE VIDEOGRAPHER: We are going off
the record at 12:01 p.m.

(Luncheon recess at 12:01)

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[REDACTED]

A F T E R N O O N S E S S I O N

(12:56)

[REDACTED] Ph.D.

resumed, having been previously duly
sworn by a Notary Public, was
examined and testified further
as follows:

CONTINUED EXAMINATION BY MR. FIGEL:

THE VIDEOGRAPHER: We are back on the
record at 12:56 p.m.

Q. Good afternoon, Dr. [REDACTED] I would
like to direct your attention back to the
approximately 514 events that you divided into
the 14 categories.

A. Yes.

Q. First, did you do an individualized
assessment on each of those 14 events to
determine whether, standing in isolation, they
had a statistically significant impact on the --

A. No.

Q. -- price of XRP?

A. No. I did not test each of those
events individually.

Q. What methodology, if any, did you use

1 [REDACTED]
2 in developing, or identifying, the 14
3 categories?

4 A. Categorizing events is part of the
5 event study methodology. And I applied my
6 understanding of economics and general judgment
7 to try and create a taxonomy of categories which
8 was helpful and complete.

9 Q. Was there any academic literature,
10 accounting -- I mean any academic literature or
11 econometric guidance that you looked to in
12 formulating those categories?

13 A. Well, again, categorizing news is
14 simply part of the event study process. So, for
15 example, in -- and I -- I tend to mix the two
16 studies up, but either Gerritsen or Joo or both,
17 they collect a set of events, and they then
18 categorize them by whether it's positive or
19 negative. That's part of the process.

20 But -- other event studies, looking at
21 other topics, will collect a set of events and
22 will characterize them by different types.

23 So characterizing events, categorizing
24 them, I view as simply part of the event study
25 methodology.

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Q. But the categories reflect your subjective judgment, correct?

A. The categories reflect judgment of what I think is a helpful taxonomy of how to organize these 700 articles.

Q. But it's your judgment, correct?

A. It is my judgment, yes.

Q. And it's not guided by any economic or econometric guidance or protocols that informs how you allocate the events into specific categories. Is that correct?

A. Well, it is guided by my understanding, general understanding of economics, in terms of how it might be useful when formulating an event study analysis to group certain events together as separate from other events.

Again, I -- I don't view that as separate and distinct from the event study methodology. I view it simply as part of the event study methodology.

Q. Do you disagree with this statement: Classifying news is necessarily a subjective exercise?

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[REDACTED]

A. I agree that there is necessarily an element of subjectivity in the categorization of news. Again, that's part of the accepted event study methodology. It's an irreducible part of the event study methodology.

Q. Other than your judgment, did you rely on any external guidance or factors to help you identify the categories?

A. I -- I discussed the categorization with members of my team. But ultimately, it reflects my judgment on a useful taxonomy of these categories -- or, I'm sorry, of these events.

Q. And as we discussed previously, your opinion that statistically significant price movements in XRP are correlated with Ripple news events is based on your analysis of just 5 of those 14 categories. Correct?

A. No, I don't agree with that. It's -- I reviewed several categories in reaching that opinion. I also conducted robustness checks, including robustness around the possibility that I had miscategorized or misclassified news events. And I found that the statistical

1 [REDACTED]
2 results were robust. They held across all of
3 those variations.

4 Q. Let's go to paragraph 48(b) of your
5 report, Exhibit 1.

6 A. Yes, 48(b).

7 Q. These are the categories that you
8 selected?

9 A. That's correct.

10 Q. All right. And five of these
11 categories are categories that you -- the events
12 for which you put together in a single
13 collective study that you described in
14 paragraph 100, correct?

15 A. Yes, I believe it was five.

16 Q. And those are milestones, trading
17 platform listings, customer and product
18 acquisition and investment, and Ripple
19 commercialization. Correct?

20 A. Yes, that's correct.

21 Q. So that's five; is that right?

22 A. Yes.

23 Q. Put those aside.

24 Of the remaining nine, how many did
25 you examine as a stand-alone category to see

1 [REDACTED]
2 whether you could find a statistically, quote,
3 significantly -- statistically significant
4 correlation between the events in that category
5 and the market price of XRP?

6 A. In addition to those five, I performed
7 an analysis on other initiatives, and office and
8 staff announcements.

9 Q. And just so the record's clear, you
10 then did not do an independent statistical
11 analysis on case study, charity, corporate
12 activity and announcement, litigation, market
13 commentary and company review, markets reports,
14 or miscellaneous. Correct?

15 A. That's correct. It wasn't necessary
16 to reach my opinions.

17 Q. And with respect to the studies you
18 did, or the analysis you did of the other
19 initiative and office and staff announcement
20 category, what was the conclusion of your
21 analysis as to whether the events in those
22 categories had a statistically significant
23 impact on the price of XRP?

24 A. I found no evidence of a -- no
25 evidence of a correlation between the

1 [REDACTED]
2 announcements in those categories and
3 significant XRP price increases.

4 Q. So now we've got seven that I'm going
5 to ask you to put aside, and the remaining
6 seven, the ones that you said you did not
7 perform an analysis of with respect to the
8 events in that category. You with me?

9 A. Yes.

10 Q. With respect to those seven other
11 categories, as you sit here today, you don't
12 know whether the events in those categories,
13 standing alone or collectively, had a
14 statistically significant impact on the price of
15 XRP, correct?

16 A. Correct, sitting here today, I do not
17 know the answer to that question. It wasn't
18 germane to my -- I -- it wasn't necessary for me
19 to reach my opinion.

20 Q. And fair to say that the reason you
21 didn't perform a -- an analysis of the events in
22 those categories is, your judgment was that
23 based on the nature analyses, it was unlikely
24 that they would have a statistically significant
25 impact on the price of XRP. Correct?

1 [REDACTED]
2 A. I -- I'd say it was a little bit more
3 nuanced than that.

4 That's -- that's partially true, and
5 certainly true of some categories. I would say,
6 you know, even if we believe that Ripple Labs
7 impacts XRP markets, even if we take that as
8 true, for example, when they publish a couple of
9 paragraphs talking about somebody who has used
10 the product and -- and had a good experience
11 with it, I -- my expectation before running an
12 analysis would be, I don't -- I would be
13 surprised if that moved prices. It just doesn't
14 seem like the sort of thing that would move
15 prices.

16 So in some cases, I agree, we could
17 probably go through categories and -- and I
18 would give you the answer that my expectation --
19 even presuming a link between Ripple Labs and
20 XRP, my expectation would be you probably
21 wouldn't see an association there.

22 But the -- the -- the real point is,
23 it wouldn't -- it wouldn't particularly interest
24 me whether we saw an association there.

25 So let me explain that for a second.

1 [REDACTED]
2 If there was no correlation between customer and
3 product announcements of banks signing up to
4 RippleNet and all those other things, if there
5 was no correlation there, and yet there was a
6 correlation among, you know, corporate
7 overviews, or announcing who's going to speak at
8 an upcoming conference, right?

9 So suppose there's no correlation
10 among customer and product but there is a
11 correlation among the announcements and speakers
12 of upcoming events. Personally, I wouldn't find
13 that terribly persuasive of a connection between
14 Ripple Labs and XRP markets.

15 On the other hand, if there is a
16 connection between customer and products
17 announcing growth in RippleNet and new people
18 signing up, and yet there was no correlation
19 among announcements of upcoming speakers at
20 conferences, again, I -- first of all, that
21 wouldn't surprise me. But second of all, it
22 wouldn't -- it wouldn't alter my opinion.

23 So I viewed some categories as
24 meaningful to test in the sense that if we found
25 a correlation, or if we did not find a

1 [REDACTED]
2 correlation, that would be economically
3 interesting to the question at hand.

4 And then there were other categories
5 that I set aside where, in my view, whether you
6 found it or didn't find it wouldn't really
7 provide any -- much compelling evidence one way
8 or the other.

9 So I just didn't think they were worth
10 testing.

11 Q. All right. And just so the record's
12 clear, of the seven we're talking about now that
13 you didn't test, why don't you identify for us
14 which ones you expect would not have a
15 statistically significant correlation between
16 the event and the impact on the price of XRP.

17 A. Well, I'm happy to do that, just --
18 just so we understand, you -- you're really just
19 asking for my just prior expectation. And I
20 haven't run the analysis, I don't know the
21 answer.

22 My prior expectation is that the
23 events in the case study category, which
24 generally are articles on the Ripple Insights
25 page where a bank or a financial institution,

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2 you know, discusses how they've used RippleNet
3 and -- and how it was fast and it was
4 inexpensive --

5 Q. I don't mean to interrupt you. I'm
6 just asking you to identify which ones -- as you
7 sit here today, you don't have an expectation
8 today or you --

9 A. Sorry.

10 Q. A list would be fine. The reasons why
11 are less important and they're not responsive to
12 the question I'm asking you.

13 A. Okay. I -- I understand.

14 Q. I'm sorry to interrupt you.

15 A. Again, I would -- case study.

16 Probably charity.

17 The litigation category, I -- you
18 might expect a negative reaction, but there are
19 very few events there so it was awfully small to
20 test.

21 Market commentary and company
22 overview, again, those are sort of puff piece
23 articles. I wouldn't -- I wouldn't think that
24 would move the price but --

25 The markets report, I wouldn't have

1 [REDACTED]
2 expected to move the price.

3 The miscellaneous, I'm trying to
4 remember what's in there. I think the -- what
5 is it, the Arrington XRP hedge fund. There's
6 not -- there are very few things in there. May
7 I consult Appendix C to remind myself?

8 Q. You're welcome to consult anything you
9 need to make sure your testimony is complete and
10 accurate.

11 A. Okay. Thank you.

12 I just -- just want to remind myself
13 what's in that category.

14 (Witness reviewing document.)

15 A. Miscellaneous. So yeah, hackathon
16 challenge, yeah, the Arrington fund. The
17 Arrington fund, you know, that's an interesting
18 event, but it doesn't really belong in any other
19 category, at least in -- in my estimation.

20 Right, so, you know, this -- this set
21 of events, it's kind of a mixed bag. I really
22 don't know what my prior expectation would be on
23 that set of events. And I think that's --
24 that's it.

25 Q. That's all. That's correct. Thanks.

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[REDACTED]

So let me direct your attention to
general market commentary.

A. Uh-huh.

Q. And I guess what -- I guess what the
category is -- market commentary and company
overview is the category.

A. Correct.

Q. All right.

So you rejected the possibility that
XRP might have a statistically significant price
impact on XRP -- withdrawn.

So you reject the likelihood that --
of -- press releases about market commentary and
company -- and Ripple company overview would
have a statistically significant impact on the
price of XRP?

A. Well, with respect to your language,
it's -- to reject the likelihood, that sounds
like a --

Q. Well --

A. -- scientific procedure. You asked me
my ex ante expectations. That's -- that's all
they were.

Q. All right. As you sit here today,

1 [REDACTED]
2 it's your view, your judgment, that the events
3 that were -- that you put in the category of
4 market commentary and company overview would not
5 have a statistically significant impact on the
6 price of XRP, correct?

7 A. I still think your language is
8 overstating the strength of my conviction.
9 My -- my ex ante expectation is that it won't.
10 I wouldn't -- I wouldn't elevate that to a -- to
11 a view or an opinion. I -- you asked my
12 opinion, you know. You asked me, do I think it
13 would. I -- my expectation is that it wouldn't.
14 That's all I can say.

15 Q. And just so the record's clear, and
16 you didn't do a -- an analysis of this category
17 to de-- to answer that question. Correct?

18 A. Correct. I don't recall doing an
19 analysis of this category to determine one way
20 or the other.

21 It -- I mean, it -- a lot of the
22 things in this category -- this is, I think, the
23 single largest category. A lot of it is
24 third-party articles about what is
25 cryptocurrency, and maybe they have a paragraph

1 [REDACTED]
2 about what is XRP, who is Ripple. It's a lot of
3 just general market commentary, as the name
4 suggests.

5 And my expectation is, I'd be
6 surprised if that moved prices. It might. But
7 I just -- I would be surprised.

8 Q. Okay. And the consequence, or the
9 result, of excluding the events in the
10 nine categories that you didn't include in the
11 regression that you described in paragraph 100,
12 was to reduce the number of Ripple events from
13 approximately 514 to 113. Correct?

14 A. Well, that's -- yes, that's -- that's
15 correct. We start with 514 events, and we end
16 up studying 113 events, if I recall.

17 Q. Now, when you describe the process by
18 which you conducted your analysis in your
19 report, if I understand it correctly, the first
20 thing you did was to regress market prices of
21 XRP against 20 different models to determine
22 what days there was a statistically significant
23 change in the price of XRP. Correct?

24 A. Rather than XRP prices, if you had
25 said XRP returns, yes. I -- I conduct -- I run

1 [REDACTED]
2 20 different regression models of XRP returns,
3 against different -- 20 different sets of
4 control variables.

5 Q. I accept the clarification, and I
6 appreciate it.

7 But as a result of running the price
8 data of XRP, against those 20 different models
9 you are able to identify on a day-by-day basis
10 each day in which there was a statistically
11 significant price return of XRP, correct?

12 A. That sounds generally correct. Yes.

13 Q. Did you consult the results of that
14 aspect of your study before you decided to
15 exclude the approximately 401 events, that you
16 put in the nine categories that we just
17 discussed?

18 A. No. No. My -- my -- my organization
19 of the news events was conducted without
20 reference to results from the statistical
21 models. It was based on my economic
22 understanding of -- my economic understanding.

23 Q. I'm not sure your answer was
24 responsive to my question. Let's just talk
25 about temporally or chronologically.

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As you described in your report, the first thing you did was identify the days in which there's a statistically significant price return for XRP. Correct?

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A. Now, you -- all right. You really want to talk about the temporal sequence in which certain things were done.

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We pulled -- you know, I -- we collected the news from Ripple Labs as one of the very first thing we did. Perhaps in parallel and simultaneously, we collected pricing data on digital tokens. But I certainly don't want to leave any suggestion that there was some kind of review of the statistical results which then informed the selection of news categories. That's categorically not true.

18

Q. How do you know that?

19

A. Because I conducted the study.

20

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Q. I thought you said you had a team of people that were evaluating the data and making recommendations to you.

23

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A. All I -- I conducted the study. It is -- it was my determination of how to categorize the news. I just -- I -- I can state

1 [REDACTED]
2 categorically that it was not -- the selection
3 of events or categories, was not informed by a
4 review of statistically significant results.
5 That would be an improper procedure.

6 Q. But at least the way you described the
7 process in your report -- give me just a second.
8 Sorry.

9 So let's go to page 28 of Exhibit 1.

10 A. Yes.

11 Q. You -- you -- you there -- you set out
12 on this page in -- in Section E a summary of the
13 empirical methodology. Correct?

14 A. Yes.

15 Q. And you say, first, you specify the
16 regression model of XRP returns, correct?

17 A. Uh-huh.

18 Q. And you identify the event window.

19 A. Uh-huh.

20 Q. And then you estimate the cumulative
21 abnormal returns for each trading day, correct?

22 A. Uh-huh.

23 Q. And then you --

24 MR. MOYE: You have to say yes or no.

25 THE WITNESS: I'm sorry.

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A. Yes.

MR. FIGEL: Thanks.

Q. You tested using you both parametric and nonparametric approaches, correct?

A. Correct.

Q. And that tells you on a day-by-day basis which days there is a statistically significant price return for XRP, correct?

A. Correct.

Q. And then the last thing you say you do here is, finally, you examine the interaction between the set of news days you've identified and the set of days with positive returns.

A. Correct.

Q. It suggests that you had identified the number of days with a statistically significant price return before you applied the event days in which you were looking for a correlation.

A. I'm genuinely surprised that you read it that way. I read it -- of course, I know what was done -- as saying, these are -- these are the -- the steps of the empirical analysis to which we then apply that to a set of news,

1 [REDACTED]
2 that we have identified. It doesn't say, we do
3 this analysis to then determine the set of news
4 that we will then test. I mean, you're
5 inserting that step that's not there.

6 Q. Well, the first thing that you
7 describe in your summary of the empirical
8 methodology is a process by which you identify
9 the days on which there is a statistically
10 significant price return. Correct?

11 A. This is laying out the -- in a way
12 that is meant to be helpful, a sequence of
13 events that must be conducted in this order. In
14 other words, you have to begin by specifying a
15 regression, et cetera, et cetera, et cetera.
16 All of that then gets applied to a set of events
17 that you want to study.

18 Now, if -- if it would -- if you would
19 like -- I mean, we could have inserted a
20 paragraph in the beginning that says, first,
21 select the events and then do all of these
22 things.

23 I considered that to be there by
24 implication. That is certainly how any event
25 study is connected. You begin with a set of

1 [REDACTED]
2 events; then you run through the statistical
3 analysis to get the -- to get the -- identify
4 which days are significant. And then we test to
5 see whether the events are correlated with the
6 days of statistical significance. That's how it
7 was done; that's how event studies are generally
8 conducted.

9 Q. But what you just described is not how
10 testified earlier. What you testified earlier
11 to was that you took 500-some events, put them
12 into categories, and then effectively rejected
13 nine of the categories. Correct? And then you
14 applied the remaining five categories to the
15 days to which you --

16 A. And having -- having done that --

17 Q. Let me finish. I'm sorry.

18 A. -- I then followed these steps and
19 this work --

20 Q. Let me just finish.

21 The -- what you described was that you
22 did the regression that identified days with
23 statistically significant price returns,
24 correct?

25 A. I'm sorry. Say it again.

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Q. You conducted a regression analysis that allowed you to identify what you believed were the days for which there was a statistically significant price return for XRP.

Correct?

A. I did conduct such regression analysis, yes.

Q. And then you also had a set of 500-some events that you had identified, correct?

A. Correct.

Q. And you reduced those -- the 514 events that you had in 14 categories to 105 events in five categories. Correct?

A. 113 events in five categories, yes.

Q. And 105 event days?

A. Event -- 105 unique days, yes.

Q. Right. And it was only the 105 event days that you applied to the days on which -- or that you correlated to the days on which there was a statistically significant price return.

Correct?

A. No. Again, I -- we've -- we've gone over this a few times. I tested categories in

1 [REDACTED]
2 addition to those 105. Remember, I tested
3 office and staff announcements and noncommercial
4 XRP initiatives, in addition to those other
5 113 events.

6 But, again, I just want to make it
7 very clear, because I -- I worry that -- I just
8 want to make it very clear, and I hope you're
9 not trying to insinuate that I looked at which
10 days were significant and then decided how to
11 organize the news. That would be improper, and
12 that's not how -- that's not what was done. And
13 that's not how I conduct my work.

14 Q. Why would it be improper?

15 A. It would be improper because it's
16 become circular. Obviously -- and this really
17 is -- is criticism I have of the rebuttals of
18 Dr. Marais and Professor Fischel. It is not
19 proper to begin with a set of statistically
20 significant days and then go look to see whether
21 or not you can find news on those days.

22 That does seem to be the methodology
23 that they're endorsing. It's not the correct
24 methodology. Becomes completely circular. I'll
25 give you an example.

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It may very well be true -- I do not know if it is true or false, but it would not surprise me if Ripple Labs, some combination of Ripple Labs and Mr. Garlinghouse and Mr. Larsen and Mr. Schwartz probably issue a tweet every day. It wouldn't surprise me. May not be true, but it wouldn't surprise me if they're issuing a tweet every day.

So if I started with, well, here, a set of statistically significant days; let me go look and see whether or not I can go find something. I'd be willing to bet that the answer is, yes, I can go find something on each and every one of those days. Here's a tweet from Mr. Garlinghouse. Here's a statement from Mr. Schwartz. That's a meaningless exercise.

Dr. Marais and Professor Fischel seem disappointed I didn't do that exercise, but it's an utterly meaningless exercise. And that's not how I conducted this analysis, and it's not proper.

To be meaningful, you have to start with a set of events and ask the question: Does this set of events, is it associated with

1 [REDACTED]
2 statistically significant price changes or not?

3 Q. I want to do just a -- a simple little
4 bit of arithmetic.

5 Had you tested for all of the 514
6 events -- I may have the numbers wrong -- 514
7 events against the regression analysis that
8 identified statistically significant price
9 returns, you still would have come up with
10 24 points of coincidence. Maybe a few more,
11 maybe a few less. But your assumption is that
12 the nine categories you excluded were unlikely
13 to have a correlation with a statistically
14 significant price impact on XRP. Correct?

15 A. Again, that was -- as we went through
16 them, that was my prior expectation. I -- I
17 don't think I had an expectation on the
18 miscellaneous category, and the litigation
19 category I probably would expect an association
20 with negative returns rather than positive
21 returns.

22 But certainly, if in the nine -- if in
23 the five categories that we study, there are
24 24 days, if we add categories, we will always
25 have at least 24 days, and, of course, we may

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have more.

Q. Right. And given that we don't know what we don't know since you didn't do the test, you agree with me, rough numbers, that 24 over 105, which is the results of the corr-- the correlation between the Ripple events that you included and the days on which you found -- I'm sorry.

Withdrawn.

You agree with me that the -- of the 105 events that were included in the -- event days that were included in the five categories that you describe in paragraph 100, you found a correlation with 24 days of statistically significant price returns on XRP. Correct?

A. I think -- I think we'd have to -- we'd have to specify which model, because not every model covers the entire time period. But there -- I -- I -- there may be some models which -- to which the answer to your question is yes. I just don't have it memorized.

Q. Why don't we go to paragraph 100.

A. Yes.

Q. All right. Tell me if I'm reading

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this right.

