

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

SECURITIES AND EXCHANGE COMMISSION,

Plaintiff,

v.

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

Defendants.

Case No. 20-CV-10832 (AT) (SN)

**DECLARATION OF ANDREW J. CERESNEY**  
**IN SUPPORT OF DEFENDANTS' MOTION TO EXCLUDE**  
**THE TESTIMONY OF [REDACTED]**

I, Andrew J. Ceresney, hereby declare under penalty of perjury pursuant to 28 U.S.C. § 1746 as follows:

1. I am an attorney associated with the law firm of Debevoise & Plimpton LLP, counsel to defendant Ripple Labs Inc. I submit this declaration in support of Defendants' Motion to Exclude the Testimony of [REDACTED].
2. Attached as **Exhibit 1** to this declaration is a true and correct copy of the Amended Expert Report of [REDACTED], dated October 13, 2021.
3. Attached as **Exhibit 2** to this declaration is a true and correct copy of the transcript of the February 15, 2022 Deposition of [REDACTED].
4. Attached as **Exhibit 3** to this declaration is a true and correct copy of an article titled, [REDACTED]  
[REDACTED], published in [REDACTED], on December [REDACTED].

5. Attached as **Exhibit 4** to this declaration is a true and correct copy of the Rebuttal Expert Report of Allen Ferrell, dated November 12, 2021.

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

Dated: July 12, 2022  
New York, NY

By: /s/ Andrew J. Ceresney  
Andrew J. Ceresney

DEBEVOISE & PLIMPTON LLP  
919 Third Avenue  
New York, NY 10022  
(212) 909-6000  
aceresney@debevoise.com

# EXHIBIT 1

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

**AMENDED EXPERT REPORT OF [REDACTED]**

**October 13, 2021**

*Securities and Exchange Commission v. Ripple Labs, Inc. et al.*  
Index No. 1:20-CV-10832-AT



## TABLE OF CONTENTS

I.	INTRODUCTION.....	3
A.	Assignment .....	3
B.	Qualifications .....	3
C.	Documents Considered .....	5
II.	SUMMARY OF OPINIONS .....	6
III.	BACKGROUND ON RIPPLE AND XRP .....	7
IV.	RIPPLE COORDINATED WITH GSR TO BUY XRP IN A MANNER CONSISTENT WITH POSITIVELY INFLUENCING XRP PRICES .....	10
V.	LARSEN COORDINATED WITH GSR TO BUY XRP WITH HIS PERSONAL FUNDS IN A MANNER CONSISTENT WITH POSITIVELY INFLUENCING XRP PRICES .....	19
VI.	RIPPLE DIRECTED GSR TO SELL XRP IN A MANNER CONSISTENT WITH SEEKING TO MINIMIZE DOWNWARD PRESSURE ON XRP PRICES .....	21
VII.	LARSEN AND GARLINGHOUSE EMPLOYED GSR TO SELL THEIR XRP IN A MANNER THAT MINIMIZED THE NEGATIVE PRICE IMPACT OF THEIR XRP SALES, AND BLOCKCHAIN ANALYSIS CONFIRMS THAT THEY TRANSFERRED LARGE AMOUNTS OF PERSONAL XRP HOLDINGS TO GSR.....	27
A.	Larsen and Garlinghouse Agreements with GSR .....	27
B.	Blockchain Tracing of Funds Leaving Larsen’s Addresses.....	27
C.	Blockchain Tracing of Funds Leaving Garlinghouse’s Addresses .....	30
VIII.	RIPPLE ENTERED INTO PARTNERSHIP AND OTC AGREEMENTS WHICH INCLUDED TERMS THAT WOULD MINIMIZE DOWNWARD PRESSURE ON XRP PRICES.....	32
IX.	RIPPLE HAD STRONG INCENTIVES TO MAXIMIZE XRP PRICES .....	33
A.	Funding Operational Costs.....	33
B.	Funding for Shares Repurchases.....	36
C.	Funding from Outside Investors vs. Through XRP Sales .....	38
D.	Executive Compensation.....	39
E.	XRP vs. Stock Similarities.....	40
X.	APPENDIX A: CURRICULUM VITAE .....	43
XI.	APPENDIX B: RECENT TESTIMONY AND COURT-FILED EXPERT REPORTS .....	53
XII.	APPENDIX C: LIST OF DOCUMENTS RELIED UPON .....	54
XIII.	APPENDIX D: IDENTIFICATION OF GSR ADDRESSES .....	59
XIV.	APPENDIX E: METHODOLOGY FOR BLOCKCHAIN ANALYSIS AND FLOW OF XRP FROM LARSEN AND GARLINGHOUSE ADDRESSES .....	64
A.	Methodology for Blockchain Tracing.....	64
B.	Flow of XRP from Larsen and Garlinghouse Addresses .....	65

## **I. INTRODUCTION**

### **A. Assignment**

1. I have been engaged by the Securities and Exchange Commission (“SEC”) to provide expert testimony in the matter of *Securities and Exchange Commission v. Ripple Labs, Inc., et al.* pending in the United States District Court for the Southern District of New York. The SEC has retained me to independently analyze and comment on two areas. First, the SEC asked me to opine on whether Ripple Labs Inc. (“Ripple”), Chris Larsen (“Larsen”), and Brad Garlinghouse (“Gsrlinghouse”) took steps to influence XRP prices. Second, I have also been retained to opine on the incentives that might have been present for Ripple to attempt to influence the price of XRP.<sup>1</sup>

2. My opinions are based upon my professional knowledge and experience, my review of documents and information relevant to this matter, and the analyses described in this report. My analyses in this report rely partly on data, documents, and statements produced to the SEC by Ripple. I am not currently opining on the validity of the data, documents, and statements made by Ripple or produced to the SEC by Ripple in this matter.

### **B. Qualifications**

3. [REDACTED]  
[REDACTED] I have also served on the faculty at [REDACTED]  
[REDACTED]  
[REDACTED]. I received a B.A. in Economics from [REDACTED], a M.S. in Finance from [REDACTED], and my Ph.D. in Finance from [REDACTED]

---

<sup>1</sup> I have also been retained to potentially provide additional analysis or opinion, if necessary, in response to additional information which may be presented in Defendants’ expert reports.