You identify 105 event days spanning
2,369 trading delays, correct?

A. Uh-huh.

MR. MOYE: Say yes.

A. Yes. I'm sorry, yes.

Q. And you had 105 Ripple event days,
correct?

A. Yes, that's correct.

Q. And of those 105 Ripple event days,
you found 24 days on which there was a
statistically significant price return, correct?

A. Per the -- per one of the models.
Just to -- just to be clear, again, using -- I'm
reading this second sentence of paragraph 100 --
again, using the constant mean return model as
an example. So these numbers all apply to that
model.

Q. And that's Model 1, correct?

A. That's Model 1, correct.

Q. And so the simple arithmetic is 24
over 105, correct? Using the constant --

A. I mean, that -- that is --

Q. -- mean return model.

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[REDACTED]

A. Sorry.

That is a simple arithmetic calculation one could do. That is not the arithmetic calculation that I did to reach my conclusion. I just want to be clear.

But one could divide 24 by 105.

Q. And you'd get about 23 percent, correct?

A. That sounds right.

Q. And if you had run 514 event days against the price returns you found through the constant mean return model, and you still found 24 days of correlation, you'd have about 5 percent, correct?

A. Well, if, if, if. That would -- that would be what the arith-- the arithmetic would show.

Q. Was that a factor in your subject-- the exercise of your subjective judgment to exclude 9 of the 14 categories, from the analysis that you conducted as described in paragraph 100?

A. No. There -- there's -- there is no economic significance to that result.

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[REDACTED]

There's no economic significance to that result whatsoever. It's not an interesting result. I'm not -- didn't run the analysis because it's not interesting to run that analysis.

Q. And why is it not interesting from an economic perspective?

A. Because it -- because once you start throwing in a bunch of articles that are not breaking any news, they don't even purport to break any news, once you -- one you throw in a bunch of things which have nothing to do with whether Ripple Labs is going to impact XRP prices, testing whether they impact XRP prices just becomes an uninteresting exercise.

For example, we could do an event study on whether earnings announcements impact stock prices. That's an interest question. That's an interesting analysis. People have done it.

It is not an interesting question to say, Well, to those earnings announcements, let's add every press release that the company ever issued about anything whatsoever and see if

1 [REDACTED]
2 there's an association with price movements.

3 The reason that's not interesting is
4 because, even before you do it, you sort of know
5 that the answer is going to be, it won't.
6 Because if it were -- if it were that easy to
7 move a stock price, if all a company had to do
8 to move a stock price is issue a press release
9 about something, they'd do it all the time and
10 move their stock price all the time, so it's
11 just not an interesting question.

12 It was interesting to me to see if
13 these categories, product announcements,
14 customer announcements, things related to
15 growing the XRP ecosystem, if that moves the XRP
16 market, that's an interesting result.

17 Finding that every time the New York
18 Times wrote an article about cryptocurrency as a
19 mentioned XRP, that that does not move the XRP
20 market, is neither here nor there. It's just
21 irrelevant.

22 Q. But that's not the source of events
23 that you collected, Dr. [REDACTED] The source of
24 events that you collected were what you
25 described as publications by Ripple that you

1 [REDACTED]
2 deemed that Ripple thought was important.

3 Correct?

4 A. No. What I collected were news on
5 Ripple's curated web page, which includes, for
6 example, links to third-party articles. They
7 link to a New York Times -- I mean, maybe not a
8 New York Times, but they will link to somebody
9 else who wrote an article saying, The 50 best
10 places to work in the Bay area and Ripple Labs
11 is, I don't know, Number 23. Right? They want
12 to trumpet that. They want say, Hey, great,
13 we're a great place to work, so they link to an
14 article like that.

15 Now, testing whether the XRP market is
16 going to move in response to that kind of
17 announcement is just a waste of time. It's
18 uninteresting.

19 My expectation is that it won't. But
20 it wouldn't matter to me if it did.

21 Q. Could you read for me the portion of
22 your report set forth in paragraph 48(a).

23 Just the first sentence.

24 A. 48A.

25 I start with the news which

1 [REDACTED]
2 Ripple Labs has identified to be important by
3 virtue of, 1, having issued a press release
4 about the event, or 2, having written about it
5 on its Insights news page, or 3, having linked
6 to a third-party news outlet in its curated
7 newsroom page.

8 Q. And then read the last sentence of
9 paragraph 48A.

10 A. I simply assume that based on its
11 understanding of its business and industry,
12 Ripple had some basis to highlight certain
13 events and not others.

14 Q. So you -- in your methodology, you
15 substituted your judgment for Ripple about what
16 events you thought were important to evaluate as
17 to whether it had a statistically significant
18 impact on the XRP price return. Correct?

19 A. No, that is not correct. That is not
20 a fair characterization of what happened.
21 Ripple did not assemble these articles for the
22 purposes of conducting an event study on whether
23 there's an impact on XRP markets.

24 They assembled a set of articles that
25 conveyed information that they generally wanted

1 [REDACTED]
2 to convey, whether that would impact XRP markets
3 or not.

4 So they had their objectives in mind,
5 and I have my objectives in mind, and they are
6 not same objectives.

7 So they're perfectly free to link to
8 an article trumpeting Ripple Labs as one of the
9 best places in the Bay area to work, that's
10 perfectly fine. But that is not suitable
11 material for an event study of the type that
12 we're conducting.

13 Q. You wrote in your report, that you
14 assumed that Ripple had some basis to highlight
15 certain events and not others. Correct?

16 A. I did write that, yes.

17 Q. And you said, in your report, that you
18 started with news which Ripple has identified to
19 be important. Correct?

20 A. Correct.

21 Not for the purposes of conducting an
22 event study but just news that they thought was
23 important.

24 Q. Why do you think -- what is your
25 assumption about why Ripple thought it was

1 [REDACTED]
2 important to include these events on its
3 website?

4 A. I wouldn't presume. Most of them
5 were -- almost all of them were positive in
6 nature, saying good things about Ripple, good
7 things about cryptocurrency, good things about
8 XRP.

9 I -- I don't find it surprising that a
10 company would want to almost retweet, if you
11 will, if not literally, but -- but call
12 attention to press accounts and press reports
13 that are favorable or shed -- put their products
14 in a -- in a good light, I don't find that
15 surprising.

16 Q. Did you assume that the reason Ripple
17 had these events on its website and publicize
18 them was to increase the market price of XRP?

19 A. I -- I'm not going to speculate on
20 their motive for linking to things. It's not --
21 it's not the domain of an economist to speculate
22 on their motive.

23 Q. All right. Let's now go to
24 paragraph 85.

25 A. Yes.

1

2 Q. All right. And you note there that,
3 Not all product developments might be expected
4 to lead directly to increased utilization of
5 XRP.

6 Correct?

7 A. I just -- bear with me one second.

8 Correct.

9 Q. Why did you consider it important to
10 observe that not all product developments might
11 be expected to lead directly to increased
12 utilization of XRP?

13 A. Again, it -- if there is a -- an
14 announcement or event, the nature of which
15 wouldn't be expected to have any sort of impact
16 on XRP, even if there is a link, which there may
17 not be -- that, again, is what we're testing --
18 even if there is a link between Ripple Labs and
19 XRP markets, it's not -- it doesn't become an
20 interesting event to test, because whether you
21 find something or whether you don't find
22 something doesn't provide evidence one way or
23 the other that's helpful to the matter at hand.

24 So announcing that MIT is opening up a
25 validator, that's fine. They're welcome to

1 [REDACTED]
2 announce that. Some people may find that
3 interesting. The link between that and somebody
4 saying, Oh, well I guess I'll go buy XRP, seems
5 somewhat tenuous.

6 So whether that event is or is not
7 associated with XRP price increases is not an
8 interesting question.

9 I note that in Appendix E, again, one
10 of the robustness tests I run is to take all of
11 these events that I've excluded here and add
12 them back just to show that my statistical
13 results do not depend in any way on these
14 exclusions.

15 Q. You didn't write that not all product
16 developments might be expected to lead to a
17 statistically significant price impact on XRP,
18 did you? In paragraph 85.

19 A. I did not write -- I'm sorry. Say it
20 again.

21 Q. You did not write in paragraph 85 that
22 not all product developments might be expected
23 to lead to a statistically significant price
24 impact on XRP, did you?

25 A. No, I did not write that.

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Q. So here you're focusing on increased utilization of XRP. Correct?

A. Correct.

Q. And that's not what you were testing for, was it?

A. No. I'm testing for price impacts.

Q. So are you assuming that only news events that lead to increased utilization of XRP will result -- will result in a price impact?

A. Certainly not.

Q. But the basis on which you excluded six events from this category was based on a judgment that those events would not lead to an increased utilization of XRP. Correct?

A. These events did not seem relevant to testing for a link between Ripple Labs and the XRP market, hence I excluded them. Again, my results hold if you want to add them back. I have that result in Appendix E. So nothing hinges on this exclusion.

But it struck me as appropriate to exclude events that didn't speak to XRP utilization.

Q. Just to be clear, the study you talk

1 [REDACTED]
2 about with the add-backs, you didn't add back
3 all of the events, did you?

4 A. No. I added back these -- these sorts
5 of exclusions. So, for instance, when I say,
6 Identify some announcements as being stale, or
7 in this case, I identified some announcements as
8 being -- I think I used the phrase "direction
9 uncertain," I do a -- one of the robustness
10 checks that I do in Appendix E is to add them
11 back them, just to demonstrate that my results
12 are not dependent on these exclusions.

13 I still think they're appropriate. I
14 still think they're the right thing to do. But
15 if somebody strongly disagrees and thinks that
16 we ought to add back the event of MIT announcing
17 a new validator, we can add it back. It doesn't
18 change the results.

19 Q. Let's just be clear about what events
20 you added back in, in the study or the analysis
21 that you just described.

22 You added back in the events from
23 particular categories that you excluded based on
24 a subjective judgment that you believed it
25 wouldn't have -- wouldn't lead to an increased

1 [REDACTED]
2 utilization of XRP. Is that correct?

3 A. I added back -- before I -- may I
4 consult Appendix E? I just want to make sure
5 I -- I don't want to say something that's not
6 true. Let me just check one thing in
7 Appendix E. I certainly add back those events.
8 I think I also added back events that were
9 stale.

10 Q. If you wouldn't mind, as you do that,
11 would you just make sure that the record is
12 clear what information you're referring to.

13 A. Sure. So I did a robustness check in
14 Appendix E, which I'm just looking for now. And
15 I just want to remind myself exactly of the
16 parameters of that robustness check. And I have
17 so many robustness checks that I just -- it
18 takes me a minute to find them.

19 (Witness reviewing document.)

20 A. Oh, okay. So I'm looking at page 6 of
21 Appendix E.

22 So page -- let's look at both page 5
23 and page 6. Page 5 are the specific test
24 statistics on the select set of customer and
25 product developments. So that's the set that

1 [REDACTED]
2 we've been discussing where, starting with
3 customer and product announcements, I exclude
4 those that are stale or have an uncertain
5 directional implication for XRP utilization.

6 So what's on page 5 of Exhibit E are
7 the test statistics which underlie the exhibit
8 in the body of the report, if you follow me.

9 Q. Uh-huh.

10 A. Page 6 is exactly that same set except
11 you'll see customer and product developments,
12 all. So here I've just added back everything
13 that I had excluded from the first one, just to
14 show that the results are essentially unchanged.

15 Q. All right. Let's go to Appendix C.

16 A. I'll definitely need my reading
17 glasses for this.

18 Q. If you have them, put them on.

19 Appendix C lists all of the individual
20 events that you collected and placed in the
21 various categories. Is that right?

22 A. It does. Strictly speaking, it lists
23 all of the documents, but it also lists all of
24 the events.

25 Q. And pages 3 through 6, going back to

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where we were, is the customer and product category. Correct?

A. Excuse me.

Yes, that appears to be correct.

Q. And do you see, event ID 255 on the last line of page 4?

A. Yes.

Q. And you see there's another Event 255, on the first page of page 5?

A. Yes.

Q. And the date of that event is November 22, 2027; is that correct?

A. 2017.

Q. 2017. I'm sorry. Yes.

A. Yes.

Q. And this is one of the events you included in your analysis. Is that right?

A. It's certainly part of the category. I would have to go back and see if it was on the list of excluded events. I don't think it was.

So --

Q. So let's go to page -- I think it's page 20 of your report.

I'm sorry. Page 40, Figure 20, I

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think, is what it is.

A. Right. Yeah, no, it doesn't appear to
be on that list.

So it should have been -- I believe it
was included.

Q. So Event 255 is not listed. Is that
correct?

A. I didn't see it listed, no.

Q. And you don't have an event dated
November 22, 2017?

A. On that list, no.

Q. Going back to -- apologize for this,
but I don't have a better way to do it.

All right. The second document or the
second event or document, you give
Document ID 7790. Is that right?

A. This -- this second document for
Event 255, is Document ID 7790. That's correct.

Q. Right. And that's in Appendix C,
Standard Chartered, Axis launch payment services
with Ripple Tech, correct?

A. Correct.

Q. All right. If we could go to the
press release from November 22.

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[REDACTED]
This will be the CoinDesk.

So I think this will be Exhibit 7.

(Press Release titled "Standard
Chartered, Axis Launch Payments Service
with Ripple Tech" was marked Exhibit 7 for
identification, as of this date.)

MR. MOYE: I'm sorry. I have 6. Did
I miss one?

MR. FIGEL: I had 6 as his declaration
from [REDACTED].

MR. MOYE: Got it. Thank you.

Q. Do you recall looking at this press
release?

A. It seems familiar, yes.

Q. And this talks about a new
cross-border platform that's being built on top
of technology developed by Ripple. Correct?

A. Uh-huh.

Q. And if you look at the last paragraph,
could you just read the -- the first sentence of
the last paragraph.

"Not included."

A. Not included in the cross-border
platform is Ripple's XRP digital asset. The

spokesperson for the start-up confirmed that SC -- which I assume is Standard Chartered -- and Axis are not using XRP to facilitate transactions between Singapore and India.

Q. So fair to say that the events described in this press release would not lead to increased utilization of XRP, correct?

A. As described here, this particular product, it says it is not using XRP.

It's a cross-border payment platform built on top of Ripple technology. But this particular technology, it says, is not using the XRP token.

Q. Can you tell us why you didn't exclude Event 255, from your analysis on consumer and product announcement events?

A. Because this is an announcement of banks using Ripple technology to effect cross-border payments. The particular corridor, I agree, it says it's not using XRP. But this is, I would say, an expansion or enhancement to the ecosystem that Ripple is interested in building.

It is an interesting question, it

1 [REDACTED]
2 seems to me, to know whether or not this event
3 moved XRP prices. May it did; maybe it didn't.

4 Q. He didn't perform a test to determine
5 whether it didn't or it didn't even though it
6 was an interesting question, correct --

7 A. I --

8 Q. -- Dr. [REDACTED]

9 A. I did not look at this event in
10 isolation to determine whether or not to include
11 it in the study. I do not know, sitting here
12 today, whether XRP prices move following this
13 event or whether they do not.

14 Q. Now, if you go to the second paragraph
15 of this release, you see where it says,
16 According to SC's release?

17 A. I'm sorry, where?

18 Q. Second paragraph, second line at the
19 right.

20 A. Yes.

21 Q. And SC presumably is Standard
22 Chartered?

23 A. That would be my interpretation.

24 Q. Did you go to -- look at Standard
25 Chartered's release?

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[REDACTED]

A. Unless it was in the Ripple set, if they didn't link to it, no, I didn't go look at it.

Q. Why not?

A. I didn't see the need to.

Q. Do you know how many other press releases you considered in which you included as an event an announcement about a customer who was using a Ripple-related product that did not include the use of XRP?

A. In many of the announcements, it's difficult to know explicitly whether XRP is going to be utilized or not.

It struck me as an interesting question to know if announcements of this type, announcing new customers using Ripple technology, whether that moved XRP prices or not.

Your expectation might be that this announcement wouldn't. You might be right.

Q. And just so the record's clear, even though you find that to be an interesting question and even though you acknowledge that at least with respect to this press release,

1 [REDACTED]
2 there's not a direct increase in the utilization
3 of XRP, you didn't test to see whether it was
4 statistically significant. Correct?

5 A. I included it in a set of events and
6 tested the joint significance of that set of
7 events.

8 To the extent that this one has
9 nothing to do with XRP and XRP prices don't
10 react, my results get a little bit weaker.
11 That's -- that would be the downside.

12 Q. Why do they get weaker?

13 A. Well, if you add an event -- I mean,
14 if you add an event and there is no price
15 reaction, that makes the joint significance of
16 your set of events weaker.

17 Q. So the 400 or so events that you
18 excluded, had you included them, would have made
19 the results of -- the joint significance of the
20 set of events weaker. Correct?

21 A. Meaningless and almost surely weaker.

22 But the important point is that it's a
23 meaningless exercise to run.

24 Q. Let's go to -- apologize for having to
25 go back and forth like this -- page 5 of

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[REDACTED]

Appendix C.

You with me?

A. Uh-huh.

Q. And you see there's three events, or three -- I guess press releases or documents that you associate with Event 296.

A. Yes, I see three documents with Event 296.

Q. And then going back to page 40, this was not one of the events you excluded from your study with respect to consumer product announcements, correct?

A. I think that's correct, yes.

Q. Did you personally review the documents that you've associated with Event 296?

A. I believe so.

Q. Understood them?

A. I believe I did.

Q. The third document, which you have identified as Document 7758. You with me?

A. Uh-huh.

Q. And the headline of that is, "Ripple Blockchain Networks Adds China Payments Provider."

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[REDACTED]

Do you see that?

A. I do.

Q. Do you know -- why don't we go to that document.

This will be Exhibit 8.

(Article titled "Ripple Blockchain Network Adds China Payments Provider" was marked Exhibit 8 for identification, as of this date.)

Q. And I'm showing you what I believe is Document 7758, which is an -- an article dated February 7, 2018.

A. Uh-huh.

Q. If you go to the last -- well, let me just read it to you and save a little time. I'm reading to you from this document.

The product differs from Ripple's xRapid solution, which, unlike xCurrent, uses the company's custom cryptocurrency XRP.

So this is another announcement in which a customer utilized a Ripple-related product that didn't require the use of XRP. Correct?

A. It appears to be.

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2 Q. And why didn't you exclude this event
3 from your study if it didn't -- if it announced
4 an event that didn't result in an increased
5 utilization of XRP?

6 A. Because this is an example of a
7 customer and product announcement. A major
8 payment provider in China joining RippleNet
9 using Ripple's technology strikes me as
10 particularly interesting to know whether XRP
11 prices respond to events of this general type.

12 Q. And you don't know the answer to
13 whether there was a statistically significant
14 price impact on XRP as a result of this
15 announcement. Correct?

16 A. This particular event? I don't
17 know -- I don't know the answer to that.

18 Q. Now, as with this one, you -- certain
19 of the events that you identified had multiple
20 documents associated with them, correct?

21 A. That is correct.

22 Q. What methodology did you use to
23 determine whether multiple documents should or
24 should not be associated with a specific event?

25 A. I read the content of the documents to

1 [REDACTED]
2 see if they provided substantively similar
3 information.

4 I looked at the dates of the documents
5 to see if they were adjacent in time, if not
6 simultaneous in time, to determine if they were
7 essentially referring to the same event.

8 Q. And again, this was just your
9 subjective judgment as to whether there was one
10 event or more than one event?

11 A. It's a -- it's a judgment exercise.
12 In many cases, I think there would be very
13 little controversy. You may perhaps find a case
14 where you think there is some controversy. But
15 generally I think it's fairly straightforward,
16 at least in this set of events, to say that
17 certain documents were essentially talking about
18 the same thing.

19 Q. And as I understood your answer, other
20 than reading the documents that you have listed
21 in Appendix C, you didn't do any additional
22 research. Correct?

23 A. Well, again, we -- I -- I looked at
24 the dates of publication. If they were
25 two years apart, that would probably make it

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[REDACTED]

unlikely that they were referring to exactly the same event.

If they're on the same day, or a day apart, or maybe two days apart -- so it was a -- a -- based on the content of the announcement but also some consideration to publication date.

Q. All right. But that's all information that appears within the four corners of the document, correct?

A. Generally, yes.

Q. My question is, did you look outside the four corners of the document to get more information that it allow -- would allow you to have a more informed judgment about whether a series of documents should be correlated with a single event or multiple events?

A. I can't say that I particularly did more than read the documents to see if they were talking about the same thing.

Q. Can you think of any instance where you did anything to investigate whether documents should be associated with a single event or multiple events, other than reading the documents themselves?

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A. Just trying to remember.

There -- there may have been times,
I -- I seem to -- I seem to recall there may
have been times when a document might say --
this is just a -- this is just a -- an example
of type, not a literal quote.

Seven banks join RippleNet, and then
another document, maybe published the same day,
lists seven banks and says, These joined
RippleNet. I may have done a little bit of work
to make sure that these were talk-- that the one
document was talk-- was referring to the same
set.

There may have been instances like
that. I think they were few and far between.

Q. You may have done many things,
Dr. ██████ Do you have a specific recollection,
as you sit here today, of doing that, of looking
beyond the four corners about -- beyond the
four corners of the documents that you pulled
off the -- the Ripple website to investigate
whether they related to one event or more than
one event?

A. Yes, I -- I --

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Q. Which event?

A. I can't tell you which event it was.

There was -- there -- I -- I do recall there was an event. There were documents that were separated by a couple of days of publication, and I wanted to see if they were really describing the same thing. I don't remember what the event was.

Q. Other than that investigation as to that one event, do you recall doing that on any other occasion?

A. I don't have a specific recollection.

Q. Could you now go to page 22, paragraph 48(c)?

A. Page 22.

Yes.

Q. Can you read for the record the sentence you wrote beginning with the word "First."

A. First, the announcement may substantially repeat a previous announcement. I term such announcements as stale.

Second, the nature of the announcement may not have a particular directional

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implication for XRP prices, even assuming the hypothesis of independence is false. I describe such announcements as direction uncertain.

Q. All right. Directing your attention to the events you believe to be stale. Can you tell us what you mean by "stale"?

A. There may be a document published on a certain date that announces some new information, and there may be another document a week later that essentially repeats that information but doesn't appear to be providing new information.

Q. Okay. If we could go to page 3 of Appendix C.

A. Yes.

Q. And directing your attention to Events 11, 12, and 13 in the customer product category.

You with me?

A. Yes.

Q. You identify all those events as -- or the document date for all those events as September 24, 2014. Is that correct?

A. The documented date is September 24,

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2014. Yes.

Q. And you didn't exclude any of these three events from your analysis as stale. Correct?

A. Correct.

Q. So all three of these events -- and these are individual events, right? There are three events here?

A. Three events all on the same day, so they get counted once. You can exclude them if you want. Doesn't make any difference.

Q. And that was all part of your analysis that found the correlation between customer and product news and XRP returns. Correct?

A. That single-event day is part of the analysis, yes.

Q. Let's go to what I believe is Document 7594 in Appendix C, which is titled, I believe, Hundred-year-old CBW Bank, one of first U.S. banks to integrate Ripple's transformational money-transfer protocol.

You see that? I think this would be Exhibit 9.

(Article titled "Hundred-Year-Old CBW

1 [REDACTED]
2 Bank One of the First U.S. Banks to
3 Integrate Ripple as Transformational Money
4 Transfer Protocol Ripple" was marked
5 Exhibit 9 for identification, as of this
6 date.)

7 A. 7594, one of the September 24
8 documents. Yes.

9 MR. MOYE: Are we marking this as 9?

10 MR. FIGEL: Yes.

11 Q. You with me, Dr. [REDACTED]

12 A. Yes.

13 Q. The first paragraph, it suggests that
14 CBW Bank continues its pioneering spirit as one
15 of the first U.S. banks to use the Ripple
16 protocol for modern real-time payments between
17 the United States and other countries globally.

18 Do you see that?

19 A. Yes, I see that.

20 Q. And this, again, is a press release
21 talking about use of the Ripple protocol?

22 A. Yes.

23 Q. What's your understanding of what the
24 Ripple protocol was?

25 A. Some documents seem to describe it as

1 [REDACTED]
2 the open-source blockchain technology. I
3 suppose that's -- that's essentially my
4 understanding of what they mean by Ripple
5 protocol.

6 Q. Go to the second page. I guess it's
7 on the back of the one you have.

8 A. Uh-huh.

9 Q. Can you read the first two sentences,
10 under the heading, About Ripple.

11 A. Ripple Labs developed the Ripple
12 protocol, which makes transacting as easy as
13 emailing. The San Francisco Bay start-up is
14 funded by Google Ventures on --

15 Q. I'm sorry. I don't mean to interrupt,
16 but you're reading about Ripple Labs. I
17 would -- about Ripple.

18 A. I'm sorry.

19 Ripple is an open-source distributed
20 payment protocol. It enables the free and
21 instant transfer and exchange of any type of
22 value, including dollars, yen, euros, and even
23 loyalty points.

24 Businesses of any size can easily
25 build payment solutions -- build payment

1 [REDACTED]
2 solutions, pardon me, such as banking or
3 remittance apps, and accelerate the movement of
4 money on Ripple. Ripple enables the world to
5 move value like information moves today. For
6 more information about Ripple, please visit a
7 website.

8 Q. No mention of XRP, correct?

9 A. XRP does not appear in that paragraph,
10 no.

11 Q. Any -- anything you see in Exhibit 9,
12 to suggest that this document would be
13 associated with the increased utilization of
14 XRP?

15 A. This document describes a bank joining
16 the Ripple protocol. How that might impact XRP
17 prices is an interesting point to study. I
18 include it in a test to see whether there's a
19 correlation, and I found that there was.

20 Q. So you were aware at the time you were
21 doing your event selection that some of these
22 press releases specifically stated that XRP was
23 not going to be used in the product that was
24 being described. Correct?

25 A. In some cases, yes.

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[REDACTED]

Q. And you elected to include those events in your study, notwithstanding your awareness that they explicitly stated that XRP would not be used.

A. Correct. You might have a hypothesis that XRP prices should not react following such announcements. That's a perfectly valid hypothesis to have.

In fact, let's remember that is the null hypothesis of the experiment, is that XRP prices are not going to react following these events. I tested that hypothesis. I was able to reject it.

Q. So if I showed you the other documents that you have correlated with Exhibits 11, 12, and 13 and I showed you that they also didn't involve a product that would require the use of XRP, it wouldn't change the conclusions you're reaching in your report. Correct?

A. No, not at all.

Q. Well, the answer to my -- I had the "correct" question. So the answer is, no, it would the not change --

A. No, it would not change my opinion.

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Yeah.

MR. MOYE: Just for clarification, are you making representation that those other documents do not refer to XRP or describe it?

MR. FIGEL: Why don't we -- if we want, before I make that representation, let me just double-check.

MR. MOYE: Right, because I would ask the same clarification about this document.

MR. FIGEL: I'm sorry. Which document?

MR. MOYE: I would ask whether you're making that same representation about this document. Exhibit 9.

MR. FIGEL: That document, I believe -- this is 9 you're talking about?

Well, this document, we can ask Dr. ██████████

Q. Do you see anything in this document to suggest that the product or the institutions described here, will be using XRP in any of the products?

A. I certainly don't see any -- I don't

1 [REDACTED]
2 see any statement that they're not. I think
3 somebody might read this and think, if they're
4 using the Ripple protocol, they may very well be
5 using its native digital token, XRP.

6 So I -- I can imagine that some people
7 might read an announcement like this and think
8 that XRP is being used. But it doesn't say --
9 that I can see, it doesn't say whether it is or
10 isn't.

11 But in any event, it wouldn't -- it
12 wouldn't alter my opinion.

13 Q. All right. So let's go to -- just --
14 I will withdraw my representation so we don't
15 have any confusion about misleading the witness.

16 MR. MOYE: Fine. Thanks.

17 Q. Let's go to Document 79 -- I'm sorry.
18 My eyes are getting bad, too. I believe it's
19 7595.

20 And that is, I believe,
21 Cross River Bank to integrate Ripple for
22 real-time international payments.

23 Do you see that?

24 A. I do.

25 MR. FIGEL: We'll mark that as

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Exhibit 10.

(Article titled "Cross River Bank to Integrate Ripple for Real-Time International Payments Ripple" was marked Exhibit 10 for identification, as of this date.)

Q. Have you seen this document before,
Dr. [REDACTED]

A. I have.

Q. This is a document with the same date,
as Exhibit 9, that you have included as a
separate event.

Do you see that?

A. Yes.

Q. If you recall from Exhibit 9 --
withdrawn.

What do you understand the substance
of the information included in Exhibit 10?

A. I understand it to be substantially
similar to Exhibit 9, just a different bank
joining the Ripple protocol.

I believe there also -- there's an
article or a press release from Ripple which I
think joins these two things and talks about

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[REDACTED]

both of them in the same context. But --

Q. And do you see anything in this document to suggest that the banks or the products that are being described contemplate the use of XRP?

A. Well, I certainly think somebody might draw that inference. If they're joining the Ripple protocol, they might reasonably think that they're going to use its native token. It doesn't say, We will use XRP. And I don't see that it says, We will not use XRP.

But again, that's -- it doesn't really have any bearing on my opinion.

Q. Now let's go to Event 13. That's associated with three documents. Is that correct?

A. Yes.

Q. Actually, four documents.

A. Yes, four.

MR. MOYE: That's so small. I'm sorry.

MR. FIGEL: Yeah, I know.

Q. So the first of these four documents that you correlate with Event 13 have the

1 [REDACTED]
2 headlines, Two U.S. banks are ready to embrace
3 the Ripple protocol allowing instant global
4 money transfers.

5 Do you see that?

6 A. I do.

7 Q. Let's -- let me show you what we
8 believe is -- it's 11, but it is the article
9 that says -- yeah, it's 7923, Two U.S. banks are
10 ready to embrace.

11 MR. MOYE: Do you want him to look at
12 it?

13 MR. FIGEL: I think so, yeah.

14 Well, why don't we do -- let me see if
15 I can cut through this.

16 Q. We have four press releases or four
17 documents that you associate with a single
18 event, correct?

19 A. Yes.

20 Q. And we have two other events with
21 documents that you associate with separate
22 events?

23 A. Yes.

24 Q. All occurring at or about the same
25 day?

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[REDACTED]

A. On the same day. I think that's --

Q. Well --

A. -- an important point.

Q. Some are the 24th, some are the 25th?

A. But the event day, I believe I assign
9/24 to all.

Q. So why do you -- why did you decide to
treat those various press releases as different
events?

A. Since they're all on the same event
date, it's immaterial how I do that. I could
have grouped them all together as -- and given
them one event number, it wouldn't make any
difference.

One document talks about CB -- or
Cross River Bank, the other talks about
CBW Bank, and then you have a series of
documents that talk about both.

They all came out basically on the
same day and maybe one came out the following
day. The event date is September 24. We could
call that one event, we could call it
ten events.

Q. How do you know, then, which of the

1 [REDACTED]
2 various announcements are associated with the
3 statistically significant price return on that
4 day?

5 A. Well, I don't know that there is a
6 statistically significant price return on that
7 day. But in any event, it doesn't make any
8 difference to me which one of them is.

9 Recall that Ripple Labs has to take
10 the position, or has taken the position, that
11 none of them can be driving the price. Whether
12 it was the C-- again, assuming there was a
13 significant return on that day, which I -- I'm
14 not conceding is true, I don't know if it's
15 true, but even if it were true, it doesn't make
16 any difference to my opinion whether that was
17 driven by the Cross River Bank joining or the
18 C-- I keep saying CBW. Yeah, CBW Bank joining.

19 It -- it wouldn't make any difference
20 to my opinion if it was a little of one, a
21 little of the other, a little of both.
22 Ripple Labs has taken the position that there
23 would no association, it couldn't be either one.
24 So it -- it doesn't matter to my analysis which
25 one it is.

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Q. So if I understand your answer, all your methodology is seeking to prove is that on one day and one action by Ripple Labs, if there is a correlation, that you have disproved the hypothesis you're seeking to disprove; is that correct?

A. No, that's not correct at all.

Q. Well, you just said, if I understood it right, that what you understood Ripple to be saying is that no Ripple action ever had an impact on the price of XRP. Correct?

A. I understand Ripple disputes that the XRP market looks to them to create value, and they dispute -- also some of the expert reports they submitted in this matter dispute that there's any connection between Ripple Labs and XRP prices.

Q. And so what exactly is it that you believe your study is relevant to with respect to the issues you just identified?

A. I'm testing that hypothesis.

Q. Well, which hypothesis? You named about five.

A. I think I've named one. I'm testing

1 [REDACTED]
2 the hypothesis of whether news about Ripple's
3 actions and news about Ripple is correlated with
4 significant XRP price increases.

5 That is the essential statistical and
6 economic analysis of my report. And I find,
7 through a variety of measures, that the
8 hypothesis that they are independent can be
9 rejected at any reasonable degree of
10 significance.

11 Q. And how many days do you have to find
12 a correlation between a Ripple action and a
13 price impact on XRP for you to reach the
14 conclusion that you reach?

15 A. I -- I'm not aware of a bright-line
16 number. We can -- you know, some categories I
17 test. For instance, the milestone category has
18 as few as -- what is it, six or eight events. I
19 think it's eight.

20 That is actually a large enough sample
21 to test.

22 And then, of course, other categories
23 have many more events. So I don't have a
24 bright-line number in mind.

25 MR. FIGEL: I can't remember what time

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we got on the record.

MR. MOYE: Close to 1.

MR. FIGEL: Close to an hour, so
should we take a break?

MR. MOYE: Sure.

THE VIDEOGRAPHER: We're going off the
record at 2:25 p.m.

(Recess from 2:25 to 2:40.)

THE VIDEOGRAPHER: We're back on the
record at 2:20 [sic] p.m.

Q. All right. Dr. ██████████ if you could go
to your -- Exhibit 1, your report, and go to
page 20, paragraph 45.

A. Yes.

Q. You look in the middle, paragraph 45,
you write, If there is a statistically
significant price reaction, and if certain
conditions can be established, then one might
conclude the market reacted significantly to the
announcement.

Correct?

A. Yes, I see that.

Q. And in Footnote 57, you describe the
conditions that need to be established.

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[REDACTED]

Correct?

A. I -- I don't intend it to be an exhaustive list, but it's certainly some of the conditions. Yes.

Q. And -- and one of them, in romanette i, is, There is no other confounding news that day which might explain such movement. Correct.

A. Correct.

Q. What's confounding news?

A. Confounding news is generally information released on or about the same time as the -- let me back up.

There's an event that you're interested in. Confounding information would be news released on or about the same time, which might reasonably be expected to impact the security price that you're questioning.

So a canonical example might be ABC Enterprises issues a corrective disclosure on January 1 and the stock price drops. Everybody agrees that the stock price drops. People want to say, Well, the stock price dropped because of the corrective disclosure.

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And somebody comes along and points out, Well, wait a minute, ABC Enterprises was also named as a defendant in a class action suit on the very same day, so how do you know if it was the corrective disclosure or the lawsuit.

That would be an example of confounding information.

Q. And so if there are compounding events present on a given day in which there's a statistically significant price impact, that would undermine the confidence that you could have that one event or the other caused that price impact. Correct?

A. It -- it could. Yes.

Q. And the presence of confounding events would undermine the reliability of any finding you made in this case through your event study, correct?

A. Potentially.

Q. Well, in your own judgment do you believe it was necessary to establish that there was no confounding news on an event day, with whatever the Ripple event that you identified was, before you could reach a reliable opinion

1 [REDACTED]
2 that the market for XRP reacted in a
3 statistically significant manner to the Ripple
4 news event?

5 A. Yes, I think one has to take steps to
6 rule out the likelihood of confounding
7 information before drawing any sort of causal
8 inference from a correlation result.

9 Q. And for the three-day event window
10 that you use primarily in your study to support
11 your opinion, would it also be necessary to rule
12 out confounding events on each of those
13 three days?

14 A. One would -- one has to consider the
15 possibility of confounding information, I agree.

16 Q. Okay. What steps did you take to
17 ensure that the analysis in your -- withdrawn.

18 What steps did you take to satisfy
19 yourself that there were no confounding events
20 on any of the Ripple news event days that you
21 considered?

22 A. So I took a number of steps.
23 So this might be one of those long
24 answers.

25 Q. If you must.

1 [REDACTED]
2 A. So let's begin by thinking about
3 what -- what this confounding information might
4 be. It might be news that impacts the digital
5 token market broadly.

6 Well, we can rule that out. We can
7 rule that out because 18 of the 20 regression
8 models that I consider control for other digital
9 token returns such as bitcoin.

10 So if it's simply that XRP prices are
11 going up at the same time that the -- the
12 broader cryptocurrency market is going up, we
13 can rule that out as a possible explanation.

14 Another type of confounding
15 information, the example that I gave earlier,
16 is -- is company-specific information.

17 Well, we can rule that out, too.
18 Because, of course, Ripple Labs has taken the
19 position that such information does not exist as
20 a matter of logical possibility. Because
21 they've said nothing that -- there --
22 Ripple Labs is independent of the XRP market, so
23 there's nothing that could be announced about
24 Ripple Labs that should move XRP price.

25 So we can rule that out as a

1 [REDACTED]
2 possibility.

3 What we're left with is speculating
4 that there might be something which wasn't
5 specific to Ripple Labs, didn't impact the
6 broader market, but impact the XRP market
7 uniquely. Okay. Let's consider that.

8 This would have to be something, first
9 of all, that's only good news, because,
10 remember, we look for -- one of the robustness
11 checks that I do is to see if there's a
12 correlation between these event days and
13 negative returns. And there is no correlation.

14 So this has to be good news, unique to
15 the XRP market.

16 Okay.

17 It has to be good news, unique to the
18 XRP market, that Ripple Labs chose not to
19 discuss or link to or reference in any way,
20 among 700 articles on its news page.

21 Okay.

22 It would have to be good news for XRP
23 markets that, on the other hand, didn't impact
24 the number of XRP accounts, because remember,
25 that is a control variable in half of the

1 [REDACTED]
2 regression analyses that I do.

3 It would have to be something that is
4 released exactly on the day in question.

5 It can't be the second day, and it
6 can't be the third day. And the reason I say
7 that, again, is one of the robustness checks
8 that I did was to look at that one-day event
9 window, and we continue to get the statistical
10 result that we've been discussing all along.

11 It couldn't have been something that
12 came out before the news day in question. How
13 do I know that? Because I looked a few days
14 before the news event, and there is no
15 correlation between these events and XRP price
16 increases.

17 So I think it -- it's -- it becomes so
18 implausible to suggest that this hypothetical
19 confounding news could be driving these results.
20 I think that possibility can be dismissed.

21 Q. You've referred several times to what
22 you believe to be Ripple's position that no
23 action by Ripple had any impact on the price of
24 XRP. What's your basis for that?

25 A. That's my understanding from some of

1 [REDACTED]
2 issues that are being considered in this
3 litigation. That's, of course, the position
4 that Dr. Ferrell has taken, and his experts
5 report.

6 I believe that was position taken in
7 Ripple Labs' Wells submission that I looked at
8 some time ago.

9 That's just my general understanding,
10 that they maintain they are independent of the
11 XRP market.

12 Q. So other than the inferences you draw
13 from the Ferrell report, is there anything in
14 writing that you are -- that you can identify,
15 that has caused you to reach that opinion?

16 A. I -- I read the complaint some time
17 ago. I -- I don't remember if it's specifically
18 in there.

19 I think in some of the deposition
20 testimony that I reviewed, executives of
21 Ripple Labs are asked repeatedly about their
22 impact on XRP prices, and they insist that
23 there's no connection.

24 I -- I really didn't think that this
25 was a contentious or controversial point.

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[REDACTED]

Q. Can you recall which depositions you read that caused you to have that understanding?

A. I believe -- I mean, I know the depositions were lengthy.

I think there's discussion on XRP and Ripple Labs and price in the deposition of Mr. Garlinghouse and Mr. Larsen and Mr. Schwartz, and -- maybe Monica Long and probably others. I don't -- I don't claim to have a photographic memory of which depositions include which.

I believe that if we review the deposition transcripts, we'll find questions and answers on this subject.

Q. As you sit here today, other than the Wells submission, you can't think of a specific transcript or document in which Ripple Labs has stated that no action by Ripple would have any impact on the price of XRP.

A. I -- again, I would point to the deposition transcripts. At least the officers of Ripple Labs have said statements to that effect, I believe.

Q. And if you were wrong about that

1 [REDACTED]
2 assumption, would that change the results of
3 your analysis?

4 A. No. That would simply mean if
5 everybody wants to stipulate that Ripple --
6 things Ripple Labs does moves the market, then I
7 suppose we would all stipulate to that.

8 Q. I'm going back to the steps you took
9 to identify confounding events.

10 As I understood your answer, you did
11 not seek on a particular day to identify whether
12 there were actions or events that could have had
13 an impact on the price of XRP. Is that correct?

14 A. No, I don't think that's correct.
15 Again, I took -- I took a number of steps that
16 I've described, so that with -- with -- so that
17 I could reasonably rule out the possibility that
18 the statistical results I was observing were
19 being driven by confounding events outside of
20 the new set that I'm studying.

21 Q. Did you do any investigation or
22 research to determine whether there were any
23 other events that occurred on a day in which you
24 found a overlap between a statistically
25 significant price return on XRP and the 105

1 [REDACTED]
2 Ripple events that you tested for to see whether
3 there was anything else happening in the world,
4 in the market for -- that could have had an
5 impact on the price of XRP?

6 A. Well, again, there was no need to do
7 what you're suggesting. It couldn't -- it
8 couldn't be a factor that impacts the -- the
9 digital token market broadly. I don't have to
10 go look for it. It can't be the case. It can't
11 be something specific to Ripple Labs. I don't
12 have to look for it. It can't be the case as a
13 logical possibility.

14 And I have enough statistical controls
15 to -- there seemed no point to this sort of
16 exercise that you're describing.

17 Q. So you have such confidence in your
18 economic modeling that you can rule out with
19 certainty, under oath, that there's not an event
20 that occurred on a day in which there was -- a
21 confounding event that occurred on a day in
22 which you found a statistically significant
23 price impact -- price return. Correct?

24 A. No, I didn't say that.

25 Could you find and -- could you find a

1 [REDACTED]
2 particular day where you want to point to
3 something and argue that it might be
4 confounding? And we could have a discussion
5 about it.

6 I am confident that the statistical
7 result that the null hypothesis of independence
8 can be rejected, I do not believe that that
9 result would change through any exploration of
10 confounding news.

11 Q. You would agree, though, that if there
12 was confounding news on an event day with a
13 statistically significant price return of XRP,
14 that that would undermine the reliability of
15 your opinion. Correct?

16 A. Again, no. We'd have to see -- no.
17 We'd have to see what kind of news we're talking
18 about. I mean, we're speculating about things
19 that might be. We'd have to review it, what it
20 is. We would have to demonstrate that news of
21 that type does move XRP prices.