Exchange Commission, the Commodity Futures Trading Commission, state-level enforcement and regulatory entities, and private parties.

6. My curriculum vitae, attached as Appendix A to this report, provides more details about my educational and professional background and experience, as well as a list of my publications in the last ten years. A list of cases for which I have provided testimony or submitted court-filed expert reports in the past four years is attached as Appendix B. I have been compensated at a rate of \$700 per hour for my personal time and I have been assisted by employees of Integra FEC [REDACTED]. My compensation is not contingent upon the findings of this report or outcome in this or any other matter. The use of “I” in this report includes all analyses of data performed by the staff of Integra FEC under my direction and oversight. My opinions are based on my own understanding of the analysis and results presented in this report.

### **C. Documents Considered**

7. Documents, data, and other information that I have relied upon as the basis for my opinions are cited in this Report and listed in Appendix C. These include, but are not limited to, XRP sales reports from market makers retained by Ripple, Ripple internal communications, deposition transcripts and related exhibits reflecting communications of Ripple employees, XRP digital wallet addresses identified to be associated with Ripple, Larsen, and Garlinghouse, and Ripple financial statements. Other sources relied upon include publicly available XRP Ledger transactions and historical digital asset prices from CoinMarketCap and CryptoTick.

8. It is possible that I may review additional new information that may become later available, as well as the reports and depositions of other experts. I reserve the right to supplement my report and analyses based on any additional evidence, including any evidence brought to my attention by the defense, other experts, or obtained through discovery.

## II. SUMMARY OF OPINIONS

9. Based on i) the analysis of Ripple's internal and external communications, documents and data provided by the SEC, ii) analysis of publicly available XRP Ledger transactions and historical price data, and iii) my academic research and knowledge of this field, I conclude that Ripple and its executives at specific times took steps to influence the price of XRP and their sales of XRP functioned similarly to that of a public equity offering for Ripple.<sup>2</sup> The facts I have reviewed reflect the following, among others:

- a. At specific times, Ripple and its executives directed GSR, a digital asset trading and market making firm,<sup>3</sup> to buy XRP in a manner consistent with i) pushing prices upward, or ii) providing a price floor to stabilize and keep prices from falling. In analyzed episodes of Ripple-directed trading, GSR traded exactly as directed and XRP prices generally moved upward or stopped declining.
- b. Through market making firms, Ripple sold XRP to purchasers in a manner designed to minimize downward pressure on the price of XRP. Ripple employed trading strategies to protect the price of XRP.
- c. Ripple also placed lock-up restrictions on certain sales of XRP, sold in over-the-counter sales agreements to individual or institutional investors, that would mitigate selling pressure. These functioned similarly to lock-up restrictions in a traditional company's Initial Public Offering and allowed Ripple to protect the price of XRP from falling.

---

<sup>2</sup> Throughout this report, I frequently use the present tense as a stylistic preference, however, unless otherwise indicated, my report covers the period from when Ripple began selling XRP in 2013 to the filing of the complaint in this action, December 22, 2020. Additionally, analysis is performed only when data are available for specific date ranges within this period.

<sup>3</sup> <https://www.gsr.io/our-team>.

- d. Ripple and its executives are incentivized to influence XRP prices in order to maximize the proceeds raised from XRP sales. In addition to Ripple's sales of XRP, Larsen and Garlinghouse collectively transferred 4.4 billion units of XRP (valued at \$1.3 billion at the time of transfer) from their XRP digital wallet addresses. A large portion of these transfers were made to GSR, a market maker who also sold XRP programmatically on Ripple's behalf, to strategically sell their XRP holdings slowly over time.
- e. From 2017 to 2020, Ripple relied on XRP sales to supplement a very significant funding gap of over \$800 million that venture capital fundraising and other revenue items could not cover.
- f. Ripple used XRP in a similar manner as companies use stock. Ripple employees receiving XRP were incentivized to work together to increase the price of XRP similar to the incentives of employees at public companies who work to increase company share value. XRP was also used to fund Ripple operations and to enrich Ripple's founders, directors, and early investors.

### **III. BACKGROUND ON RIPPLE AND XRP**

10. According to Ripple, beginning in 2011, Jed McCaleb, David Schwartz, and Arthur Britto evidently began development of XRP and the XRP Ledger as an alternative to Bitcoin and the Bitcoin blockchain.<sup>4</sup> The ledger launched publicly in late 2012, and soon after Chris Larsen joined Ripple (then referred to as "OpenCoin") as co-founder and CEO. The native digital asset on the ledger, XRP, was created with a total fixed allocation of 100 billion XRP, of which 20

---

<sup>4</sup> <https://xrpl.org/history.html>.

billion XRP were given to the founders and the remaining 80 billion XRP were transferred to Ripple.<sup>5</sup>

11. XRP is a digital asset whose transactions are tracked and recorded on a publicly distributed database known as the XRP Ledger. The XRP Ledger is also referred to as a blockchain. Transactions are recorded and grouped together into “blocks” that are cryptographically-validated and chronologically connected, forming a chain of blocks (i.e., a blockchain). Transactions on the XRP Ledger, like other blockchains, are recorded, maintained, and verified autonomously across a peer-to-peer network of servers and validators, where each computer retains an identical copy of the transactions database and updates database records by consensus agreement. On other blockchains such as Bitcoin and Ethereum, this network of computers is incentivized to verify and record transactions because of transactional fees paid by users to those who verify and record transactions via “mining” processes. These fees are paid in Bitcoin (BTC) and Ether (ETH) on the Bitcoin and Ethereum blockchains, respectively. In contrast, computers operating the XRP Ledger do not receive fees and there is no “mining” on the XRP Ledger.

12. Ripple sold XRP to the public beginning in 2013 and to at least December 22, 2020.<sup>6</sup> Ripple sells its XRP to the secondary markets via digital asset platforms and through bulk over-the-counter (“OTC”) sales to institutional and individual purchasers.<sup>7</sup> Beginning in December 2017, Ripple placed 55 billion XRP into 55 escrow accounts controlled by Ripple, which were scheduled to be released at a rate of one billion XRP per month. Ripple continues to

---

<sup>5</sup> <https://xrpl.org/xrp-overview.html>.