22 There would be an awful lot of work
23 that we would have to do before we could even
24 determine that the news actually was
25 confounding, let alone that it had any bearing

1 [REDACTED]
2 or any impact on my overall results and overall
3 conclusion.

4 Q. There were 105 days in which there
5 were Ripple events. Correct?

6 A. One of the sets of categories I study
7 is based on 105 days, yes.

8 Q. And on 24 of those days, you found a
9 coincidence with a statistically significant
10 impact on Ripple returns. Correct?

11 A. According to one model, yes.

12 Q. And just so the record is clear, you
13 took no steps with respect to those 24 days to
14 do any sort of investigation or review to
15 determine whether there was an event that
16 occurred on that day?

17 A. No. Again, I took a number of steps.
18 May not like the steps that I took. But I took
19 a number of steps to make sure that these
20 results were not being driven by confounding
21 information.

22 Q. Well, the steps you took were the ones
23 described, which were effectively built into the
24 models that you created. My question is a
25 different one. Did you go on Lexis or Nexis on

1 [REDACTED]
2 a day in which there was a -- on one of those 24
3 days to see, is there anything else happening
4 that might explain this result?

5 A. The steps that I took are in some
6 cases matters of model design; in some cases
7 they are matters of variations of model runs to
8 check alternative explanations, such as the
9 possibility of confounding news.

10 I'm satisfied that these results are
11 not being driven by hypothetical, speculative
12 possibilities of maybe something else.

13 Q. Let's go back to Exhibit 4, if -- I'm
14 sorry.

15 It's Exhibit 4, which is the
16 Litigation Services Handbook.

17 And if you look -- we are going back
18 to the paragraph we looked at before. And if
19 you could just read the -- the -- the fourth of
20 the four conditions that need to be present for
21 an event study to be able to make the kind of
22 correlations that you claim to have made.

23 MR. MOYE: Is this 19.2 at A?

24 MR. FIGEL: Yes, and then sub 4.

25 MR. MOYE: Thanks.

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[REDACTED]

A. It is possible to isolate the effect of the news from market, industry, and other firm-specific factors simultaneously affecting the firm's stock price.

Q. Do you agree with that?

A. Do I agree with -- what are you asking me to agree with?

Q. That that is a condition that must be present in order for an event study to reveal the effects of an event on -- it talks about future cash flows, but I assume you would agree that price impact would also follow from -- from the -- the correlation that the author is making here.

A. If the purpose of the study is to assign causality to a particular event, then one needs to take steps to rule out the possibility that it might have been some other event.

Q. Did you identify any day in which -- any day of the 24 -- let's just try to keep the models and the studies clear.

Of the 24 days in the study that you described in paragraph 100, did you find any confounding event?

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[REDACTED]

A. Please define what you mean by
"confounding event" when you ask that question.

Q. I mean what you said, which was an
event -- well, let's just make sure the record
is clear.

Why don't you define, for the purpose
of answering my question, what you understand
confounding event to be.

My question is, on any of the 24 days
in which you found the coincidence of a -- a
price impact and a Ripple news event, did you
identify a confounding event on that day?

A. As I would define it, no.
There is -- for example, one of the
events simultaneously lists, I think it's
Series B funding along with new product, new
customers on RippleNet. I don't consider that
confounding.

I -- it's not necessary for me to
assign causation to one or the other. It's
enough that prices moved around that
announcement.

So the answer to your question is, no,
I didn't find anything that I would consider to

1 [REDACTED]
2 be confounding.

3 Q. What factors, if any, in your model,
4 other than account growth of -- of XRP accounts,
5 do you contend are unique to XRP?

6 You understand my question?

7 A. I think that I do.

8 Well, in half the models that correct
9 for serial correlation, we have the lagged
10 return of XRP itself, on the right-hand side of
11 the regression, I suppose that would qualify.

12 Q. Anything else?

13 A. No, there's nothing -- there's no
14 other right-hand side control factor that is
15 unique to XRP, besides its account growth and
16 its lag return.

17 Q. And just so the record is clear, I
18 mean, it's clear what you've testified to with
19 respect to what you feel you've done to identify
20 and rule out confounding events.

21 I just want to ask you whether there
22 are additional steps that you did or did not
23 take. You with me? In other words, I'm not
24 looking for you to repeat what you've done. I'm
25 asking a specific -- I'm going to ask you a

1 [REDACTED]
2 series of specific questions about whether you
3 took particular steps.

4 A. Okay.

5 Q. All right. And let's just -- for the
6 purposes of keeping the record clear, we're
7 going to talk about the 24 days of confluence
8 that you identified in paragraph 100 of your
9 report. You with me?

10 A. All right.

11 Q. On any of those days, did you do a
12 news review to see whether there was any news
13 about the cryptocurrency markets generally?

14 A. Yes.

15 Q. What specifically did you do to look,
16 on that particular day, for news about the
17 cryptocurrency markets?

18 A. So on some days which were -- which
19 had statistically significant price returns
20 associated with them, I directed my team to take
21 some extra steps to make sure that certain facts
22 about those days were known.

23 Some of those steps included
24 LexisNexis searches around certain keywords
25 related to XRP.

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[REDACTED]

Q. Anything else?

MR. FLUMENBAUM: Would you lean up,
please?

THE WITNESS: Sorry, I thought the
microphone was working.

A. I'm sorry, what's the question?

Q. Anything else?

A. I don't think anything uniquely to
those days. Again, we -- we -- I want to be
careful. We checked the UTC -- I'm trying to
remember if we checked the UTC publication date
on the host web pages for every day or only days
associated with statistically significant
returns, and I think it may have been the
latter. I -- I'm fairly sure it was the latter.

So that means we -- we also would have
clicked on the web page hosting the document,
looked at the -- now I'm going to get this
wrong, but the HTML code or the XML code or --
some computer scientist is going to tell me I
got the wrong term -- but the underlying script
for hosting the web page to look for the -- the
UTC date stamp for the web page, and did
Internet searches to see -- to look for other

1 [REDACTED]
2 information around these events and XRP.

3 That's what I can recall doing.

4 Q. What was the work product that was
5 generated in connection with these efforts to
6 conduct Internet searches on the days in which
7 there was the event?

8 A. I don't know that it necessarily led
9 to the creation of work product, if analysts
10 were searching for keywords and not finding
11 results. I don't necessarily know that work
12 product was created.

13 Q. So was there any document that you or
14 your staff has that would reflect the efforts
15 that you claim were made to determine, based on
16 an Internet search or a LexisNexis search on one
17 of those 24 days, as to whether there was
18 confounding events?

19 A. Well, I think in my report I discuss
20 the steps we took, for instance, to carefully
21 date the events, and I think in my report I also
22 mention conducting Internet searches around key
23 dates.

24 Q. Can you show me where in your report
25 you reported that?

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[REDACTED]

A. I'm happy to, if I can go through it.

(Witness reviewing document.)

MS. KIM: Paragraph D, Appendix 18.

THE WITNESS: Right, Appendix D.

Thank you very much.

A. We talk about how we search for UTC
dates. And part of that process was searching
for keywords around -- around those dates.

Q. Can you point to me the paragraph or
the portions?

A. Yes, it's Appendix D, paragraph 18.

Q. All right. As I read paragraph 18,
that looks to confirm the dates of events.

A. Yes, but it also refers to Factiva,
LexisNexis and Internet searches around keywords
related to the event.

Q. To determine if the event was reported
earlier through some other news channel. It's
the same event. I'm asking for a search for
confounding events.

A. Yes, but in -- in conducting a
LexisNexis and Internet search with keywords
related to XRP, confounding events could very
possibly have come up. If they had come up, I

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would have noted -- we would have taken note.
No confounding events came up.

Q. The sentence you wrote, Dr. ██████████ is
that you conducted these various Internet
searches to determine if the event was reported
earlier through some other news channel. So
you're looking for stale news there.

A. Correct. I mean, that -- that was the
principal motivation for doing it, but your
question was if we did other research around the
24 days. The answer is yes. And you asked if
we did -- if we did Internet searches, the
answer is yes.

Q. Well, let me be clear about my
question to make sure we have a clear record
here.

Did you do Internet searches, or any
other searches, in an attempt to identify
confounding events on the 24 days in which --
that we've been talking about?

A. We -- I did not do additional searches
beyond what's described here for the purpose of
searching for confounding events.

I was satisfied with the statistical

1 [REDACTED]
2 properties and analytical methods that I adopted
3 and didn't feel that such efforts were
4 necessary.

5 Q. So the sentence you just identified as
6 conducting Internet searches was not for the
7 purpose of identifying confounding events on any
8 one of those 24 days. Correct?

9 A. It was not for that purpose, it may
10 have had that effect. It was for the purpose of
11 making sure that we dated events correctly.

12 Q. So you didn't direct your staff, and
13 you didn't personally, conduct any Internet or
14 other searches in order to determine whether
15 there were confounding events on any of the
16 24 days that we're talking about?

17 A. No. Again, it wasn't necessary.

18 Q. Based on your experience, does the
19 daily trading volume of financial -- of a
20 financial instrument on a given day have an
21 impact on the market price of that instrument on
22 that day?

23 A. That's a -- that's a difficult
24 question. And I -- I don't know that there's a
25 settled answer in the literature about the

1 [REDACTED]
2 relationship between volume and price. I don't
3 know that I have a view on the relationship
4 between volume and price.

5 I don't think I -- I would say that
6 that's not settled.

7 Q. Well, have you -- are you aware of
8 studies that look at price discovery of common
9 stock on public -- public exchanges?

10 A. Generally, yes.

11 Q. And isn't it a fact that those studies
12 generally suggest that more thinly traded stocks
13 are more volatile and more price sensitive to
14 news?

15 A. I would agree that there is a general
16 result that volume may relate to volatility,
17 within some thresholds perhaps. But not
18 necessarily on the level of price.

19 Q. Well, isn't volatility a proxy for --

20 A. No.

21 Q. -- price movement?

22 A. For price movement but not for the
23 level of price. The price is a hundred dollars,
24 the price is a hundred dollars, if there's a lot
25 of volume or a little volume.

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Could that price fluctuate more or
less depending on the depth of the volume?
Perhaps.

Those are different questions.

Q. Well, then, do you agree with me as a
general proposition, financial instruments that
are more thinly traded are more volatile?

A. As a general proposition, I think
that's consistent with empirical findings.
Again, there may be exceptions here or there.

Q. Any reason that that would not carry
over to the market for digital assets?

A. I -- I have no reason to think that
digital assets are necessarily different in that
respect.

Q. Now, earlier you testified about
bitcoin essentially being the big whale in the
cryptocurrency market. Is that a fair lawyer
summary?

A. I would say that that's a fair
summary.

Q. And it follows that a digital token or
asset like lumens has less trading volume than
bitcoin on a given day.

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[REDACTED]

A. Not having specifically looked at it, that would certainly be my expectation.

Q. And do you have a view as to whether the trading volume of XRP was more or less than the trading volume of bitcoin?

A. Again, my expectation is that on most days that you would want to look, you would probably find the trading volume was less.

Q. What about Ether? Same question, relative to bitcoin?

A. Again, I would expect it would be less than bitcoin on any day you select at random.

Q. So with respect to an event that would apply generally to cryptocurrencies, would you expect to see a different price impact on lumens or Ether as a compared to bitcoin?

A. I -- I don't know. I just -- I just -- it would depend on the event.

I don't know.

Q. Well, a more thinly traded financial instrument responding to the same news, presumably, based on what you said, would be more volatile, correct?

A. More volatile, I mean if -- if China

announces that it's shutting down the digital token market, you might expect that that would negatively impact almost all digital tokens.

Q. And would the price change be the same -- would you expect the price change to be the same for all digital tokens?

A. Certainly not. Bitcoin is trading at tens of thousands of dollars per token, and most tokens are trading at a fraction of a penny per token; therefore, the price change would almost certainly not be the same. The return may not be the same, but there's no particular reason to think it would be identical.

Q. And where would you expect to see larger percentage changes? You call it price return.

A. I -- I don't know. I don't have a prior -- and I don't -- it would depend on the news. I don't know.

Q. That was something that you could have -- withdrawn.

There are economic empirical models that allow an economist to test for the impact of trading volume on price. Correct?

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[REDACTED]

A. Yes. Such models exist.

Q. And you didn't incorporate any of those models into your regression analyses in which you were estimating the return of XRP based on the models that referred to bitcoin, Ether, and lumens, correct?

A. I generally followed the accepted methodology and peer-reviewed academic literature and applied similar regression models you'll find there.

No, I did not incorporate a factor related to trading volume.

Q. And the same is true for XRP, correct?

A. Well, all of these are models of XRP.

Q. No. I'm talking about when you were using -- let's just break it up into two pieces. You have your 20 models or so that show each model and what the components of each model were, correct?

A. Correct.

Q. And in none of those models did you include reference to the trading volume of any of those digital assets. Correct?

A. Correct. Trading volume not a control

1 [REDACTED]
2 factor in any of my models, as it is not a
3 control factor in peer-reviewed event studies
4 related to crypto markets.

5 Q. And similarly, when you were measuring
6 the price impact of XRP, you didn't consider the
7 volume of XRP that was traded in a given day,
8 correct?

9 A. I did not consider the volume. No, I
10 did not.

11 Q. And why not?

12 A. Following accepted methodology, it's
13 not typically included in an event study model
14 of the type that I'm doing.

15 What the -- one concern is that, for
16 instance, volatility, generally moves over time.
17 That's a concern. And that's one of the reasons
18 that researchers, myself included and the
19 researchers in the literature that I cite to,
20 use what are called rolling estimation windows,
21 precisely to allow changing volatility and
22 changing relationships, between returns and
23 control factors.

24 That's -- that's a common methodology
25 for addressing these sorts of concerns, and

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that's what I did.

Q. Show me where in your report you make reference to rolling estimation windows, to account for changing volatility and changing relationships.

A. All right. I'll start Appendix D this time.

(Witness reviewing document.)

A. Appendix D, paragraph 10.

Q. Other than paragraph 10, do you describe in any other place in your report what steps you took to address changes in volatility and change in relationships over time?

A. Well, section -- changing relationships over time is the subject of Section 7 of my report?

So Section 7 is entirely devoted to documenting changing relationships between XRP and at least bitcoin and Ether, just to make the point that relationships change over time.

I have to flip back to my earlier methodology section to see if I relate the rolling window specifically to volatility. Of course, I discuss rolling windows.

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(Witness reviewing document.)

A. So I haven't read it yet, so I --
let's see if it talks about volatility. But
paragraph 42 and the footnotes there, 51 and 52,
I'm just reading them.

Footnote 51, A well-accepted method
for performing the event study is to estimate a
regression model over some period of time to
quantify typical relationships.

That -- that establishes the -- the --
the commonality of the six-month estimation
period. Footnote 52 in my analysis, the
estimation window, i.e., the 180-day window used
to estimate the regression, will change with
different dates of interest. This is typically
referred to as a rolling estimation window since
the estimation is rolled forward for each
subsequent date of interest.

By using a rolling estimation window,
I'll allow for the relationship between the XRP
prices and the explanatory factors as well as
the volatility of the random factor to change
over time. Use of a rolling model to account
for changing volatility and evolving

1 [REDACTED]
2 relationships among factors is often applied and
3 is accepted in peer-reviewed literature. See --
4 and then there are various citations.

5 Q. Anything else?

6 A. I'm sorry?

7 Q. Anything else?

8 A. Possibly, but I don't think so. I
9 imagine that those are the only places I discuss
10 it.

11 Q. In Appendix B to your initial report,
12 Exhibit 1, you list the complaint filed by the
13 SEC in this case as one of the documents that
14 you considered. Is that correct?

15 A. Strictly documents relied upon, but
16 yes.

17 Q. Did you read the complaint?

18 A. I did.

19 Q. How many times?

20 A. I don't know.

21 Q. Did you understand it?

22 A. I -- as a layperson reading a legal
23 filing, I would like to think I understood it as
24 well as a layperson would.

25 Q. Do you understand that the SEC

1 [REDACTED]
2 contends that the opinions that you reached in
3 your initial report support the allegations in
4 the complaint?

5 A. I'm sorry. Your question is -- do
6 I -- do I understand that -- I'm sorry. Could
7 you repeat the question.

8 Q. Do you understand that the SEC
9 contends that the opinion reached in your
10 reports support the allegations in the
11 complaint?

12 MR. MOYE: It's a yes-or-no question,
13 right? I'm going to object to the extent
14 you're asking for work product.

15 Q. I'm not asking you about
16 communications with counsel. I'm asking for his
17 understanding about whether the SEC is
18 sponsoring his opinion in support of its
19 theories as outlined in the complaint.

20 A. I would say that -- certainly, yes, in
21 the sense they asked me to conduct the study and
22 they're submitting my expert report as part of
23 their proceedings. Beyond -- I mean, beyond
24 that, I can't say.

25 Q. And you read the report before you

1 [REDACTED]
2 crafted your methodology, correct?

3 A. I assume you mean I read the
4 complaint?

5 Q. I'm sorry. Yes. Read the complaint.

6 A. Yes, I read the -- reading the
7 complaint was one of the very first things that
8 I did.

9 Q. Okay. What's your understanding of
10 the violation of law alleged in the complaint?

11 A. I don't know.

12 MR. MOYE: Object to the extent you're
13 asking for a legal conclusion.

14 Q. And just so Mr. Moye can continue to
15 have a relaxed afternoon, I'm not asking you for
16 communications you had with counsel for the SEC.

17 A. Right. But, I mean, I'm not a lawyer.
18 I'm not -- I'm not qualified to offer a legal
19 opinion.

20 Q. I'm not asking for a legal opinion.
21 I'm asking for your understanding about what the
22 violations alleged in the complaint are.

23 A. Well, answering as just a layperson,
24 I -- my understanding is the SEC believes that
25 XRP should be classified as an investment

1 [REDACTED]
2 contract, and certain requirements that I don't
3 fully understand follow therefrom.

4 Q. Okay. And, again, I'm asking for your
5 understanding. What is your understanding as to
6 why the opinions that you reached support the
7 SEC's contention that XRP, or transactions in
8 XRP, are investment contracts?

9 MR. MOYE: Same objection. Work
10 product.

11 A. I just -- I'm -- I -- again, I'll say
12 it again. I'm not a lawyer. I'm not qualified
13 to offer a legal analysis.

14 I was asked to investigate whether
15 there's -- whether actions or news of actions by
16 Ripple Labs impacts XRP prices. I conducted the
17 best analysis that I could, and I found that
18 there is overwhelming evidence that it does.
19 That's -- that's -- there it is.

20 Q. Have you read the Supreme Court's
21 opinion in Howey -- in SEC versus W.J. Howey
22 Company?

23 A. No, I have not.

24 Q. Are you familiar with the Howey test?

25 A. Broadly familiar with it, yes.

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[REDACTED]

Q. What's your understanding of it?

A. Well, as a layperson, just
recollecting what I think I understood, the
Howey test describes an investment contract as
a -- a -- an investment in a common enterprise
with an expectation to earn profit from the
efforts of a third party or promoter or
something like that.

Q. And are you aware, generally, that
courts apply the Howey test to determine whether
a contract, scheme, or transaction, qualifies as
an investment contract under the federal
securities laws?

A. Again, I'm not a lawyer, I -- I'm not
familiar with the law or the case law or the --
the legal issues.

I do recall the Howey test being
mentioned in the complaint. I assume it is
germane to the discussion, but that's just my
lay understanding.

Q. You write, in paragraph 12A, that
Using a well accepted event study methodology, I
find statistically significant evidence that XRP
prices react to news about Ripple's actions.

1 [REDACTED]
2 Do you see that?

3 A. Yes.

4 Q. And are you aware that the Howey test
5 requires proof that an offeree makes -- the
6 question in the Howey test is whether an offeree
7 makes an investment in a common enterprise and
8 is led to expect profit solely or primarily as a
9 result of the efforts of others.

10 MR. MOYE: Objection. Calls for legal
11 conclusion. Very explicitly.

12 A. So I'm sorry, what is your question?
13 I mean, I recognize those words when the Howey
14 test is being described.

15 Q. Well, what's your understanding, from
16 an economic perspective, of what it means for
17 the price impact on an asset to come solely or
18 primarily from a person or entity?

19 A. As an economist, I don't think those
20 words have very much meaning at all.

21 Very few things, speaking as an
22 economist, could be said to derive solely from
23 the efforts of one person.

24 The -- the stock price of
25 XYZ Enterprises does not depend solely on the

1 [REDACTED]
2 efforts of XYZ Enterprises. So as an economist,
3 I -- I'm not quite sure what meaning or
4 significance I would attach to those words.

5 I'm sure they're well defined legally,
6 but as an economic matter, I -- I don't think
7 it's clear what those words would mean.

8 Q. So as a result, you didn't attempt, in
9 your event study methodology, to answer the
10 question whether offerees or holders of XRP were
11 led to expect any increase in the value of their
12 XRP based solely or primarily on the efforts of
13 Ripple. Correct?

14 A. Since that's not an economic question,
15 I did not conduct an economic analysis of such a
16 question. I conducted an analysis which
17 demonstrates that Ripple Labs -- some of the
18 things Ripple Labs does moves XRP prices.

19 Q. And your methodology didn't rely on
20 any information about the expectations of XRP
21 holders, correct?

22 A. That is correct. I -- I don't know
23 the motives of people who buy XRP. That has no
24 bearing on my analysis.

25 Q. And your methodology didn't seek to

1 [REDACTED]
2 answer the question whether XRP price returns
3 were caused solely by the actions of Ripple.
4 Correct?

5 A. Yeah, I would -- I would say that that
6 is not a question that an economist could
7 answer, whether something is due solely to
8 something else.

9 In -- in the field of economics, I --
10 I'm hard pressed to think of any example of
11 anything that is due solely to something else.
12 If Party A and Party B make an exchange, Party A
13 and Party B are involved, as an economic matter.
14 Again, legally, I mean, perhaps it's a
15 well-defined term.

16 Q. So the answer to my question is your
17 methodology did not seek to answer the question
18 whether XRP price returns were caused solely by
19 the efforts of Ripple Labs. Correct?

20 MR. MOYE: Objection. Asked and
21 answered.

22 A. I would -- I would say, as I testified
23 before, that that question is not an
24 economically well-formed question.

25 Q. And so your methodology doesn't answer

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it. Correct?

MR. MOYE: Same objection.

A. My methodology establishes that
Ripple Labs does things to move XRP prices.

Q. If you would, Dr. [REDACTED] I'd like an
answer to my question. Does your methodology
allow you to answer the question whether the
actions of Ripple Labs are the sole cause of XRP
price returns?

MR. MOYE: Objection. Calls for legal
conclusion.

A. I'm struggling to -- to understand
that as an economist. As an economist, the
question doesn't make a great deal of sense.

That's all I can say.

So -- that's all I can say.

Again, it may be a very well-defined
legal term, but I don't think an economist could
render an opinion one way or another whether
something was due solely to the actions of one
person versus another.

Every -- as I said, every act of
exchange involves at least two parties. It's
just not a -- not a term that economists tend to

1 [REDACTED]
2 use.

3 Q. So you're not offering an opinion in
4 this case that Ripple's actions were the sole
5 factor impacting the price of XRP; is that
6 correct?

7 A. Correct. I -- I -- nowhere do I offer
8 such an opinion. I offer the opinions as laid
9 out in my report.

10 Q. And similarly, your methodology
11 doesn't allow you to answer the question whether
12 XRP price returns were caused primarily by the
13 actions of Ripple Labs. Correct?

14 MR. MOYE: Objection. Calls for legal
15 conclusion.

16 A. Again, as an economist, I -- I -- I'm
17 not comfortable using the word "primarily."

18 What I have -- what I have shown, what
19 I've attempted to show and what I think the data
20 clearly show, is that XRP -- I'm sorry,
21 Ripple Labs does things to move XRP prices.

22 XRP prices react to things that
23 Ripple Labs does. XRP prices react to things
24 that happen to Ripple Labs.

25 That's -- that's what I was asked to

1 [REDACTED]
2 investigate, that's what I did investigate, and
3 that's what I found.

4 Q. And on how many days, in the
5 approximately 2400 days covered by your study,
6 did you find evidence that the price of XRP was
7 statistically correlated with an action of
8 Ripple Labs?

9 A. Well, the only number that I can
10 recall offhand is one that we discussed. I
11 provide an example of one case in my report,
12 Model Number 1, the constant mean model, and
13 under that model, out of the 105 days being
14 tested in Section 6(f), 24 are associated with
15 statistically significant positive XRP price
16 increases.

17 Q. All right. Your methodology did not
18 seek to answer the question whether XRP price
19 returns were caused primarily by the actions of
20 Ripple Labs. Correct?

21 MR. MOYE: Asked and answered.

22 A. I think we asked that question, but --

23 Q. We asked it about solely. Now I'm
24 asking it primarily.

25 A. I thought we also had discussed that

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way, but fine.

Again primarily, the word "primarily" just is not a word that, as an economist, I -- I would apply to an analysis like this, or any other analysis.

If -- if Alice sells an apple to Bob, you could say, Alice sold the apple or you could say Bob bought the apple. I -- parsing out the primary-- who primarily did what is just not something that is usually in the domain of an economist.

Q. And you're not offering an opinion in this case that the XRP price returns were caused primarily by the actions of Ripple Labs. Correct?

MR. MOYE: Asked and answered.

A. As I testified, I -- I was asked to investigate a question, and I found significant evidence, statistical evidence, that XRP prices react to actions by Ripple Labs.

Q. Now, you say "primarily" is not a word that economists --

A. I -- I do -- I'm just wondering how much -- are we coming up on a break? I'm just

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asking.

Q. Sure, we can take a break.

A. I don't want -- I don't want to derail things. If it's convenient at some point.

Q. As I say, we can do this for 16 hours so --

MR. MOYE: No, we can't.

MR. FIGEL: Any time to break is as good as any other time. Let's go off the record.

THE VIDEOGRAPHER: We're going off the record at 3:36 p.m.

(Recess from 3:36 to 3:50.)

THE VIDEOGRAPHER: We're back on the record at 3:50 p.m.

Q. Dr. [REDACTED] do you recall your testimony about how the word "primarily" doesn't -- isn't -- isn't a term an economist would use?

A. Beyond how a -- a layperson might use it, but I meant as a scientific term in a context like this, I don't think it's very well defined.

Q. So take a look at page 22 of your report.

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[REDACTED]

A. Yes.

Q. In the fourth bullet from the top you say, Ripple Commercialization Initiative. Initiative launched by Ripple Labs primarily described as being related to the commercialization or promotion of Ripple's products or technology.

A. Yes.

Q. What did you mean by "primarily" there?

A. I meant that a reading of the announcement and description of the initiative made it sound largely related to commercialization or promotion of its products or the general ecosystem.

Q. So there you're using "primarily" and "largely" synonymously?

A. There I'm using the word "primarily" as -- as used in common speech, I would say.

Q. And going back to your opinion, you're not offering the opinion that the price impact -- any price impact on XRP was primarily or largely caused by actions of Ripple Labs. Correct?

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A. I'm not offering that opinion, that is correct. The -- to -- to insert those words into an analysis like that I just think is economically not well defined.

Q. And -- and --

A. Let me -- if I may finish.

I mean, the value of a citrus grove is going to depend on the weather. It's going to depend on the general conditions of supply and demand for citrus.

So, I -- you know, inserting the word "solely" and "primarily," I don't know what standard needs to be met, or how it would be determined by an economist, to know whether those words, which have a legal meaning, could be applied to -- to a result like this. So I'm -- I'm not going to do it.

Q. And the substance of your opinion is that you found evidence that XRP prices react to news about Ripple's actions. Correct?

A. I think I may have said "select actions." But in substance, yes.

Q. And you found that on about 1 percent of the days during the period that you examined.

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Correct?

24 days out of about 2400.

A. I mean, that's -- that's not a calculation that has any meaning.

One could divide 24 by 2400, but that doesn't mean anything in this context. Out of 105 events -- and, again, this isn't the only basis for my opinion.

But focusing on that, out of 105 events, 24, plus or minus, are associated with significant positive returns, and that is an outcome that is so unlikely, but for some kind of a correlation or association or dependence between Ripple Labs and XRP prices. That is the statistical basis of my opinion.

Q. But what you found when you found that correlation, you only found it on that model 24 times out of approximately 2400 days. Correct?

A. I -- I reject the -- the formulation of your question, 24 out of 2400. It's 24 out of 105.

I'm testing 105 days. And I find 24 of them, again according to one model, have statistically significant returns. And that

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outcome is incredibly unlikely.

Q. And you found no correlation between the actions of Ripple Labs on the 2400 minus 24 days that you -- that were encompassed in your study, correct?

A. I don't accept your characterization at all. I think you're misstating, or -- the basis of my analysis. It's not the right way to think about it. I had a set of events. This is how events studies work.

I had a set of events. I look to see if there are price reactions in that set of events. And I found that there were far more than could be accounted for under the hypothesis that Ripple Labs and XRP are independent of each other.

Q. I understand that, and you've testified to that.

My point is, the only time you found a statistical correlation between a Ripple news event and a statistically significant XRP price impact was on 24 days.

Correct?

MR. MOYE: Objection. Argumentative.

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A. According to Model 1, the intersection between -- and according to Model 1, studying the superset of various news categories, the intersection between news days and significant market days numbered 24.

Q. All right. To do a proper event study, you are required to state a hypothesis, correct?

A. I would say that statistical tests revolve around the acceptance or rejection of certain null hypotheses.

Q. And what was the hypothesis that you sought to accept or reject, in connection with the opinion you're offering in this case?

A. The null hypothesis is that Ripple Labs and XRP price increases are independent of each other.

Q. And your conclusion is they're not independent, correct?

A. That is correct.

Q. You weren't asked to determine whether the actions of Ripple Labs were the sole or primary reason that we see significant price increases, correct?

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2 A. Again, it's not a well-formed economic
3 question, but that was not the question that was
4 posed to me.

5 Q. And you didn't seek to answer the
6 question whether the actions by any person or
7 entity other than Ripple had an impact on XRP
8 prices. Correct?

9 A. I think that's fair. I certainly did
10 look at how XRP returns correlate with broad
11 crypto -- other broad digital token returns.
12 Now, that's not -- I acknowledge that's not
13 exactly what you asked.

14 But I did look at that question.

15 I was not investigating whether the
16 actions of, say, XYZ Enterprises, impacts XRP
17 prices.

18 Q. So the answer to my question is no.
19 You didn't conduct any analysis to determine
20 whether actions by any person or entity outside
21 of Ripple had an impact on XRP prices. Correct?

22 A. I -- I'm going to agree with that.

23 I would say that that's fair. I was
24 looking for a relationship between Ripple Labs
25 and XRP prices. I was not looking for a

1 [REDACTED]
2 relationship between something else and XRP
3 prices. Again, above and beyond a general
4 exploration of correlation in the digital token
5 market.

6 Q. All right. And couple times you have
7 included in your answer that XRP prices react to
8 certain news, and public statements about
9 Ripple's actions. Correct?

10 A. Yes, that's correct.

11 Q. And your methodology demonstrated that
12 there's not a statistically significant price
13 return on XRP with respect to all news about
14 Ripple. Correct?

15 A. Correct.

16 Q. And similarly, you did not find a
17 statistically significant price return on XRP,
18 with respect to all public statements about
19 Ripple. Correct?

20 A. That's correct. I wouldn't expect
21 such a finding.

22 Q. And your methodology didn't determine
23 whether a particular Ripple news event caused
24 any particular price movement. Correct?

25 A. My methodology, based on the

1 [REDACTED]
2 statistical results and analysis that I
3 conducted, I believe XRP prices reacted to news
4 of certain actions from Ripple Labs.

5 Q. So are you -- is your opinion that
6 your study proves causation between Ripple
7 events and a statistically significant XRP price
8 movement -- price return?

9 A. Causation is not a question which is
10 generally subject to proof as a matter of
11 economics. Correlation or independence is a
12 question which may be subject to proof.

13 So the statistical test, the -- the
14 statistical test, the null hypothesis, is
15 expressed in terms of correlation.

16 The question of what kind of inference
17 you can draw from a statistical result depends
18 on your economic understanding of the -- of the
19 facts of the matter and maybe some other
20 robustness checks that you may run to rule out
21 alternative explanations.

22 The sum total of all of that work
23 supports a -- an inference of likely or -- of
24 likely causation. But I wouldn't say that one
25 could prove causation.

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[REDACTED]

Q. So it's -- it's an inference of causation, but you don't claim that you have proof that any Ripple action or event caused a statistically significant price return on XRP. Correct?

A. I would say that I have the type of economic evidence which is often used when assigning or assessing loss causation, on asset prices. Whether a philosopher would say I've proven something, I don't know.

I fully accept the truism that correlation doesn't prove causation, but I think correlation in conjunction with other analysis can support an inference of likely or reasonable causation.

Q. What do you mean by the -- I want to make sure I got your -- when you say, I fully accept the truism that correlation doesn't prove causation, what is the truism you're referring to?

A. Well, it's generally understood that, just because two things -- let's call them A and B.

Pardon me. My apologies.

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Just because two things, A and B, are correlated, that alone doesn't tell you whether A caused B or B caused A, or whether X caused both A and B.

Independence, finding that A and B are independent of each other is generally evidence that A didn't cause B. But simply finding correlation by itself wouldn't be enough to make a statement of, because A and B are correlated; therefore, I know that A caused B.

Q. And to make the point in a slightly different way, on the days in which you did not find a correlation between one of your 105 Ripple events and a statistically significant price return on XRP, you're not offering an opinion about the presence or absence of causation with respect to that relationship. Correct?

A. Sorry. I'm trying to understand that question.

Can you repeat it, please.

Q. Let me see if I can ask it differently.

Just as you said that your methodology

1 [REDACTED]
2 doesn't prove causation between a Ripple news
3 event and a statistically significant price
4 return for XRP on the 24 days in the model that
5 we've been talking about, you similarly don't
6 attempt to explain why there was not a
7 correlation between a Ripple news event and the
8 absence of a statistically significant XRP price
9 return. Correct?

10 A. If by that you mean on the 75-, 79-odd
11 days where there is news but no significant
12 price reaction, did I do an exploration to
13 understand why there was no significant price
14 reaction on those days? Is that your question?

15 Q. Well, why don't you answer that one.

16 A. The answer to that question is, per
17 standard practice and event studies, no, I did
18 not do an investigation to see why there was not
19 a significant price reaction on those 79 days.

20 Obviously, it doesn't make any
21 difference to my analysis or opinion why there
22 was not a price reaction on those days.

23 Q. And that's because your methodology
24 seeks to prove a correlation, not causation.

25 Correct?

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A. I would be a little bit careful about that. My -- the event study methodology is a statistical analysis of correlation, which could be accepted or rejected per scientific standards, generally, as a -- as part of an inference of likely causation.

Again, we want to -- if you want to use the word "proof," I don't know what proof would mean there.

But the event study usually -- a typical event study would proceed something along the lines of, I observe a statistically significant price reaction; I -- I check certain boxes; and I, therefore, am willing to make the statement that the price reacted to the event.

Q. Well, let me give you a hypothetical which is counterfactual, right?

On a day in which you have a Ripple news event and a -- that -- that coincides with a date on which there is a statistically significant XRP price return, right?

A. Uh-huh.

Q. That price return could have been caused by any number of factors. Correct?

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[REDACTED]

A. No.

Q. Well, you don't know if the reason the price went up was because John Doe in Albania decided to buy a billion units of XRP, correct?

A. Well, wait a minute. The -- the price went up presumably because there was change in relative supply and relative demand. Whether that was John Doe in Albania or Sally Smith in Arkansas, I don't know, and I don't see what difference it would make.

There was a change in relative supply and demand, which is another way of saying, The price moved, and the question is, Why did the price move. Why was there a change in supply and demand.

And the reasonable explanation is there was a change in supply and demand because of the news of this event.

Q. Well, your methodology didn't test to see whether supply changed in response to a Ripple news event, did it?

A. No event study methodology asks the question of whether the increase in price was because supply moved or because demand moved.

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2 I've never seen an event methodology -- event
3 study methodology that concerns itself with
4 that. They moved relative to each other, and,
5 therefore, the price changed.

6 Q. Well, you don't know, do you?

7 You're --

8 A. I do know that.

9 Q. Well, tell me what data you studied to
10 determine whether it was an increase in demand
11 that caused a price impact or a reduction in
12 supply that caused a price impact.

13 A. Again, I just said, it doesn't make
14 any difference to the event study methodology
15 which of demand or supply moved. It doesn't
16 make any difference. Nobody ever asks that
17 question.

18 The price moved. It is, therefore,
19 axiomatic that there was a change in relative
20 supply and demand. The question is, Why was
21 there a change in relative supply and demand,
22 that's the question.

23 And a reasonable answer, the answer
24 that I think the evidence supports is, there was
25 a change in relative supply and demand because

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of news of the actions of Ripple Labs.

Q. Did you -- on any of the 24 days in the model we're talking about, did you look at the volume of XRP trading on that day?

A. Since it's not relevant, no, I did not.

Q. And as a result, you're not in a position to offer an opinion as to whether the price moved because there were more buyers than sellers, or fewer sellers than buyers, correct?

A. I'm sorry, I shouldn't laugh. I've never seen any event study concern itself with the questions you're posing.

I will, therefore, say that you're correct that I did not attempt to determine whether supply moved more than demand or whether demand moved more than supply.

I would further point out that looking at trading volume can't help you answer any question like that, but it's -- it's such a strange exercise and question, it would never occur to me, or I think anybody else, to even attempt anything along the lines of what you're suggesting.

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[REDACTED]

So no, I didn't do it.

Q. All right. If you could turn to paragraph 75 on page 32.

A. Yes.

Q. And in the bottom of paragraph 75, you write, From an economic perspective, one explanation, of course, is that news of the event causes the XRP price response.

You wrote that, correct?

A. Yes.

Q. And why did you add "one explanation"?

A. Well, I wanted to acknowledge -- this -- this goes back to the truism that we were discussing a few minutes ago. Simply establishing the two things are correlated, by itself, doesn't tell you which one is causing the other, or whether there's even a third event or third force causing both.

So I wanted to say here, one possibility is that the news is causing the price, and then in Footnote 71, I try and lay out what the other logical possibilities are, but why, you know, I -- I don't think those are at all plausible or -- or reasonable.

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[REDACTED]

Hence, I'm -- I'm comfortable in offering the opinion that in my opinion, the evidence indicates that the news is causing the price.

Q. And you say that -- you outline, in Footnote 71, logical possibilities. What do you mean by logical possibilities?

A. Well, so, let's accept that A and B are correlated.

A could cause B, or B could cause A, or X could cause both.

So in this case, the A is the news from Ripple Labs, and the B is the XRP price increase. Let's just accept for a moment that those two things are correlated. Okay. What's causing that?

What I lay out here is, you know the first one, another explanation might be what I say is the reverse, that the price caused the news, rather than the news caused the price.

Now, what that would mean, and why I think we could dismiss that immediately as unreasonable, is that Ripple Labs, with its crystal ball, knowing that the price of XRP was

1 [REDACTED]
2 about to go up, strategically decided to release
3 certain announcements at exactly the right time.

4 I -- I simply reject that as at all
5 possible. So in that -- going back to the A and
6 B terminology, the idea that B could cause A,
7 the idea that the price could cause the news,
8 I -- I just think is -- is unreasonable and we
9 can dismiss it.

10 Then the question of, Well, could
11 there be some X factor that's causing both.
12 Again, we've discussed this at length this
13 morning. This is the idea of some confounding
14 event that is driving both things; I think we
15 can dismiss that as also unreasonable.

16 And that leaves sort of the last --
17 the last person standing, that the most likely
18 explanation of the statistical evidence is that
19 the news caused the price.

20 Q. Tell us what you mean by an X factor?

21 A. I mean what some might term
22 confounding event.

23 So something else both causes, you
24 know, in this case, Ripple Labs to get venture
25 funding and also causes XRP prices to go up.

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Q. But you acknowledge that an X factor is a possibility, correct?

A. I acknowledge, of course, that it is a logical possibility. Therefore, I take a number of steps to rule it out as not probable.

Q. And it's a logical possibility on any of the 24 days in which you found the correlation between the Ripple news event and a statistically significant price impact on XRP, correct? It's a possibility on every one of those events.

A. Not -- I cannot say as a matter of logic, that it is impossible. I can say that following all the steps that I took, I don't think it's at all likely or reasonable with an explanation.

Q. And you gave some examples of possible X factors in Footnote 71, correct?

A. I don't -- I don't think I actually do provide examples of what these X factors might be. I just simply label them "X factor."

Q. Well, what did you mean when you wrote, These events -- following the sentence about the X factor, what did you mean when you

1 [REDACTED]
2 wrote, These events, of course, are disparate in
3 their nature, including venture funding rounds
4 involving multiple investors, joint ventures in
5 Asia and licensing decisions made by the State
6 of New York.

7 A. I'm referring to the events being
8 studied here. This is the milestone category.
9 Those are the milestones.

10 So we -- we'd have -- we'd have to be
11 positing some X factor that is causing venture
12 founding rounds, New York regulatory decisions,
13 various other things, all -- so that -- causing
14 it in such a way that the day that we happen to
15 announce that we're getting venture funding
16 Round A also happens to be the day that XRP
17 price go up.

18 Again, I just -- I just don't think
19 that's -- that's a plausible or reasonable
20 explanation. I acknowledge here in the footnote
21 I cannot rule it out as logically impossible.
22 I -- I do end up dismissing it as a reasonable
23 explanation.

24 Q. Can you posit, or imagine, any factor
25 that could have a different price impact on XRP

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as opposed to bitcoin or Ether?

A. Besides actions by Ripple Labs?

Q. Yes.

A. Well, sure. I think -- I think --
what is it, the Arrington fund, when -- when he
announces setting up an XRP-denominated fund,
that might be something that would spur interest
in XRP.

Of course, it also presumably would
spur creation of XRP accounts, but that might be
an example of something that might move the XRP
price. I don't know.

Q. Anything else?

A. I -- I mean, not without just
descending into wild speculation of things that
might be.

Q. Well, John Doe's been thinking about
buying XRP for six months and, on that
particular day, decides he wants to buy a lot of
XRP. That would be an X factor, wouldn't it?

A. An X factor that cause-- why would
John Doe buying XRP cause the price to go up?

Q. Didn't you just testify that increased
demand and fixed supply --

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2 A. That's -- that's simply a component of
3 demand. I said that demand relative to supply
4 changes, and so price moves. John Doe buying
5 XRP is just an example of demand --

6 Q. Doesn't it --

7 A. -- not an example of demand changing
8 relative to supply.

9 Q. Doesn't it depend on what size
10 purchase he makes?

11 A. Possibly.

12 But whether it causes the price to go
13 up or down -- sometimes people want a volume
14 discount. If he buys a lot of XRP, maybe he'll
15 want a volume discount and execute that trade at
16 a slightly lower price than the prevailing
17 market price. I -- who can say?