<sup>6</sup> Q4 2020 XRP Markets Report, <https://ripple.com/insights/q4-2020-xrp-markets-report>.

<sup>7</sup> Q1 2017 XRP Markets Report, <https://ripple.com/insights/q1-2017-xrp-markets-report>,  
Q2 2017 XRP Markets Report, <https://ripple.com/insights/q2-2017-xrp-markets-report/>,  
Q3 2017 XRP Markets Report, <https://ripple.com/insights/q3-2017-xrp-markets-report>,  
Q4 2017 XRP Markets Report, <https://ripple.com/insights/q4-2017-xrp-markets-report>.

monetize XRP sales by releasing XRP from its escrow accounts, then deciding how much of the one billion XRP per month should be released into the market and how much should be re-escrowed. As of December 22, 2020, there is a circulating supply of 45.4 billion XRP that can be bought, sold, or transferred in the open markets and the price of XRP is \$0.47 for a total (circulating and non-circulating supply) market cap of XRP of \$47.1 billion.<sup>8</sup>

13. Individuals or entities can interface with the XRP Ledger through computer applications and websites that enable them to send and receive XRP from a given XRP Ledger address (subsequently referred to as “XRP address”). XRP is controlled and spent using private keys, public keys, and public addresses. Private keys are randomly generated alphanumeric strings, public keys are alphanumeric strings mathematically derived from private keys, and public addresses are alphanumeric strings derived from public keys. In order to transfer XRP, the sender must know the private key that corresponds to the public address which stores the digital assets. Therefore, in a given transaction of XRP, one can infer that the sending party controls—i.e., has the private keys to—the XRP address that sent the funds, but the sending party may or may not have control of the receiving XRP address.

14. XRP can be exchanged for other digital assets and fiat currencies either on-ledger or off-ledger mainly via digital asset platforms. On-ledger trades are recorded on the XRP Ledger and historical trade prices, amounts, and timing can be retrieved and analyzed. Trades can be attributed to unique blockchain digital wallet addresses, similar to bank account numbers. The identities of traders behind these transactions are generally anonymized on the Ledger but can sometimes be unmasked through various means including self-disclosure, forensic analytics, or proprietary Know-Your-Customer data from digital asset platforms. Beginning in 2017, XRP

---

<sup>8</sup> Wayback Machine Internet Archive of XRP on CoinMarketCap as of December 22, 2020. Accessed on October 4, <https://web.archive.org/web/20201222190557/https://coinmarketcap.com/currencies/xrp/>



became more commonly listed on centralized digital asset platforms where customers can convert XRP to another digital asset like Bitcoin or to fiat currencies like U.S. dollars. Centralized digital asset platforms are online marketplaces controlled and maintained by a company or organization on one or multiple centralized computer servers. Trades on centralized digital asset platforms are aggregated and reconciled by private computer servers and therefore, individual trades can only be analyzed if one has access to data provided by such platforms.

#### **IV. RIPPLE COORDINATED WITH GSR TO BUY XRP IN A MANNER CONSISTENT WITH POSITIVELY INFLUENCING XRP PRICES**

15. I first evaluate whether Ripple and its executives expended efforts consistent with attempting to influence the price of XRP. Ripple and its executives played a central role in creating and overseeing a liquid market for secondary transactions.<sup>9</sup> Ripple has stated in its submissions in this litigation that Ripple and its executives “do not control the price of XRP” and that the price of XRP is “not based on the efforts of Ripple.”<sup>10</sup> Yet, Ripple and its executives explicitly directed at least one of their market makers, GSR, to purchase or refrain from selling XRP at specific times with a stated intent of influencing the price of XRP. GSR traded in a manner consistent with the directions from Ripple executives to increase or stabilize the price of XRP as described in these emails and shown below.

16. Since the XRP Ledger is a publicly available database and at least some of the addresses from which GSR sold Ripple’s XRP are known through discovery, one can examine GSR’s trading activities directly on the XRP Ledger. Using XRP addresses associated with GSR,

---

<sup>9</sup> 2017-05-25 GSR Programmatic Market Activity Agreement (Bates GSR00017429), 2018-03-02 GSR amended programmatic market maker agreement (Bates GSR00018580), 2019-09-05 GSR Xrapid master agreement (Bates GSR00000988).

<sup>10</sup> Joint Submission by the Parties to Hon. Analisa Torres, February 15, 2021, Dkt. No. 45.

I am able to observe GSR's trades on behalf of Ripple. Technical details of the identification of GSR ledger trades can be found in Appendix D.

17. Based on emails from as early as 2016, Ripple executives worked directly with GSR to devise trading strategies to positively influence XRP prices. In some instances, these were timed to maximize the price of XRP around large news announcements. For example, on September 14, 2016, [REDACTED], received directions from Patrick Griffin (EVP of Business Development) and [REDACTED] (VP of Finance) to time Ripple's orders of XRP ahead of Ripple's announcements of new bank partnerships and Series B funding on the following day. Additional bank partners and funding would be highly positive news for XRP. GSR was then instructed by Griffin to "make purchases up to \$300k" and asked to consider "plac[ing] offers on the ask side of the order book to tighten the spreads and attract more buying volume from the market."<sup>11</sup> Griffin's direction to "make purchases" and "[place] offers...to tighten the spreads and attract more buying volume" suggests that Griffin wanted GSR to purchase XRP and induce other buyers to do the same. If traders see a highly active buying market, they may also purchase XRP because they see potential upward price momentum. Purchasing around a key announcement and pushing the price upward in the process might further create the perception for other market participants that the news being released is extremely important. GSR was directed to trade for "24 hours starting at 6am PST" or 1pm UTC on September 15, 2016. On the following day, news of Ripple's new partnerships and Series B funding was released at 1:10pm UTC by Ripple.<sup>12,13</sup>

---

<sup>11</sup> Email from Patrick Griffin, September 14, 2016 (Bates GSR00020001).

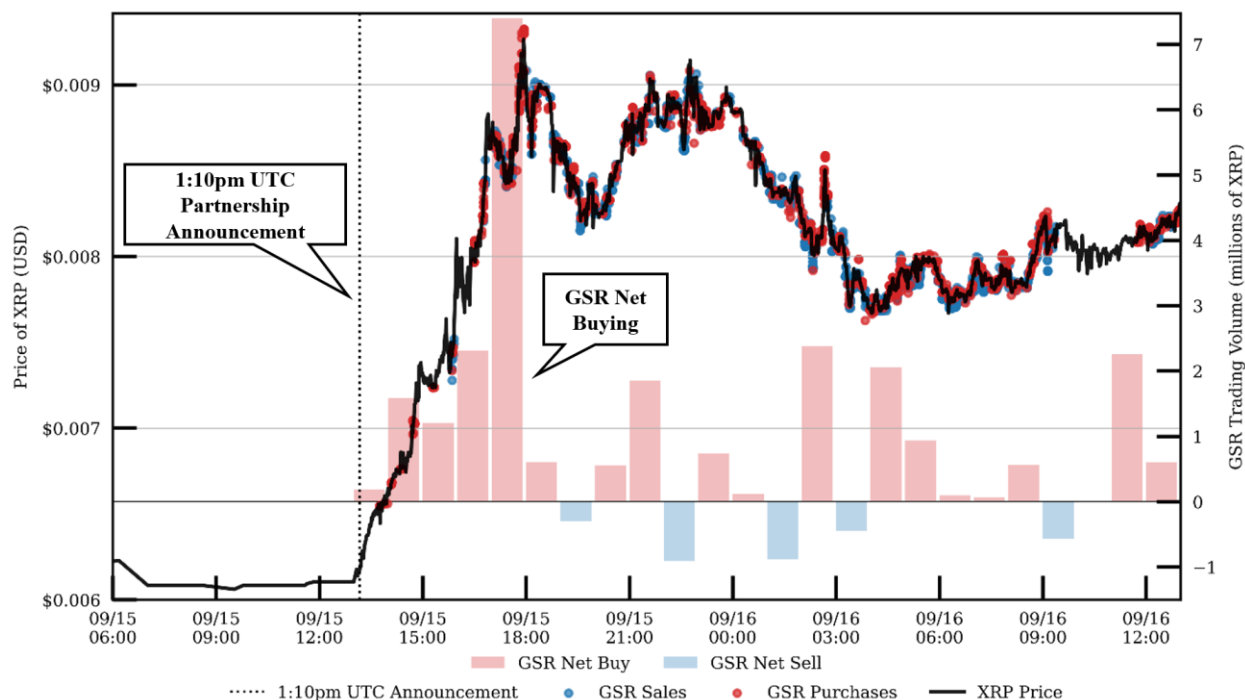
<sup>12</sup> [https://ripple.com/ripple\\_press/ripple-adds-several-new-banks-global-network](https://ripple.com/ripple_press/ripple-adds-several-new-banks-global-network). This partnership announcement does not involve any bank using XRP or the XRP Ledger, but Ripple nevertheless touted the announcement as proof of Ripple's successful efforts to expand its network of banking partners that would adopt its technology for cross-border payments.

<sup>13</sup> [https://ripple.com/ripple\\_press/ripple-raises-55-million-series-b-funding](https://ripple.com/ripple_press/ripple-raises-55-million-series-b-funding).

18. Figure 1 examines GSR trading around this time to see if it traded as directed. The red bars denote hours of net buying by GSR on behalf of Ripple, while blue bars represent net selling. Net buying is calculated as total purchases minus total sales of XRP and net buying will be positive if there are more purchases than sales by GSR. Net selling is total sales minus total purchases of XRP. The red dots represent individual buy trades and the blue dots sell trades. As one can see from Figure 1, the price of XRP was flat in the six hours before GSR trading and GSR had no purchase or sale activity in the six-hour period prior to 1pm UTC. Beginning at 1pm UTC time, GSR begins net buying. This net buying directly corresponds to the time that GSR was directed to trade by Ripple. GSR is then a large net buyer of XRP for the next five hours. During these five hours, XRP jumps from \$.0061 to a high of \$0.0093, for a gain of \$0.0032. This is a 53 percent price increase in five hours. By analyzing transactions publicly available on the XRP Ledger, I can confirm that GSR did in fact follow Ripple's directive to purchase XRP and that the activity appears successful as the price increased dramatically.

**Figure 1 – GSR Trading on XRP Ledger on September 15th, 2016.**

This figure plots XRP transactions conducted by GSR in a 30-hour window on September 15 and 16 around Ripple’s announcement on September 15, 2016. Transactions are sourced from the XRP Ledger. XRP Price, denoted by the black line, was calculated using the volume weighted average price at 1-minute intervals across all trades on the XRP Ledger involving the XRP-USD trading pair. GSR net buys and net sales are reported as bars in hourly increments. Individual GSR buy and sell prices are plotted using red and blue circles. The dashed vertical line represents the time of the news announcement. Data are displayed in UTC time zone.



19. In addition to this example of maximizing the price of XRP during a major announcement, from at least April 2016 to June 2017 certain Ripple executives also expended efforts that appear aimed at protecting the price of XRP at certain price floors. A price floor can be implemented to prevent large downward price movements that might lead to large losses for XRP holders, including Ripple, the largest XRP holder since XRP’s inception. Declining prices are more likely to cause investors to sell their holdings, further exacerbating losses and making XRP appear as an unattractive investment to other buyers. In addition to having an economic incentive to make efforts to increase the price of XRP, Ripple had an economic incentive to attempt to stabilize or reverse any declining price trends in order to encourage investors to continue to hold

or buy more XRP. Protecting a price floor for XRP would permit Ripple to maximize revenue from its own XRP sales, all else being equal.