18 Q. So let's go to page 1 of Appendix D of
19 your report.

20 A. Uh-huh.

21 Q. Tell us why you had to add an
22 Appendix D to explain your methodology.

23 A. Well, of course, I -- I detail aspects
24 of my methodology in the main body of my report.

25 Certain details, which I don't think

1 [REDACTED]
2 are necessary to understand in order to
3 understand the basic approach that I took, I --
4 I moved to an appendix, really for readability
5 issues.

6 But, thinking about, you know, who
7 might be reading this report and how familiar
8 they may or may not be with event studies, I
9 decided to provide some additional detail.

10 Q. All right. Could you read the first
11 sentence of paragraph 2 of Appendix D, please,
12 for the record.

13 A. An event study is conducted by first
14 specifying a model of expected price movements
15 and then testing the extent to which actual
16 price movements differ from those expectations.

17 Q. And you go on to say, The question an
18 event study answers is whether the differences
19 between actual and expected price movements are
20 sufficiently large that, from a statistical
21 standpoint, such differences are unlikely to be
22 explained by randomness.

23 Is that correct?

24 A. I did write that, yes.

25 Q. And then you note, In this context --

1 [REDACTED]
2 and by "this context," we're talking about the
3 market for XRP, correct?

4 A. No. I'm speaking specifically in
5 the -- in the general context of an event study,
6 to explain what randomness means.

7 I mean, it's true of XRP as well, but
8 I wasn't specifically referring to XRP when I
9 said "in this context."

10 Q. But the sentence you wrote, In this
11 context, randomness refers to the tendency for
12 actual outcomes, in this case the actual price
13 movement, to deviate from the expected outcomes
14 in ways which appear random in nature, applies
15 equally to XRP, correct?

16 A. Yes.

17 Q. And on page 28, paragraph 60, you note
18 that you considered 20 different models
19 estimated using 188-day estimation windows; is
20 that correct?

21 A. 180 days, not 188 days.

22 Q. It's getting -- I thought I said 180.

23 A. I heard 188.

24 Q. You might well have, but I agree it
25 says 180.

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And then you test the tendency for the actual XRP price returns to deviate from the expected XRP price returns that are predicted by your 20 models. Correct?

A. Correct.

Q. And in the models that you have created, the expected return is derived primarily from the price returns of other cryptocurrencies. Is that correct?

A. Several of the models -- yes, that -- I mean, in many of the models that would be true.

Q. And you have a demonstrative to assist the reader on page 19. That's your Figure 7. Is that correct?

A. I -- I hope I didn't have -- shuffle things out of order.

Okay. Page 19, yes. Yes, that's correct.

Q. You with me?

The only independent variables in these various models are the growth in XRP accounts and the returns of other cryptocurrencies. Is that correct?

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2 A. Except in half the models where we're
3 controlling for serial correlation, in which
4 case you also control for lags of those things,
5 as well as lagged XRP returns.

6 Q. So your lagged independent variables
7 are all factors independent of XRP; is that
8 correct?

9 The lagged independent -- the column
10 on the far right?

11 A. They are the independent variables.
12 So whatever independent variables you have,
13 whether that's bitcoin, Ether, whatever it may
14 be, you have those returns measured
15 contemporaneously with XRP returns, and then you
16 also include the one-day lag of those returns.

17 Q. But again, those lagged independent
18 variables are exclusively related to data
19 derived with respect to bitcoin, Ether, and
20 lumens, correct?

21 A. And XRP account growth.

22 Q. So your estimation models, is that a
23 fair description of what these are?

24 A. Yes, I would say so.

25 Q. Your estimation model suggests that a

1 [REDACTED]
2 reasonable investor's expectations of XRP price
3 returns would be based on the performance of the
4 three other cryptocurrencies that you use in
5 your models. Correct?

6 A. Well, I have models with one, two,
7 three, five. But, I mean, framing it as the
8 expectations of a reasonable investor, sort of
9 adding words that one doesn't usually add, but
10 we can decompose or project XRP returns on these
11 factors. I mean, it's standard practice, I
12 would say.

13 Q. But the baseline expectation of how --
14 how XRP prices will move, according to your
15 model, is predicted by the movement of other
16 cryptocurrencies or the three other
17 cryptocurrencies that you have in Figure 7,
18 correct?

19 A. In different combinations. And,
20 again, the equal-weighted index adds two other
21 cryptocurrencies to the mix.

22 Q. And if we could go to page 6,
23 paragraph 15.

24 I'm sorry, of your rebuttal report. I
25 got that wrong. Sorry.

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A. Sorry. Page 6.

Page 6, paragraph 15. Yes?

Q. I'm just going to read the sentence so we can move along. You write, Even accepting all of his -- and that's Professor Ferrell's -- results as correct, Dr. Ferrell's analysis would only serve to establish that, romanette i, there is a relationship between XRP returns and those of other digital tokens (which is not disputed and which I established in the ██████ report).

Do you see that?

A. I do see that, yes.

Q. What do you mean when you say that there is a relationship between XRP returns and those other digital tokens?

A. I mean that there is a correlation between XRP returns and the returns of other digital tokens. Or that in the context of a factor model of the type that Dr. Ferrell is running, that you would find that -- that other digital token returns enter that factor model with some degree of statistical significance.

Q. And you say that's not disputed and you establish that in the ██████ report.

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[REDACTED]

What do you mean by that?

A. I mean that I -- I don't -- I certainly didn't dispute it, and I -- I certainly don't dispute it. I can't -- I can't speak to whether other people dispute it.

Perhaps I should have inserted the word "I." I don't dispute.

But my opening report has -- what is it? -- Section 7, which shows at some length how XRP returns correlate with, for instance, bitcoin and how they -- how it relates to bitcoin and Ether at different points in time.

So that's what I meant when I said, I -- I -- again, I should have inserted the word "I" -- don't dispute that there is an association between XRP returns and other digital token returns, and I demonstrated that in my opening report.

Q. And in your opening report, that was the data that you relied on, to predict the expected XRP return. In order to provide the -- the data from which you would identify statistically significant XRP price returns. Correct?

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A. I'm tempted to say correct. That sounds right.

Q. Well --

A. There are too many words there, but that sounds right. That sounded right. That is the data that I used in my analysis.

Q. Let's see if we can make the record clear here. As I understand it, your methodology -- withdrawn.

As I understand it, the way in which you identify the expected XRP price return was by the 20 models that you have in Figure 7, most, if not -- most of which relied on the price returns of bitcoin, Ether, and lumens, correct?

A. In some -- let's insert the word "in some combination," right? Not all of them have lumens. But generally speaking, yes.

Q. And that -- those were the -- those were the factors -- withdrawn. I don't want to use "factors."

That was the data from which you predicted the expected XRP return. Correct?

A. With XRP account growth in some models

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and lags in other models, but broadly speaking,
yes.

Q. And I -- I don't have it memorized.
But in some of the models -- I think it's 2, 4,
6, and 8 -- the only data that you looked to for
predicting XRP price returns was your constant
variable and either bitcoin alone or bitcoin
plus Ether or bitcoin plus Ether plus lumens,
correct?

A. That is correct.

Q. And for each of those models, you
determined that they were -- you determined that
each of those models were reliable estimators of
expected XRP price returns. Correct?

A. I considered all of those models to be
reasonable factor models, and they are in the
class of factor models.

Reasonable factor models of XRP
returns.

Q. And, in fact, you relied on those
results in reaching your opinions. Correct?

A. Among other results, yes.

Q. And so one way in which someone who
wanted to expect the returns, the future returns

1 [REDACTED]
2 of XRP, and estimate what those returns would
3 be, would be able to look to the returns of
4 bitcoin, Ether, and lumens in order to reach
5 that -- that -- make that judgment, correct?

6 A. Well, I would just be a little
7 carefully. It's not a useful forecasting model
8 if that's what -- if that's what you're trying
9 to suggest. Because remember that the returns
10 are measured at the same time as XRP returns.

11 Q. Fair enough.

12 Would you --

13 A. So I'm not saying you would look at
14 what happened on bitcoin today to form a
15 forecast of what will happen in XRP tomorrow.

16 Q. Well, you do use that as one of your
17 models, but let's -- let's -- I take it as let's
18 take the forecasting point.

19 If you wanted to understand what the
20 expected return of XRP was during the period
21 that you examined, the models you used
22 established that using the various models with
23 XRP -- I'm sorry, with bitcoin, Ether, and
24 lumens, were reliable estimators of the returns
25 of XRP. Correct?

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A. I -- I -- they -- I thought they were all reasonable factor model specifications. And so I wanted to consider -- I wanted to make sure that my results were robust across these different specifications.

You know, you've inserted the word "reliable." Did I come to a point of view that I think bitcoin is the perfect factor? It's certainly a factor that you'll find in the literature, and it seems like a reasonable factor to use.

Q. Well, if you made the judgment -- withdrawn.

Let me -- let's get the models out, I think it will be easier.

So let's go back to page 19, Figure 7.

A. I have it.

Q. All right.

Model 2.

I'm sorry. Model 3 --

A. Uh-huh.

Q. -- the two independent variables you used to predict estimated XRP price returns were the constant and bitcoin. Correct?

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2 A. Model 3 is constant, bitcoin, and XRP
3 account growth.

4 Q. All right. This is why I need better
5 glasses.

6 A. Oh, no, no. You're shaking your head,
7 you're right. The odd number ones do not have
8 account growth, I apologize. I was remembering
9 back before with the 2, 4, 6, 8.

10 You're correct, Model 3 --

11 Q. So --

12 A. -- Model 3 is just bitcoin and
13 constant. You're right.

14 Q. And Model 5 is constant, bitcoin, and
15 Ether. Correct?

16 A. Correct.

17 Q. And Model 7 is constant, bitcoin,
18 Ether, and lumens. Correct?

19 A. Correct.

20 Q. And each of those models, you
21 determined, were reliable for predicting the
22 expected return of XRP. Correct?

23 A. I thought each of those models was a
24 reasonable factor model for XRP return.

25 Q. And if you thought it wasn't

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reasonable and reliable, you wouldn't have --
you wouldn't have relied on it, correct?

A. If -- certainly if I thought it was
unreasonable and unreliable, I wouldn't have
used it.

Q. Now, in Model 9, you add in what you
call an e-Index. Can you tell us what an
E Index is?

A. E is for equal, equal-weighted index.
So I -- I think the notes at the table, or -- or
footnote in -- in that section generally,
explains that the equal-weighted index is an
equal weighted -- is an equal-weighted average
return across bitcoin, Ether, lumens, Binance or
Binance coin, and then -- now I need to look at
it to remember the name of the fifth one.

Q. I'll help you. ADA?

A. Right.

Q. What is Binance coin?

A. Those -- those other two tokens are
currently -- or at least in and around the time
that -- that I was preparing the report, those
were some of the largest market cap digital
tokens.

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At that time. I don't know if they still are today.

Q. Are you aware of any academic literature in which the Binance returns were used as a variable in an XRP regression model?

A. I can't say that I can think of an academic literature that specifically used that factor.

Of course, Dr. Ferrell uses a variety of digital tokens in -- in his analysis.

But no, I can't point -- I can't remember an academic study that specifically used that token as an explanatory variable.

Q. What, if anything, did you do to satisfy yourself that using Binance returns would be an appropriate or reliable comparator for XRP returns?

A. Again, I -- I took some of -- I took the returns of what were, at the time, the -- the largest by market cap digital tokens, and what I wanted to do was satisfy myself that the correlation results I was going to focus on would not change or would not be sensitive to adding these other major coins. That was --

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that was the purpose of these different model specifications.

Q. Did you consider using any other digital assets in this model?

A. No. Those -- between those -- those tokens, plus lumens, we spanned a -- I don't remember the number but a very large share of the digital token market by volume. So no, I didn't -- I didn't think it was necessary to -- to continue to add tokens to the other side.

The other -- the other thing that happens, just as a practical point, is, some of these digital tokens don't necessarily have a very long pricing history.

So, if -- when you're going to study these events back further in time, you don't necessarily have, you know, a wide library of tokens that you could possibly choose from.

As time goes on, more tokens are created, and I agree, you could continue to expand that index, but I -- I didn't see the -- the need or benefit of doing that.

Q. And in the E Index, you weighted each of these tokens equally, correct?

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A. Correct. The alternative -- the common alternative would be value weighted as we discussed this morning. Once you value weight them, you basically just end up with bitcoin again. So I -- I already had a model with bitcoin. A value-weighted index model struck me as being largely redundant.

Q. Just so the record's clear, did you say value weighted or volume weighted?

A. Value, usually in the sense of market cap, so it's a combination of volume and price.

Q. And what do you mean by "market cap"?

A. I mean the combination of volume and price.

Q. Well, by "market cap," do you mean all of the outstanding units of that digital asset multiplied times the market price?

A. Sometimes it's all that are outstanding. Sometimes it's all that's been traded over some window. Different people may compute it slightly differently, but conceptually, yes.

Q. And did you take -- did you investigate what the -- we'll call it the market

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cap, of ADA was?

A. I know -- I know that again when we pulled the data, the instruction was to pull the largest by market cap at the time we were assembling the data set. I don't recall offhand what the market cap of ADA was.

But I think -- I imagine I have a footnote, in and around this table, where I cite the source of my market cap data which indicated it was a -- one of the larger coins at that time.

Q. Now, you included in your model what you called account growth?

A. Correct.

Q. Are you aware of any publications or studies that support using the number of accounts for digital asset as a predictor of price impact?

A. I -- I cite to a literature that explores network effects on digital token prices, and -- and accounts was one proxy that they used for network effects.

Q. That study also used four other criteria, correct?

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A. It did.

Q. Including the number of active

addresses, the number of transaction count and
the number of payment count?

A. I don't have the study in front of me,
but that sounds familiar.

Q. Does that sound generally correct? I
can show you the study if you like.

A. It sounds generally correct.

Q. And you elected not to use the other
three variables that were cited in that study.
Correct?

A. I -- correct. I elected to focus on
account growth.

Q. And why was that?

A. It was a -- if -- I think if we look
at the study, you'll see that it's a significant
factor in their models. The data were readily
available and seemed cleanly measured, and it
seemed like a useful factor to include.

I found that many of the models put a
statistically significant weight on that factor
at different points in time.

Q. The article you're referring to is

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in -- published in the Review of Financial
Studies, "Risk and Returns of Cryptocurrency" by
Yukun Liu and Aleh Tsyvinski; is that correct?

A. I mean, I -- I think so. I'm happy to
look at my report and look at the footnote.
Maybe you have it in front of --

Q. Why don't -- why don't I just show you
what we'll mark as Exhibit 11.

(Article titled "Risks and Returns of
Cryptocurrency" was marked Exhibit 11 for
identification, as of this date.)

Q. Why don't you take a look at page 2699
of Exhibit 11.

A. Uh-huh.

Q. You see they say, We construct network
factors of cryptocurrency and test whether these
factors can account for variations of
cryptocurrency prices?

A. I see that, yes.

Q. And then it says, we then use -- We
use four measures to -- to proxy for the network
effect, the number of wallet users, the number
of active addresses, the number -- or
transaction count and the number of payment

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count.

A. I see that.

Q. It says, Then we measure
cryptocurrency network growth using the wallet
user growth, active address growth, transaction
count growth and payment count growth.

Do you see that?

A. I see that.

Q. What are network factors?

A. Well, the phrase can mean different
things in different contexts. But here, I take
them to mean the idea -- the idea of -- of sort
of a network effect in value, meaning the value
of something depends in part on how many other
people are associated with it. That's generally
what a network effect is.

So as -- as it grows, as the network
of people involved grow, the value of the
network increases.

Q. So the study -- what was discussed in
this article was how to measure the growth of a
network. Correct?

A. I don't know if I would characterize
it that way. I would say what the study's

1 [REDACTED]
2 testing and showing is whether some proxies,
3 some variables, which you might say they proxy
4 for network growth, how those variables are
5 associated or correlated with digital token
6 returns to see whether -- you know, to test this
7 hypothesis, whether network factors help drive
8 prices.

9 Q. And this portion of the study, though,
10 is, as you say, using factors or proxies for
11 measuring network growth. Correct?

12 A. Correct.

13 Q. It doesn't say that those factors are
14 relevant to determining price impact on a
15 digital asset. Correct?

16 A. No. I think that's exactly what
17 they're saying.

18 Q. They're measuring network growth and
19 then measuring network growth as a predictor
20 for --

21 A. For price impacts.

22 Q. Right. So you've picked one factor
23 that they use to measure network growth and
24 skipped the step of figuring out whether there's
25 network growth and apply it directly to price

1 [REDACTED]
2 impact on a digital asset. Correct?

3 A. I don't see that I skipped a step.
4 They're testing a hypothesis of whether certain
5 proxies of network growth were associated with
6 price increases. They generally find that they
7 are.

8 So taking that result, and -- I
9 decided to have a version of -- one version of
10 all of my models, which adds a proxy for network
11 growth, again, just to make sure that my results
12 are robust to whether a proxy for network growth
13 is included or not.

14 Q. Well, you picked one of four factors
15 that was used as a proxy for network growth,
16 correct?

17 A. That's correct.

18 Q. And the data for the other factors was
19 available to you. Correct?

20 A. Correct.

21 Q. You --

22 A. I mean, I assume so because --

23 Q. You could identify the -- let's not
24 talk over each other.

25 You could have identified the number

1 [REDACTED]
2 of wallet users, correct?

3 A. Presumably. I --

4 Q. You could have identified number of
5 active addresses?

6 A. Well, that's what I have.

7 Q. And you could identify the number of
8 transaction count?

9 A. I -- I presumably could have gotten
10 some transaction count data.

11 Q. And you could have identified the
12 number of payment count. Correct?

13 A. I mean, not having attempted to obtain
14 all of those things, possibly they're all
15 obtainable. I took the -- I took the account
16 growth, which appears to be, you know, the most
17 significant factor that they have.

18 Q. All right. Are you aware of any
19 professional or academic work that has used the
20 prices of other digital assets as variables in a
21 regression model to identify XRP returns?

22 A. The event studies I've seen generally
23 do not have other digital token price factors.
24 They correspond to my Model 1, and they
25 correspond to my Model 11.

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[REDACTED]

But the use of factor models, generally, is established. And, of course, you know, Dr. Ferrell does sort of the same thing.

I'm trying to remember if -- if I saw an event study. The -- the reason I'm -- I'm thinking about it is a lot of the event studies include bitcoin as -- you know, they're looking at the -- the response of bitcoin to certain events. And so, obviously, you can't put bitcoin returns on the other side of a bitcoin model.

Q. I don't want to interrupt you. I have -- the question is very specific.

A. Yeah.

Q. The question is whether you're aware of any publications, academic literature, that use the price other digital assets as a variable in a regression model to predict XRP returns.

I'm looking specifically for publications that focus on XRP returns.

A. Sitting here today, the event studies related to XRP returns with which I am most familiar only use the constant mean return model that I used, my Model 1. And I believe

1 [REDACTED]
2 Gerritsen also does a correction for serial
3 correlation, which is my Model 11.

4 Q. But neither of those two studies
5 involve the use of other cryptocurrencies to
6 predict XRP prices. Correct?

7 Serial correlation is not a -- does
8 not depend on the returns of other
9 cryptocurrencies, correct?

10 A. Correct. Correct.

11 Q. So the answer to my question is, no,
12 you're not aware of any other academic or
13 professional studies that use the price of other
14 digital assets as variables in a regression
15 model to predict XRP price returns?

16 A. Sitting here today, I can't think of
17 one, no.

18 Q. Are you aware of any professional or
19 academic studies that have used the growth of
20 XRP accounts as a variable in a regression model
21 to predict XRP returns?

22 A. Well, now I just have to remind myself
23 whether -- whether XRP was one of the price
24 series used in the -- in the paper that we're
25 studying.

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[REDACTED]

It -- they may have been -- they may have based it on bitcoin prices.

A lot of the literature does focus on bitcoin prices.

Just trying to -- I'm just trying to remember.

My recollection is that this study is looking at bitcoin prices and suggesting network factors for bitcoin.

I just want to make sure that I'm not -- I'm not misremembering. It's been a long time since I looked at this.

(Witness reviewing document.)

A. Oh, no. That's -- no. Right. I'm sorry. They're studying an index, constructed index of cryptocurrency market returns, value-weighted returns on all coins with capitalizations of more than a million, da, da, da, da, da.

I'm trying to see if they indicate whether XRP was picked up as part of that. I expect it would have been.

I'm just trying to -- I'm sorry. I'm just trying to see where they list exactly which

1 [REDACTED]
2 digital tokens go into their index. They
3 describe it as being above a market cap of a
4 million, which I assume would have picked up
5 XRP. I'm just trying to see if I can -- if I
6 can just see a list of the tokens that they --
7 that they consider.

8 I don't think they -- I'm not
9 seeing -- and I apologize if I'm just missing
10 it. I'm not seeing an explicit list of which
11 tokens are in -- no. Wait. I'm sorry.

12 Table 1 -- okay. Table 1 compares the
13 properties, bitcoin, Ether, Ripple, and so on
14 and so forth. So I -- I have every reason to
15 think that Ripple is part of their index, of
16 digital token returns that they are comparing
17 against market factors.

18 Q. Well, it's one of several. My
19 question was, are you aware of any professional
20 or academic publications that use the growth in
21 XRP accounts in a variable, in a regression
22 model, looking specifically at XRP returns?

23 A. That very narrow question? No, I'm
24 not aware of one.

25 Q. Are you familiar with the concept of

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error rate?

A. I -- I -- I think I am, yes.

Q. Did you do any work to determine whether there was an error rate in any of the data or the application of data to the event study that you conducted in this case?

A. Well, of course, the -- the regression results incorporate error -- not necessarily error, but variance of the data and the variance of the error term of a regression.

So that's -- that's naturally part of it.

The generalized rank test that I applied is a test of significance against a measure of standard error. So that's incorporated there.

And the exact sample hypergeometric test, which is basically the Fisher test, is an exact sample test.

So thinking through the various sources of error, I believe they are all properly accounted for in my analysis.

Q. Well, you assume that the error rate based on the statistical analysis you did was

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5 percent. Correct?

A. That's not an error rate.

So no. No. I think you're -- I think you're misstating things. 5 percent is not an assumed error rate.

Q. Well, the 5 percent means the -- the correlation or the value assigned could be 5 percent higher or 5 percent lower. It's a level of statistical significance, correct?

A. No. That's not what it means in this context.

Q. Well, why don't you tell us what the 5 percent significance that you have -- has asterisks. You have 5 percent, 1 percent. Let's just talk about 5 percent.

What does that 5 percent reflect?

A. That means that the probability of observing the outcome that we observe is -- would be 5 percent, assuming the null hypothesis of the model.

So, for example, assuming Ripple Labs and XRP markets are independent of each other, the probability that you would draw 24 significant days out of a group of 105 is on the

1 [REDACTED]
2 order of 1 in a hundred thousand. So much less
3 than 5 percent.

4 That's what the 5 percent significance
5 test means.

6 And that is customarily, or at least a
7 very common standard in scientific research, to
8 say, if the probability of this outcome under
9 the model, under the null hypothesis of the
10 model, is less than 5 percent, then I can reject
11 the null hypothesis. That's what 5 percent
12 means in this -- in this context.

13 Q. What is the error rate in concluding
14 or determining that XRP had a statistically
15 significant price return when making that
16 determination based on the expected returns
17 predicted by other digital assets?

18 A. I'm going to try and understand your
19 question.

20 In the context of any one of
21 20 regression models, the context of any one
22 date that we're considering, we have a predicted
23 return and we have an actual return and we have
24 a difference.

25 We also have a measure of the

1 [REDACTED]
2 statistical -- the statistical difference --
3 distance of that difference. So, you can think
4 of it as how many standard deviations away from
5 expectations are you.

6 That statistical distance reflects
7 uncertainty and parameter estimates and a whole
8 host of things.

9 Okay. If that statistical distance is
10 such that the odds of observing -- the obs of --
11 the odds of observing a difference between
12 expected returns and actual returns is less than
13 5 percent, then we would -- then we would flag
14 that as a statistically significant abnormal
15 return.

16 Did that answer your question?

17 Q. I don't know. Let me try another one.

18 What that -- if I understood you
19 correctly, what it suggests is that not every
20 time you find a coincidence of a statistically
21 significant XRP price return and a Ripple event
22 do you have confidence of a correlation?

23 In other words, that could -- that
24 could happen by random chance, some percentage
25 of the time. Correct?

1 [REDACTED]
2 A. Well, I would not accept the way you
3 framed the question.

4 Of course, it is -- and I make this
5 clear in the report. There -- there is a one in
6 a hundred thousand chance, by random chance,
7 that we could draw 24 significant days out of a
8 set of 105.

9 It's not impossible, you know. By the
10 laws of physics, there is a one in about a
11 hundred thousand possibility of doing that by
12 random chance.

13 But the standard for statistical
14 significance and scientific research is, is
15 there a 1 in 20 chance that this outcome could
16 be due to random chance?

17 So that's why I say these results are
18 well within any reasonable standard of
19 significance that would be recognized in
20 academic research.

21 I would -- I would just refer you back
22 to the jar of marble example. As I say there,
23 it is possible to draw ten red marbles out of
24 the jar. It's not impossible, it's possible.
25 But you have to wait and do it millions and

1 [REDACTED]
2 millions and millions and millions of times
3 before you grabbed all ten red marbles. You'd
4 probably win the lottery a few times over. So
5 that's generally how statistics works.

6 Q. All right. And other than your
7 confidence in the statistical significance, as
8 you just described it, did you do anything to
9 determine whether there were any errors that was
10 in the data or in the application of the data to
11 the -- the model that you used?

12 MR. MOYE: Asked and answered.

13 A. Well, I mean, it -- of course, we have
14 procedures, among my team, to look for errors.
15 The implementation of the statistical models and
16 all of the analysis that you see was done by a
17 second independent person to make sure that
18 numbers tied out and there were no errors in
19 code or anywhere else.

20 And to the very best of my knowledge,
21 there are no errors anywhere in my work in this
22 matter.

23 Q. All right. Turn to Dr. Ferrell.

24 As I understand his report, he's
25 testing --

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[REDACTED]

A. My rebuttal or -- or I --

Q. Right now I'm asking you about --

A. Okay.

Q. -- Dr. Ferrell's report. We'll get to
your rebuttal.

A. Sure.

Q. As I understand it, he's testing a
hypothesis, using the principal component
analysis, that the returns of other
cryptocurrencies explain, to a level of
statistical certainty, the entirety of the XRP
returns. Is that correct?

A. I'm sorry, I don't -- I don't
understand that description of what he's doing.
That doesn't sound -- I -- I -- that's not how I
would describe anything that he's doing.

Q. Why don't we -- do we have
Dr. Ferrell's report?

(Expert Report of Dr. Allen Ferrell
was marked Exhibit 12 for identification,
as of this date.)

Q. All right. Let me -- let me try in
Dr. Ferrell's own words. Take a look at
page 48, Footnote 178.

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[REDACTED]
A. Sure. Page 48.

Footnote 178. Yes.

Q. And why don't you read the --

A. You just want me to read the footnote?

Q. Yeah, up to "et cetera," and then the
cite.

A. If the null hypothesis of the constant
term equals zero are rejected, which is not the
case in Exhibits 3-7, that would merely mean
that the factors used in the model were
insufficient to explain the average monthly XRP
price return and that there were potentially
additional factors that needed to be included.

A rejection of the null of the zero
constant term cannot be used to learn the nature
or identity of the additional factors that
should be added to the model and whether those
factors are related to the cryptocurrency
market, other asset markets, political
sentiment, changes to regulation, et cetera.

Q. Do you agree with Dr. Ferrell's
characterization of rejecting or accepting the
null hypothesis of the constant equaling zero?

A. I would not have characterized it this

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[REDACTED]

way, to be perfectly honest with you.

I -- I just -- I just wouldn't --
would never have described it this way.

Q. Well, do you have an understanding of
what he's referring to when he's talking about
the constant term?

A. I -- I -- I understand -- I understand
what he's trying to say up to a point. And then
he says things that I don't quite understand
what --

Q. Let's just stick with my question.

A. Sure.

Q. Do you understand what the -- what the
phrase, "constant term," refers to as used in
Footnote 178?

A. I do.

Q. And what is your understanding?

A. It refers to the intercept or constant
in a factor regression model.

Q. And what does it mean to reject the
null hypothesis of the constant term equaling
zero?

A. So, when you estimate the model, you
will have an estimated value for that constant

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[REDACTED]

term.

And, coincidence aside, the number will not actually be zero. It will be something.

I think in his case, if I remember correctly, it's .058, if memory serves.

So that's the estimate of alpha, or the constant term. 058.

Now, around that estimate, there is some uncertainty. That range of uncertainty might be narrow, it might be wide. In his case, one standard deviation is .042, if memory serves. Again, this is just period one of his model.

So what does that mean?

That means that 95 percent of the time, the actual alpha, so he -- so he's got an estimate of alpha -- backing up a second.

He has an estimate of alpha. You have to imagine that there is an actual true alpha out there, somewhere. He's got an estimate of it.

Under certain conditions, 95 percent of the time, the true alpha lies within a range

1 [REDACTED]
2 around his estimate of alpha.

3 I just want to make it -- with me so
4 far?

5 Okay.

6 Q. It doesn't matter. Just answer the
7 question.

8 A. Okay. All right. So I just -- I want
9 to make sure I'm being understood.

10 So what he's saying is that that
11 range, centered at .058 plus or minus 1.96 times
12 .042, includes the number zero. So 058, it goes
13 below zero, and then, of course, it goes up to
14 14.

15 And so he would say, quite correctly,
16 that under customary standards, you could not
17 reject the hypothesis that -- that the true
18 alpha is the number zero.

19 Q. Okay. And fair to say, because I
20 can't put all of the --

21 A. I'm trying, I'm trying.

22 Q. -- econometric qualifications into my
23 question every time.

24 If I say alpha is zero, can we agree
25 that what I'm referring to is what you just

1

described, that the difference between the true
alpha and his estimated alpha is statistically
insignificant? Is that a fair summary?

A. You were so close right up to the end.
I -- I will agree we can -- we can use the
phrase, alpha is zero, to refer to cases where
we cannot reject the hypothesis that alpha is
zero. Is that satisfactory?

Q. As long as you understand and we
agree, the record's clear --

A. I understand.

Q. -- when we say alpha's zero.

A. It's clear to me. If it's
satisfactory to you, then that's fine.

Q. All right. And in substance, again at
a high level, what Dr. Ferrell is trying to test
is whether the alpha in his principal component
study is zero. Correct?

A. That's one of the things he's trying
to test, yes.

Q. And, in fact, he concluded, using his
principal component analysis, that the alpha was
zero. Is that right?

A. That is correct.

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Q. All right.

MR. MOYE: Reid, when you have a minute, could we take a break?

MR. FIGEL: Sure. Now is as good time as any.

THE VIDEOGRAPHER: We're going off the record at 5:11 p.m.

(Recess from 5:11 to 5:25.)

THE VIDEOGRAPHER: We're back on the record at 5:25 p.m.

Q. All right. Dr. ██████████ in your rebuttal report, you don't report or state that you did any econometric analysis that indicates that the correct alpha in Dr. Ferrell's principal component content study is not zero, did you?

A. Well, that's -- that's -- there are a lot of nuances to that question.

Q. Could you start with yes or no if you can?

A. Well, I can't. I genuinely can't. Because what I do show in my report is that a parameter like alpha, in Dr. Ferrell's specification, is -- is there's evidence and reason to believe that it changes over time.

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And so I show in -- in one section of my report that if you allow alpha to change over time, take everything else Dr. Ferrell is doing as given, you can get nonzero estimates that way.

I will say, yes, that if I simply replicate what Dr. Ferrell did, I get Dr. Ferrell's numbers.

But that's -- that's a sort of narrow yes.

Q. Are you offering an opinion in this case that the proper application of Dr. Ferrell's principal component analysis should have resulted in a nonzero alpha?

A. As I explain in my report, the question is, frankly, not interesting. It could be zero. It could be nonzero. It doesn't shed any light on any helpful question that I can see in this matter. They -- the presumption when running a factor model is that alpha will be zero. That is ordinarily what you would expect.

Finding a zero alpha is unremarkable.

Q. So is the answer to my question that you will not be offering an opinion in this

1 [REDACTED]
2 litigation that a proper application of
3 Dr. Ferrell's principal component analysis would
4 have yielded a nonzero alpha?

5 A. I struggle to say yes to that, because
6 in my view, a proper application would allow for
7 parameters to change over time.

8 And when you do that, there is
9 evidence that alpha is not zero.

10 Q. Can you show us where in your
11 report -- that's Exhibit 2 -- you describe the
12 opinion you intend to offer, that whatever
13 adjustments you feel are appropriate to
14 Dr. Ferrell's principal component analysis,
15 would have resulted in a nonzero alpha?

16 A. It's -- so I would point you to
17 page 3, the second bullet, beginning, The
18 statistical analyses employed by Dr. Ferrell are
19 not robust in many respects.

20 Sub-bullet 2 to that, Dr. Ferrell does
21 not appear to have considered that certain
22 parameters of his model can and do change over
23 time.

24 That is further developed -- I believe
25 it's the very last section of my report --

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Q. Before you go to that -- I don't mean to interrupt. Just on these two points --

A. Yes.

Q. -- what I heard you say was a criticism of Dr. Ferrell's study, not that you are offering a contrary opinion that had he done the study the way you believed it should have been done, it would have resulted in a nonzero alpha. Is that correct?

A. I -- I'm not sure that that's correct. As I say here, in my opinion, a proper analysis would have allowed parameters to change. And I show in my report, I -- allowing alpha to change can produce a nonzero alpha. So I --

Q. I understand that it's theoretically possible. My question is, are you offering the opinion that if he had done -- withdrawn. Let me start over.

Are you offering the opinion in this litigation that had Dr. Ferrell done the analysis that would have, as you say, allowed the parameters to change, that that would have resulted in a nonzero alpha?

A. To that I have to say, yes, because it

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[REDACTED]

does.

Q. Where do you set out the calculations that show that with the adjustments you believe are appropriate, the result is a nonzero alpha?

A. That is Exhibit -- Figure 17, literally the last page before Appendix A.

It's precisely what I am doing in this exhibit, is I'm showing that allowing alpha to change over time, can produce estimates of alpha that are significantly different from zero. And it can produce estimates of a change in alpha, that is significantly different from zero.

Q. Right. So let's go -- you have -- you have -- Figure 17 in front of you?

A. I do.

Q. All right. As I understand Figure 17, the second column is the alpha that Dr. Ferrell calculated. Correct?

A. It's an alpha of the type that Dr. Ferrell calculated, yes.

Q. And then your middle column is your data or your calculations or the results of your calculations that showed, had he made the adjustments that you contend were necessary,

1 [REDACTED]
2 alpha would have changed in the amounts that you
3 set forth. Correct?

4 A. So to be clear, the particular
5 analysis that I'm running here, which is --
6 which is a demonstration of principle, is to
7 say, as an example of allowing a parameter to
8 change, imagine that alpha changed once
9 Ripple Labs received its BitLicense.

10 Now, I'm not saying it has to change.
11 It might change. I'm just allowing it to
12 change.

13 And so what Figure 17 is showing is,
14 if you -- if you make that allowance, you can
15 find, in several cases, that with that
16 allowance, alpha becomes significantly negative,
17 and that change in alpha post BitLicense is
18 significantly positive.

19 Q. Well, the -- let's just make sure
20 we're -- the record is clear here. The center
21 column under the heading, Post BitLicense Period
22 Change in Alpha, is the amount of the change in
23 alpha. Correct? It's not the resulting alpha.

24 A. That is correct.

25 Q. So the resulting alpha would have been

1

2 the -- let's just talk for September 4, 2015 --
3 would have been the negative .04 plus the .05,
4 correct?

5 A. Correct. The way to interpret -- the
6 way to interpret this --

7 Q. Just stay with me.

8 Correct, right?

9 A. Well --

10 Q. So had you added a column that said,
11 Alpha Post BitLicense Period, you would have put
12 in the number .01; is that correct?

13 A. Correct. Alpha -- alpha -- what --
14 the column called alpha, you could describe as
15 alpha pre BitLicense. Then there's a change.
16 You would add those two numbers to get alpha
17 post BitLicense.

18 Q. Correct. And just doing the
19 arithmetic, which I can do, you'd start with a
20 negative .04. And you add positive .05. That
21 results in positive .01. That's what the
22 post-BitLicense alpha would be. Correct?

23 A. In that case, yes, that is correct.

24 Q. And where in your report do you say
25 that the post-BitLicense alpha is nonzero?

1

2 A. Well, I -- that was not your question,
3 and that's not what I said. You asked me about
4 alpha. So everywhere here that you see a
5 significant negative, under the alpha column,
6 that would correspond to a significantly
7 negative pre-BitLicense alpha.

8 So to the question, Is alpha always
9 zero? The answer is no. It's not always zero.
10 Pre-BitLicense alpha is sometimes significantly
11 negative.

12 To that you can couple sometimes a
13 significantly positive increase once Ripple Labs
14 gets its BitLicense. The net result of those
15 two things, the post-BitLicense alpha, is
16 sometimes going to be numerically greater than
17 zero. I can't tell from looking at this whether
18 it is statistically greater than zero.

19 Q. So what you are saying is that the
20 alpha that you calculate after the BitLicense
21 was awarded should be used to change the alpha
22 before the BitLicense was awarded?

23 A. I'm saying that alpha -- what does
24 alpha represent? Alpha represents an average
25 excess return in XRP prices after controlling

1 [REDACTED]
2 for all the factors that you're controlling for.
3 That's what alpha represents.

4 Pre BitLicense, that average is
5 sometimes significantly negative.

6 Then with the BitLicense, there is a
7 change, which is sometimes significantly
8 positive. And post BitLicense, that average is
9 the combination of the two. The post license --
10 post-BitLicense average may or may not be
11 statistically different from zero. I can't tell
12 by looking at this table. I don't know the
13 answer to that.

14 But the table is already enough to
15 establish that the pre-BitLicense alpha is
16 statistically different from zero. So to the
17 question, Is alpha always zero? I would have to
18 say that the answer is no.

19 Q. Why does the change you calculate in
20 alpha following the BitLicense affect the alpha
21 prior to that time?

22 A. It doesn't.

23 So you had -- it was earning -- there
24 was -- there was an alpha for the several months
25 before it got its BitLicense, which was in some

1 [REDACTED]
2 cases significantly negative. And then there's
3 an alpha in the several months after it gets its
4 BitLicense, which is sometimes significantly
5 much more positive.

6 So you go from here to here.
7 That's -- that's what this is saying.

8 Q. Well, let's just start: Do you
9 contest Dr. Ferrell's calculation of alpha in
10 your Figure 17 in the second column?

11 A. All of Figure 17 is a criticism of
12 Dr. Ferrell's approach to dealing with alpha.
13 Dr. Ferrell's approach is to assume that alpha
14 remains unchanged for five years or seven years.

15 And my examination of cryptocurrency
16 data leads me to think that none of these
17 parameters is going to be stable for five years
18 or seven years.

19 And I'm simply demonstrating here that
20 if we had simply allowed, just allowed the
21 possibility for alpha to be different before and
22 after Ripple gets its BitLicense, you would find
23 significant evidence that alpha is different
24 before and after it gets its BitLicense. That's
25 what Table 17 reflects.

1

2 Q. Did you do any calculations or studies
3 that allows you to demonstrate that alpha should
4 have been different before Ripple got its
5 BitLicense?

6 A. Yes. And I would point you to
7 Figure 17.

8 Q. And what Figure 17 shows, as I
9 understand it -- and correct me if I'm wrong --
10 is the amount of change in alpha that you
11 observe following the award of the BitLicense.
12 Correct?

13 A. Correct.

14 Q. So -- and the BitLicense is a factor,
15 correct, or an event?

16 A. It's an event, yes.

17 Q. Yes. That has an impact. Correct?

18 A. I think so.

19 Q. And according to you, it results in a
20 change in alpha, correct?

21 A. Correct.

22 Q. So what about that makes the alpha
23 that Dr. Ferrell calculated for the period
24 before the award of the BitLicense nonzero?

25 Or inaccurate. Let's not even get to

1 [REDACTED]
2 nonzero; the -- the values that he created are
3 inaccurate.

4 A. The val-- Dr. Ferrell is producing an
5 estimate of alpha under the assumption that
6 there -- that it is constant, that it does not
7 change.

8 Now, that assumption might be true.
9 That assumption might be false. It's a testable
10 assumption. We can get the data, and we can go
11 look.

12 And that's what I do in Figure 17.
13 And what I show is that that assumption is
14 false. It's not a good assumption to make.

15 So if you estimate a model, saying,
16 I'm going to find a parameter estimate assuming
17 it's constant for seven years, or five years,
18 whatever the length of time is here, and your
19 assumption is false, you have a misspecified
20 model at the outset. And that's what I'm
21 demonstrating.

22 Q. So let me make sure I follow you. As
23 I understand it, based on the work that you did,
24 you think there are two different alphas, there
25 are two periods, right? There's a pre

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BitLicense alpha and a post BitLicense alpha; am
I correct?

A. I'm showing that if you allow for that
possibility, you'll find evidence that it's
true.

Q. All right. Did you do an analysis as
to whether the two alphas considered jointly
were statistically significant in rejecting
nonzero?

A. I've shown that the pre BitLicense
alpha is significantly different from zero, and
I've shown that the change to the pre BitLicense
alpha is statistically different from zero.

Q. By "statistically different from
zero," you're rejecting the hypothesis that
alpha is zero. Is that correct?

A. That is correct.

MR. MOYE: Excuse me. Mark's going
sub in for me. I'm going to head out.

MR. FIGEL: Just for the record,
Mr. Moye has a plane to catch. We view
these as a -- a justification to depart
from the rule that each party can only have
one lawyer representing a party at a

1 [REDACTED]
2 deposition.

3 And so, Mr. Sylvester will pitch in,
4 but we don't view this as a basis to argue
5 that there can be a swap in any other
6 circumstance.

7 MR. MOYE: Thanks very much.

8 Q. Did you ever do a test to determine
9 whether these alphas, the two that you have
10 here, are jointly significant?

11 A. Strictly speaking, no. I haven't
12 conducted a test of whether they are jointly
13 significant.

14 Q. And why not?

15 A. My point here was simply to show that
16 they can change over time. And that if you
17 allow them to change over time, you'll find
18 significant evidence that they do change over
19 time.

20 My expectation is that a joint test on
21 some of these days would reject the hypothesis
22 that they're both zero. I'd be surprised if it
23 didn't, but for the record, I haven't done it
24 and I don't know for sure.