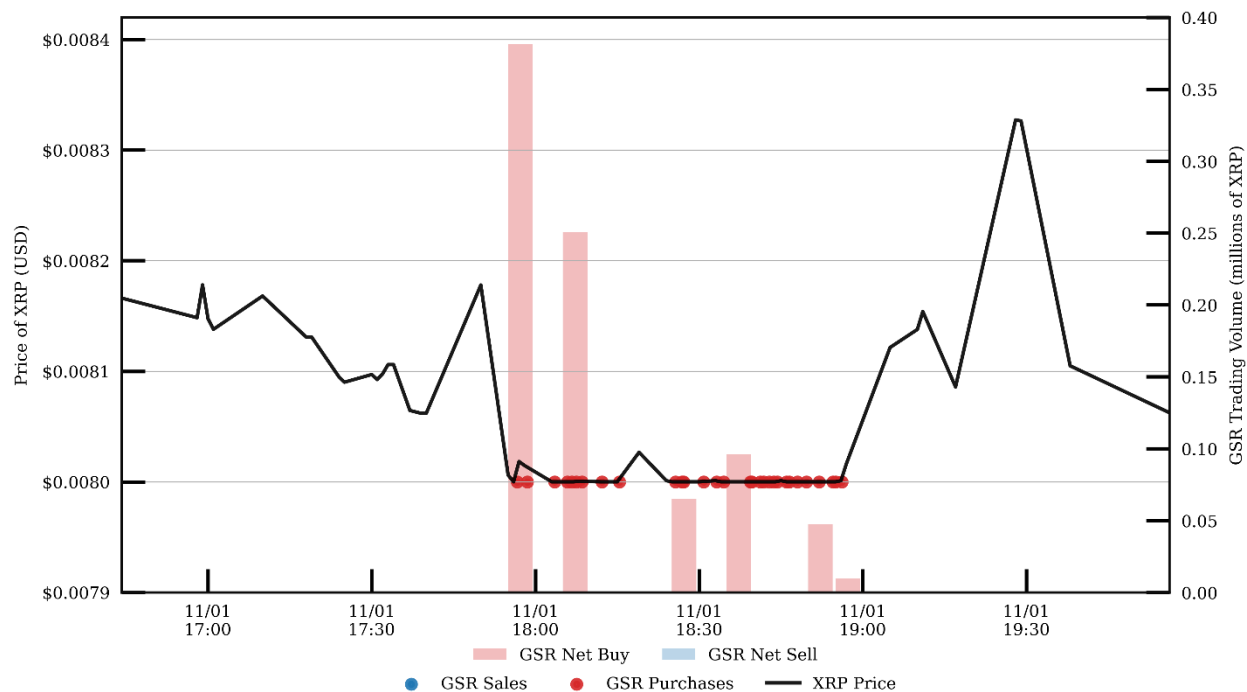
20. On November 1, 2016, Patrick Griffin instructed GSR to “aim to protect a \$0.008 floor.”<sup>14</sup> By analyzing GSR transactions on the XRP Ledger, the trading and price behavior of XRP is plotted in Figure 2. Around 5pm UTC, XRP prices declined near \$0.008 USD. I make three observations. First, GSR made many purchases directly at \$0.008 USD, consistent with implementation of a price floor just as directed by Ripple. Second, the trading seems to have succeeded in protecting XRP from dipping below \$0.008 USD as the price did not go below this level. Third, the prices reverted higher in the subsequent hour.

---

<sup>14</sup> Email from Patrick Griffin, November 1, 2016 (Bates GSR00005000).

**Figure 2 – GSR Floor Setting on XRP Ledger on November 1, 2016.**

This figure plots XRP transactions conducted by GSR on November 1, 2016. Transactions are sourced from the XRP Ledger. The XRP Price, denoted by the black line, was calculated using volume weighted average price at 1-minute intervals across all trades on the XRP Ledger involving the XRP-USD trading pair. GSR net purchases and net sales are reported as bars in 5-minute increments. Individual GSR buy and sell prices are plotted using red and blue circles. Data are displayed in UTC time zone.



21. GSR also executed uneconomic trades whose purpose appears to be to push the price of XRP upward. Traditional market makers add liquidity to markets by reducing the spread between buyers and sellers. They make a profit by purchasing at a low bid price and selling at a slightly higher price. In contrast, GSR would place bid prices at levels artificially higher than other traders. The economic incentive to make bids for XRP in the market at prices above the prevailing bids would be to attempt to push the price of XRP higher. For a market maker without an existing position, overpaying by purchasing at higher prices rather than lower prices would generally be an uneconomic trade. But since Ripple held large quantities of XRP, the small additional cost of pushing the price higher would be more than offset by the gains from the large XRP positions which would then be valued at a higher price.

22. For example, on September 23, 2016, Ripple announced the creation of the Ripple Global Payments Steering Group.<sup>15</sup> The Steering Group was purported to be a consortium of global banks that would help oversee the creation of Ripple transaction rules and promote Ripple's as of then undeveloped payment network. On September 23, 2016, with the approval of Garlinghouse, ████████ directed GSR "to keep the buying light post announcement and then do the bigger slug starting Sunday night [September 25, 2016]," to coincide with Monday morning in Asia.<sup>16</sup> On the XRP Ledger, we can see, as shown in Figure 3, that GSR made many purchases significantly above market prices.

23. As shown in in Figure 3, Panel A, GSR's large purchases are consistent with placing a "bigger slug" starting on Sunday, September 25, 2016. GSR made several large purchases of XRP that both preceded and accompanied a dramatic rise in the price of XRP of over 15 percent within 24 hours. Moreover, as shown in Figure 3, Panel B, many of GSR's purchases (red dots) were consistently above average market prices (black line), and GSR on average purchased XRP at a 1.5 percent premium compared to the last trade price. These uneconomic trades, i.e., buying XRP above market prices, coincide with XRP's increase in value on September 25 and the early morning of September 26.

---

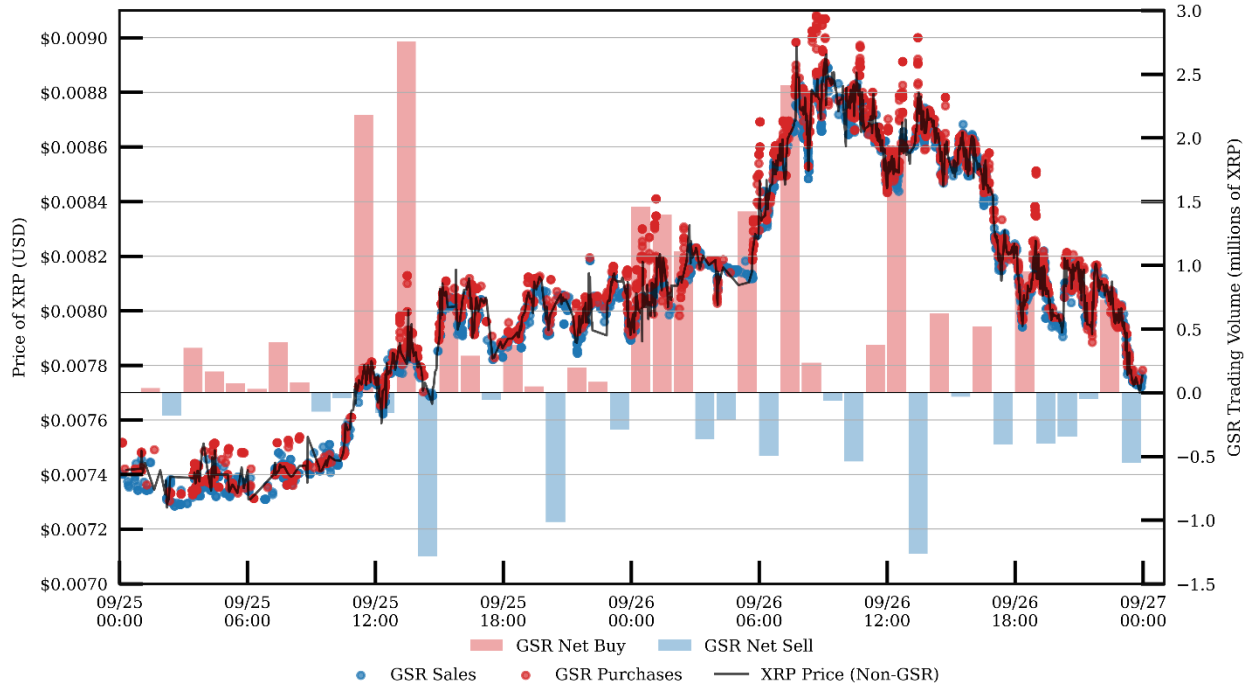
<sup>15</sup> <https://ripple.com/insights/announcing-ripples-global-payments-steering-group>.

<sup>16</sup> GSR00006693.

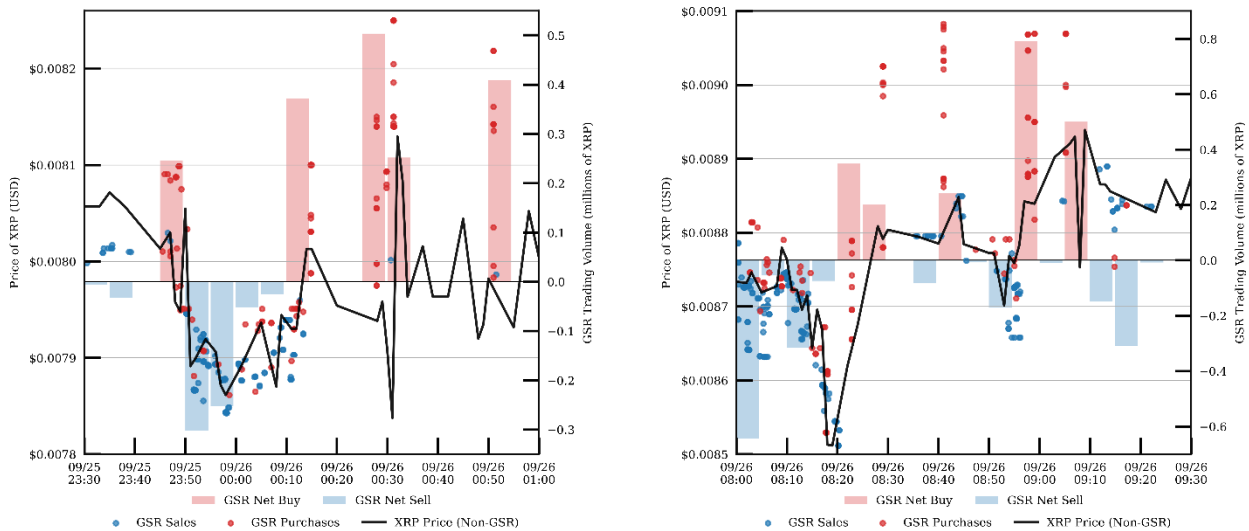
**Figure 3 – GSR Transactions Overpayment on September 25 and 26, 2016.**

This figure plots XRP transactions conducted by GSR on September 25 and 26, 2016. Transactions are sourced from the XRP Ledger. The XRP Price was calculated using the volume-weighted average price at 1-minute intervals across all trades on the XRP Ledger involving the XRP-USD trading pair. GSR net purchases and net sales are reported as bars in hourly increments. Individual GSR buys and sell prices are plotted using red and blue circles. Data are displayed in UTC time zone.