25 Q. So you're not offering an opinion that

1 [REDACTED]
2 the -- the two alphas considered jointly are
3 nonzero, correct?

4 A. Based on this analysis, I -- I
5 wouldn't be prepared to say that. I would
6 certainly say that there is substantial evidence
7 that alpha changes, and any model that doesn't
8 allow for that possibility is misspecified.

9 Q. Let me direct your attention now to
10 Footnote 174 of Dr. Ferrell's report.

11 A. What page is that, please?

12 Q. 46.

13 A. Okay.

14 Q. All right. He writes, The R-squared
15 measures the percentage of the various -- of the
16 variation in the dependent variable, (e.g., XRP
17 price return) that the regression model
18 explains.

19 Do you agree with that statement?

20 A. I do, yes.

21 Q. Do you agree that a decrease in
22 R-squared itself does not disprove Dr. Ferrell's
23 conclusion that alpha -- that under a principal
24 component analysis, alpha is statistically
25 insignificant?

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A. The -- the two points are unrelated.

Q. So a decrease in R-square values
doesn't disprove a conclusion that alpha is
statistically insignificant? Correct?

A. It doesn't -- it doesn't -- correct,
it doesn't speak to the question of whether
alpha is statistically different from zero.

Q. And I direct your attention to page --
paragraph 25 on page 10 of your rebuttal report.

A. Yes.

Q. All right. You claim that Professor
Ferrell's principal component analysis is,
quote, concentrated on three months with extreme
returns, while the model explains relatively
little of the variation on XRP's prices outside
of those three months.

A. Correct.

Q. If you could turn the page to Figure 3
on page 11. You with me?

A. I am.

Q. And the three events that you contend
should have been excluded are identified in
Figure 3, correct?

A. I'm not saying they should have been

1 [REDACTED]
2 excluded. I'm -- I'm pointing out three outlier
3 returns among his 70 return observations.

4 Q. So you agree that it was appropriate
5 for Dr. Ferrell to include these three returns
6 in his principal component analysis. Correct?

7 A. I didn't say that either. I'm
8 pointing out that in the set of 70 months, there
9 are three returns that are unusually large
10 compared to the other 70. That's what I'm
11 showing here.

12 Now, the question becomes, So what.
13 And I proceed to investigate the implications
14 and consequences of that.

15 It's possible that it doesn't matter.
16 It turns out in this case, that these
17 three returns are driving a lot of his results.

18 Q. Just before we get to -- move on from
19 this, why did you not raise the same set of
20 concerns with respect to the price return on the
21 far right of the horizontal axis?

22 A. I -- I simply went -- I simply went
23 from the first to the second to the third.
24 That -- that next one is surely the fourth. And
25 with three months, one can account for

1

94 percent of the variation in the set of 70.

3

With another four months, you know,
that would rise to something else. But I -- I
stopped where I -- where I needed to stop, which
is how many months account for 94 percent of the
variation in his data.

8

Q. Let's turn the page and go to
Figure 4?

9

10

A. Yes.

11

Q. This effectively is an effort to
replicate Professor Ferrell's analysis with
omitting those three days; is that correct?

13

14

A. No, no, that's not what this is at
all.

15

16

Q. Well, why don't you tell us what you
purport to do in Figure 4.

17

18

A. So Figure 4 is simply taking the
70 observations that Dr. Ferrell -- so let's
back up.

20

21

Dr. Ferrell has 70 observations, he
has a number of factors, he runs a regression,
he reports a very high R-squared.

23

24

I'm taking the same 70 observations,
and I'm simply putting a fixed effect on three

25

1 [REDACTED]
2 of those months. I don't have any of his other
3 factors. I just say, Let's put a fixed effect
4 for this month, this month, and the other month.
5 And that alone accounts for 94 percent of the
6 variation.

7 The purpose of this table is simply to
8 demonstrate an empirical fact, that three months
9 out of 70 accounts for 94 percent of the
10 variation in the entire set of 70.

11 This right now is just a --
12 demonstrating a fact.

13 Q. What do you mean by "fixed effect"?

14 A. They're also -- they -- they're
15 sometimes called dummy variables. Back when I
16 was a student, they were dummy variables, and at
17 some point that fell out of favor because it --
18 maybe it sounds dumb. And so people started to
19 say fixed effects instead. But it's just a --
20 it's just a flag to pick up this -- this
21 observation.

22 Q. How is that different than omitting it
23 from the study?

24 A. Well, you're almost right, with
25 respect.

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And I'm not suggesting that he do this, but you would be correct that in the context of his model, if he wanted to, he could have put dummies for each of these three months, and that would be effectively the same thing -- in terms of the other parameters of his model, that would effectively be the same thing as removing three observations from the model.

But that's not what I'm doing here, and that's not the point that -- that I'm making in this section of my report.

Q. So if I understand your testimony, it's just observational; is that right? You're just explaining how much of the variation can be traced to those three --

A. To those three months. At this point in this section, that's all I'm doing. Three months account for 94 percent of the variation.

This is not yet -- if you stopped here, this is not yet a criticism of anything that Dr. Ferrell has done. Simply documenting an empirical fact.

Q. And you're not challenging or

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contesting the accuracy of the price returns
that he calculated on those three instances.

A. That is correct. I'm not -- I'm not
arguing that those returns were not real and did
not actually happen in XRP prices.

Q. All right. If you could turn the page
and go to -- give me just a second.

Let's go to Figure 5. Can you tell us
what Figure 5 represents.

A. So, out of these 70 months in his
factor model, Dr. Ferrell reports an R-squared
of about 93 percent, plus or minus. That's Fact
Number 1.

Fact Number 2, I show just three of
those 70 months accounts for 94 percent of the
variation. That's Fact Number 2.

Now, the question becomes, is
Dr. Ferrell getting a high R-squared only
because his model explains those three months
and doesn't explain the other 67?

That's possible.

Or is Dr. Ferrell getting his
R-squared because his model does a really good
job of explaining all 70 months including the

1 [REDACTED]
2 three outliers? That's also possible.

3 I -- I don't know yet.

4 So that is what I'm going to test.

5 And so in this figure, what I've done
6 is I've replicated Dr. Ferrell's model, I've
7 taken his predictions for 67 of the 70 months.
8 And I'm asking the question: How powerful is
9 his model outside of the three months that we've
10 been talking about? That's the question.

11 And, of course, I don't know the
12 answer before I -- before I do the analysis. It
13 might be very powerful. Or it might not be
14 powerful. What I find is, it's not powerful.

15 In fact, outside of those three
16 months, Dr. Ferrell's model is actually worse
17 than no model. He would be better off with no
18 model.

19 So that's -- that's the point that I
20 want to make, is the high R-squared he reports
21 is not because he's done a very good job of
22 explaining every point in his data set. It's
23 because he's done a good job of explaining three
24 points in his data set and really is not
25 explaining anything that happens the other

1 [REDACTED]
2 67 months.

3 Q. So when you testified with respect to
4 Figure 5, you've taken his predictions for 67 of
5 the 70 months and asking the question: How
6 powerful is his model? In Figure 5, you are
7 excluding the three outlier dates. Correct?

8 A. Correct. I'm taking his model
9 estimated on all 70, and I'm simply taking the
10 predictions of that model for the other 67
11 months besides the three that we're talking
12 about.

13 Q. And what is the -- what is the basis
14 in the academic literature that causes you to
15 believe that it's appropriate to remove three
16 days of data out of 70 that you don't contest is
17 a mismeasurement and exclude it from your model?

18 A. Well, there's -- first of all, that's
19 not what I'm doing.

20 But to answer your question, there's
21 an entire literature of how to handle outlier
22 data points and regression models.

23 The data may be correct. Being an
24 outlier doesn't necessarily mean the data are
25 false. It simply means that they have -- they

1 [REDACTED]
2 are overly influential in your parameter
3 estimates.

4 So, for example, you have 70 points,
5 and they're all kind of bouncing around a little
6 bit like this. And then you've got one point,
7 which is just way out of scale for the others.
8 That might be the data. Nothing wrong with the
9 data.

10 If you fit a model to that series of
11 data, what can happen is that your model, which
12 is just trying to solve a problem that you've
13 given it, your model will say, Well, okay, if
14 you want me to solve this problem, what I'm
15 going to do is I'm going to figure out how I can
16 match this one point that's way outside of
17 everything else, and I'm going to not do a very
18 good job on these other points. That might be
19 okay, or that might not be okay. But that's
20 what can happen with outlier or influential
21 points.

22 That appears to be what happened here.

23 Now, if in response to this,
24 Dr. Ferrell decided that he wanted to do
25 something in the sense of he wants to have

1 [REDACTED]
2 better -- a better, more robust, more reliable
3 model by taking account of those outliers,
4 there's plenty of literature that discusses
5 appropriate ways to do that.

6 Q. I'm going to quote from you -- from
7 the Litigation Services Handbook again. This is
8 Section 9.4.

9 It says, Practitioner should not
10 eliminate outlier data points without first
11 investigating them. The removal of data points
12 can prove dangerous. Although eliminating
13 outliers will typically improve a regression's
14 fit, it can also destroy some of the model's
15 most important information. One should
16 investigate whether substantive information
17 exists regarding these points and whether the
18 analysis should exclude them. Do they involve
19 possible measurement errors? If not, then the
20 analyst should consider including them.

21 We agree that you're not contending
22 that the three points are measurement errors,
23 correct?

24 A. Correct. I'm not -- I'm not saying
25 that.

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[REDACTED]

Q. What did you do to investigate the circumstances of those three data points?

A. That's what this section is.

Q. I'm not talking about the --

A. This set --

Q. Not talking about the effect on the R-squared. I'm talking about what happened in the real world as to why there were those -- call them outlier results.

A. Well, one I point to, I mean, I -- I didn't -- again, I have no reason to doubt the data. I didn't concern myself with that question.

I identify single largest outlier here, happens to land -- or maybe not happens, but lands on the day that Ripple Labs announces its intention to escrow tokens. That might be what's causing the outlier.

But that was -- I -- but I didn't concern myself with trying to understand everything that was happening on -- on these three dates.

What the handbook is saying, I completely agree with, which is if you've got

1 [REDACTED]
2 outliers, you need to do some work. That's
3 really what the handbook is saying. If you've
4 got outliers, you need to do some work to see
5 whether you want to keep them or deal with them,
6 and that's what I'm doing here.

7 Q. And the only work that you did was to
8 associate the largest, call it outlier, with the
9 announcement of escrow --

10 A. No, no. That's not --

11 Q. Let me finish my question.

12 A. Please.

13 Q. -- and you did nothing to investigate
14 the circumstances or the context of the other
15 two outliers. Correct?

16 A. No. No. That's -- that's --

17 Q. When you said --

18 A. -- incorrect.

19 Q. -- you didn't know what happened on
20 the other two dates.

21 A. The work -- the work of the type the
22 handbook is discussing and the type that I'm
23 discussing is to investigate whether those
24 outlier points are having undue influence in
25 your model. That's the work.

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And that's the kind of -- this is the kind of work that I'm doing here. This is the type of investigation that an -- that an analyst might do to determine if these three outlier points are biasing the model.

Q. Well, if the data is accurate, what basis is there to exclude it as having an impact on the model that purports to describe what's actually happening in the real world?

A. Well, the handbook lays out some of these reasons, and I've explained some of those reasons. An outlier point, accurate though it may be, may be biasing your model, right?

Your model may adjust its parameters in such a way that it will get that one point right, but get a lot of other points wrong. And in some circumstances, you might say that's fine. And in other circumstances, you might say that's not fine.

Because I don't want a model that doesn't work most of the time. And that's what we have here.

Dr. Ferrell's model does not work, 67 out of 70 months.

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So if -- if -- I would -- if it were me, I would deal with these outliers, because I -- I don't want to have a model that does not work 67 out of 70 months.

Q. So when the handbook says one should investigate whether substantive information exists regarding these points and whether the analysis should exclude them, you don't think that requires an investigation into the factual circumstances that led to the data?

A. No, I don't believe that that -- that is necessarily -- or at least I certainly didn't read that to be some kind of investigation into the circumstances that created the data.

I interpret that to mean, you should see if those points have information that is consistent with your model with respect to the rest of the points. That's what outlier analysis is. That's what I've done here.

No -- no researcher would -- worth his salt -- his or her salt would say, Just because the data are accurate, I therefore cannot deal with them as outliers in a model.

That -- that's -- not a proper

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position to take.

Q. So just so the record's clear, you did no factual investigation of the circumstances that led to what you call the outlier price points. Correct?

A. I had no reason to doubt that the pricing data were accurate.

Q. But you don't know what the circumstances were that were associated with the outlier data. Correct?

A. Again, I -- one of them, I happened to recognize the date. But what the circumstances are that are causing those prices is not the point of this analysis.

The point of this analysis is, do these three data points, correct though they may be, are they biasing the model and rendering it worthless in 67 out of 70 months?

And the answer is yes.

Q. All right. And in Figure 5, you come up with an unadjusted R-square of .328.

And you state that -- well, Professor Ferrell's model explains 93.5 percent of the variation in -- of all 70 months, at

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best, it only explains 32.8 percent of the variation of 67 of those 70 months.

A. That is what I wrote, yes.

Q. Right. And if you could read paragraph 30, the first sentence, please.

A. From Figure 5, we see that Dr. Ferrell's model is statistically unbiased. Alpha is numerically close to zero, and one cannot reject the hypothesis that it is zero at any reasonable significance level.

Q. And that is true with respect to the information you calculated in Figure 5, correct?

A. That is the sentence describing what's in Figure 5, yes.

I should point out, just so there's no confusion, this alpha is different from Dr. Ferrell's alpha. But the sentence is true.

Q. Excuse me a second.

All right. If you could go to paragraph 39. And page 19.

A. Yes.

Q. You with me?

A. Yes, I am.

Q. These are other outlier data.

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[REDACTED]

Correct?

A. Correct.

Q. But this is for a particular digital asset, THC?

A. Correct.

Q. And you identify three days in which the THC prices appear to be incorrect.

A. That is correct.

Q. Right. And those are days where the price per unit, I guess, is 11- or \$12 million?

A. Correct.

Q. Now, Professor Ferrell calculated his returns by looking to prices on a start date and an end date. Correct?

A. That is correct.

Q. And didn't look at price information in between.

A. That is correct.

Q. All right. And in order to calculate the return, between August and September, Professor Ferrell compared the prices of August 8 and September 5. Correct?

A. I -- I don't have the sequence of dates memorized, but he would have had a start

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date and a date 28 days later, and he would have compared those two prices.

Q. And so the price spikes that you identify in Figure 10, if they didn't occur on a date where he was getting price data, they wouldn't affect his results, correct?

A. Correct. Which is why I -- I'm speculating that he didn't notice the problem in the data.

Q. And does the -- do these price spikes affect the calculations based on the data that he used?

A. It speaks to the robustness of his approach.

So if he's going to start on the particular day that he starts, he will not land on these particular prices, and they will not impact his results.

But the choice of start date is fairly arbitrary, and had he chosen another date, which would have just as valid from a principal point of view, he would have landed on these days, and that's when he would have discovered this problem.

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That's, for instance, one of the ways
that came to my attention.

Q. But are you offering an opinion that
Dr. Ferrell's conclusions are unreliable because
the reported price of THC spiked on the
three days that you set forth in your report?

A. I'm very careful to say that these
price spikes do not impact the calculations that
Dr. Ferrell uses.

Of course, I think his conclusions are
unreliable for a host of reasons.

But his calculations, because of the
particular start date that he picked and the
particular sequence of dates that follows
therefrom, do not land on these dates. It does
raise questions, in my mind, about the integrity
of his data source.

But to your question, that's correct.
These particular prices, though I think they're
clearly wrong, are not altering his
calculations.

Q. All right. You identified another
outlier month, one return date in which the
price return for THC equaled 8,916 percent.

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That was in January of 2016.

Do you see that?

A. Yes, I do.

Q. He used 6,370 return dates in his
primary component analysis. Correct?

A. I -- I'm sorry, he used what?

Q. A total of 6,370 return dates in
his --

A. I haven't done that arithmetic. I --
I don't know.

Q. And he didn't include THC in
estimated -- Estimation Period 1, did he?

A. It is not part of Estimation Period 1,
that's correct.

Q. And it was only one out of 11
principal components in Estimation Period 2,
correct?

A. It dominates the second principal
component in Estimation Period 2.

Q. And what analysis did you perform to
determine that this one month in one currency
dominated his -- sorry.

Dominated his results, I think is what
you said.

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[REDACTED]

A. I said dominated his second principal component.

Q. So what is your basis for your testimony that a single-event day dominated his second principal component?

A. Well, I said that the coin dominated his -- the second principal component. And I -- I would refer you to Figure 13 of my report.

Q. Let's go to Figure 14.

What does Figure 14 purport to do?

A. Showing how things would have been different had Dr. Ferrell noticed the flaw in his methodology. The flaw in his methodology, which doesn't apply just to THC but it's a general flaw in his entire approach, is splicing two pricing data series together in the way that he does.

This is just an example of the problems that that creates. It's a particularly stark example, but it's just one example.

By doing that, he creates a variation or a variance in his principal components, which is not real. It's not part -- it's not real in the data. It's created by this -- this -- this

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poor methodology.

And so what I'm just showing here is, if -- if we draw -- if we didn't have the THC dominating the second principal component, I'm just showing how the second principal component that emerges is much more correlated with XRP than what Dr. Ferrell's second principal component is.

Q. Does your Figure 14 show a statistically significant alpha on your recalculated numbers?

A. No. In -- in Figure 14, with just two principal components, whether Dr. Ferrell's or whether a corrected second principal component, alpha is not statistically different from zero in either case.

Q. So it wouldn't change his results. Correct?

A. No, no, I don't know that. Again, the general method, the general problem here, is you have pricing data from one source and you have pricing data from another source, and you just slap one on top of the other. That's the problem. This is -- this is

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an example of that problem.

Now, he does that for virtually and maybe literally every single coin in his data set. And you can't do that. That's -- that's -- that's a bad methodology. That is the wrong way to combine data sets.

The right way to combine data sets is in return space. Dr. Ferrell didn't do that. He just took one price and superimposed another price on top of it.

That creates problems. This is just an example of a problem that that methodology creates.

Had he -- had he done it correctly, had he corrected it -- I didn't investigate it, I don't know if that would have created a statistically significant different alpha, I don't particularly care. I don't know whether it would or not, but I'm simply pointing out that his methodology is fundamentally flawed.

Q. Without quibbling with your testimony about his methodology, you didn't do the calculations to determine whether having used the methodology that you would have preferred

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2 would have resulted in a different result, with
3 respect to rejecting the nonzero conclusion for
4 alpha. Isn't that correct?

5 A. I did not undertake that analysis, no.

6 Q. You could have, correct?

7 A. I could have, yes.

8 Q. And you didn't.

9 A. I didn't. I...

10 Q. All right. Let's go to paragraph 48.
11 If you would.

12 You calculated a change in R-squared
13 and Principal Component 1, assuming estimation
14 period began on September 10 instead of
15 September 3, correct?

16 A. Correct.

17 Q. And in your report, you observe that
18 R-squared would vary based on the start date
19 that Dr. Ferrell selected. Correct?

20 A. Correct.

21 Q. And you demonstrated that you can come
22 up with differing R-squared calculations,
23 correct?

24 A. Yes.

25 Q. You don't recalculate any alphas

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associated with a change in start date, do you?

A. No, not here, no.

Q. And so you're not offering an opinion as to whether the alphas that Dr. Ferrell determined in his principal component analysis would have been different, in other words, if it would have been able to -- if he would have been able to reject the nonzero conclusion, had he used different start dates. Correct?

A. I'm not investigating that particular question in this section, that is correct.

I just want to demonstrate that different start dates can move things around quite a lot, and that's not a desirable property of this kind of framework.

MR. FIGEL: How much time do we have left?

THE VIDEOGRAPHER: About two minutes.

MR. FIGEL: All right. I'll -- I'll spare you the last two minutes, even though we can go for several more hours. Let -- let's just make sure nobody on the phone wants to say anything.

Any -- any questions for Dr. [REDACTED] from

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Cleary or Paul Weiss?

Okay. I texted him. Hearing none --

All right. Dr. ██████████ thank you for
your time. No further questions.

THE WITNESS: Thank you.

MR. SYLVESTER: Thanks.

THE VIDEOGRAPHER: This marks the end
of the deposition. We're going off the
record at 6:16 p.m.

(Time noted: 6:16 p.m.)

██████████ Ph.D.
Subscribed and sworn to before me
this day of 2022.

C E R T I F I C A T E

STATE OF NEW YORK)
) Ss.:
COUNTY OF NEW YORK)

I JEFFREY BENZ, a Certified Realtime
Reporter, Registered Merit Reporter and
Notary Public within and for the State of
New York, do hereby certify:

That [REDACTED] Ph.D., the witness
whose examination is hereinbefore set
forth, was duly sworn by me and that this
transcript of such examination is a true
record of the testimony given by such
witness.

I further certify that I am not
related to any of the parties to this
action by blood or marriage; and that I am
in no way interested in the outcome of this
matter.

IN WITNESS WHEREOF, I have hereunto
set my hand this 22nd of February, 2022.

JEFFREY BENZ, CRR, RMR

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1 NAME OF CASE:

2 DATE OF DEPOSITION:

3 NAME OF WITNESS:

4 Reason Codes:

5 1. To clarify the record.

6 2. To conform to the facts.

7 3. To correct transcription errors.

8 Page _____ Line _____ Reason _____

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