**Panel A. GSR Trading on September 25 and 26, 2016**



**Panel B. GSR Transaction Overpayment**

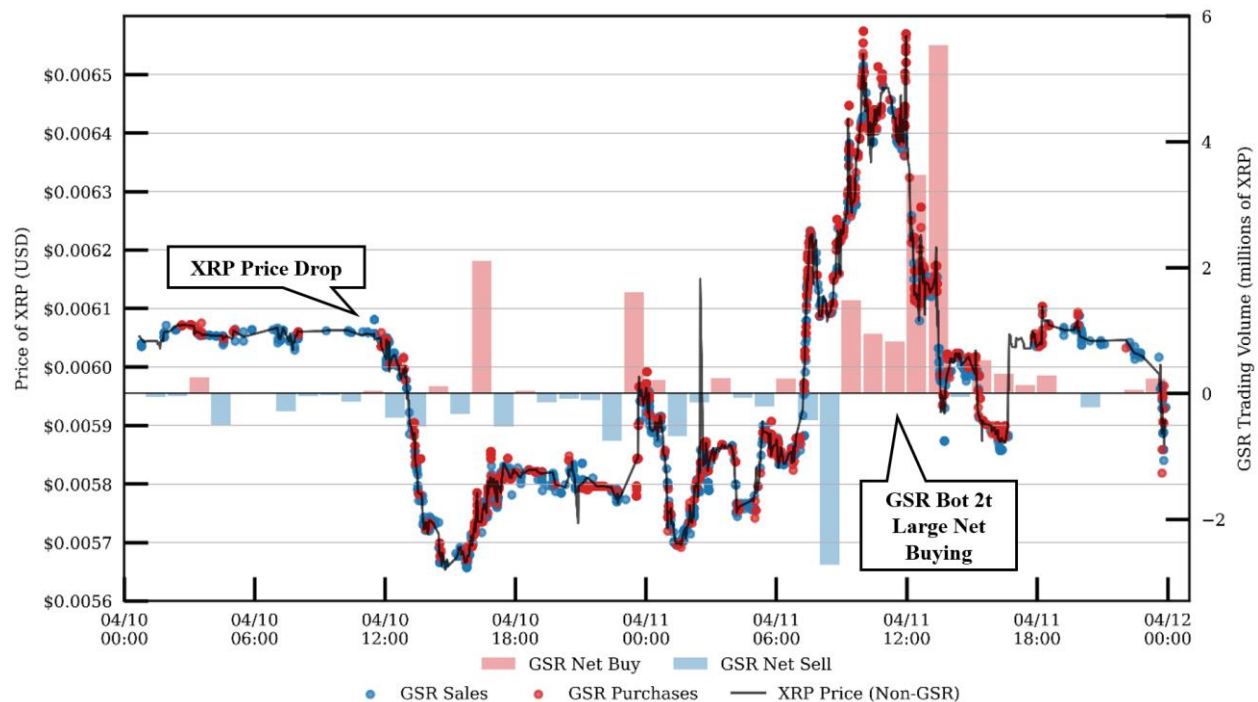




24. In at least one instance, instructions for GSR to buy XRP on behalf of Ripple that appear aimed at price support came directly from Ripple’s top executives, Larsen and Garlinghouse. For example, on April 10, 2016 Garlinghouse wrote to Larsen, “Given the sell off this weekend – I think we should halt the sales entirely tomorrow and Tuesday – instead purchase \$20k each day.”<sup>17</sup> After Larsen replied, ‘Let’s try it,’<sup>18</sup> Ripple executives passed on the directives to GSR to buy XRP, who confirmed with an email the next day that it had followed Ripple’s instructions and “reversed bot 2.t to net-buy 5% of previous 24 hour trading volume.”<sup>19</sup> As seen in Figure 4, at the direction of Ripple, GSR reversed its programmatic sales after the price of XRP continues to decline. Instead of net selling, XRP began net buying around 9:00am UTC.

**Figure 4 – GSR Transactions on April 10 and 11, 2016.**

This figure plots XRP transactions conducted by GSR on April 10 and 11, 2016. Transactions are sourced from the XRP Ledger. The XRP Price was calculated using volume weighted average price at 1-minute intervals across all trades on the XRP Ledger involving the XRP-USD trading pair. GSR net purchases and net sales are reported as bars in hourly increments. Individual GSR buys and sell prices are plotted using red and blue circles. Data are displayed in UTC time zone.



<sup>17</sup> Email from Brad Garlinghouse, April 10, 2016 (Bates RPLI\_SEC 0307781).

<sup>18</sup> Email from Chris Larsen, April 10, 2016 (Bates RPLI\_SEC 0307781).

<sup>19</sup> Email from [REDACTED] April 11, 2016 (Bates GSR00011984).

25. The instances examined above provide specific examples of how Ripple and certain of its executives directed GSR to trade XRP on behalf of Ripple in a way consistent with an attempt to increase or stabilize the price of XRP. Indeed, as discussed above, contemporaneous statements from Ripple employees support the conclusion that Ripple took these steps to increase or stabilize the price of XRP. GSR did in fact trade just as directed. GSR executed trades with the stated motive of preventing the price of XRP from going down and moving the price of XRP upward when it was directed to by Ripple and its executives. GSR also seems to have been at least partially successful in its targeted efforts in these directed cases as the price of XRP generally increased or stabilized in the short term at the prices GSR set.

**V. LARSEN COORDINATED WITH GSR TO BUY XRP WITH HIS PERSONAL FUNDS IN A MANNER CONSISTENT WITH POSITIVELY INFLUENCING XRP PRICES**

26. In addition to instances where Ripple directed GSR to trade XRP in a manner consistent with positively influencing XRP prices, there are also instances where Larsen himself directed GSR to trade his personal holdings in a similar manner. For example, on February 18, 2017, Larsen emailed GSR, requesting “on my bot4, could you start buying as long as we’re below 0.006 usd.bitstamp.”<sup>20</sup> As covered in the next Section VII.A, GSR provided programmatic sales for Larsen’s personal XRP holdings and “4t” was the name of one the trading algorithms, referred to by GSR as “bots,” that conducted trades on behalf of Larsen.<sup>21</sup> Like Ripple, Larsen is a large holder of XRP and stands to financially benefit from higher XRP prices through his personal sales of XRP.

---

<sup>20</sup> Exhibit CG-34 (Bates GSR0000104).

<sup>21</sup> GSR00000467A.

27. Later in 2017, Larsen again used his personal holdings to buy XRP in a manner consistent with an effort to mitigate XRP price declines. On or around June 9, 2017, prices of XRP had declined by nearly 29% since the beginning of the month as shown on Figure 5. On June 11, 2017, Garlinghouse contacted Larsen, noting there had been “decent stability in the price over the past 36 hours.”<sup>22</sup> Larsen responded that he personally bought a “total [of] \$800k [of XRP] by end [of] weekend” through GSR. In response, Garlinghouse speculated that Larsen’s purchases might be the reason for the recent XRP price stability.<sup>23</sup>

28. Figure 5 plots Larsen’s trading activity through GSR on the digital asset platform Poloniex in the XRP/BTC currency pair. In the eight days prior to June 10, Larsen was a large daily seller averaging 357,901 XRP in sales per day. Starting on June 11 and in the subsequent 72 hours, Larsen purchased a net total of 2,623,363 in XRP, or an average of 874,454 XRP per day and nearly 2.5 times more than his daily average of XRP volume in early June. Normally a seller of XRP, Larsen’s purchases are consistent with selection of an opportune time to purchase XRP to provide support similar to implementing a price floor to keep the price of XRP from further declining. As can be seen in Figure 5, his buying beginning on June 10 coincided with the price of XRP stabilizing around 0.00009 XRP/BTC, and later reversing its earlier decline.

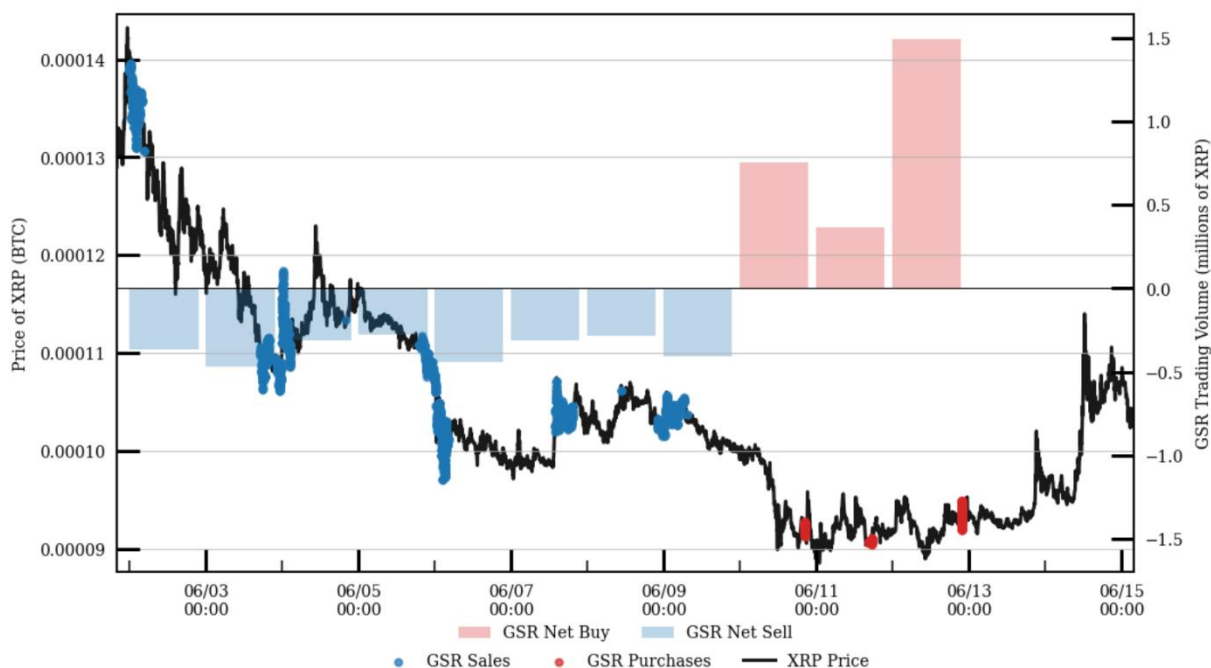
---

<sup>22</sup> 2017.06.11 CL BG chat (Bates GARL\_Civil\_000877-78)

<sup>23</sup> *ibid.*

**Figure 5 – Larsen Selling and Buying Activity in June 2017.**

This figure plots XRP transactions conducted by GSR on behalf of Larsen from June 3 to 14, 2017. Transactions are sourced from the digital asset platform Poloniex.<sup>24</sup> The XRP Price, denoted by the black line, was calculated using the XRP-BTC price at 1-minute intervals on Poloniex.<sup>25</sup> Net purchases and net sales are reported as bars in daily increments. Individual GSR buy and sell prices on behalf of Larsen are plotted using red and blue circles. Data are displayed in UTC time zone.



## VI. RIPPLE DIRECTED GSR TO SELL XRP IN A MANNER CONSISTENT WITH SEEKING TO MINIMIZE DOWNWARD PRESSURE ON XRP PRICES

29. Ripple had an economic incentive to maximize proceeds gained from XRP sales by selling large amounts of XRP while also increasing and maintaining high XRP prices. There is evidence that Ripple executives closely monitored XRP price movements and directed GSR to halt any sales activity that would further exacerbate sell-offs. This section finds that GSR’s selling behavior is consistent with the directives from Ripple, and that from January 2015 to at least September 2019,<sup>26</sup> GSR appears to carefully time when XRP would be sold so as to minimize the

<sup>24</sup> Filename: polo\_gsr\_trades.csv (Bates CIRCLE\_00001699).

<sup>25</sup> Historical XRP/BTC trade data at the 1-second interval on Poloniex was sourced from CryptoTick.com.

<sup>26</sup> Detailed daily programmatic sales data for GSR is only available from January 2015 to September 2019.

negative selling impact on the price of XRP. An analysis of GSR's XRP selling activity, together with the selling activity of [REDACTED], [REDACTED], Ripple's other large programmatic XRP sales partner,<sup>27</sup> finds that they sold more XRP following price increases.

30. As per [REDACTED] a member of Ripple's XRP Markets team which coordinated XRP sales, "Overall, our sales through GSR are done with sophisticated algorithms that 'drip' into the market, so the price impact should be marginal."<sup>28</sup> Specifically, Ripple set "target sell rates"<sup>29</sup> for XRP, which established a maximum amount of XRP it could sell as a percentage of the daily volume of XRP traded. Also, during times when the price of XRP experienced "downward pressure," Ripple executives including Bret Allenbach (then-CFO) and Garlinghouse discussed lowering the target sell rates, e.g., from 3.5% to 1.5%,<sup>30</sup> or even halting XRP sales in order to positively "impact the price."<sup>31</sup>

31. In April 2016, executives from GSR discussed trading strategies with Ripple noting that GSR "[has] analyzed the order books since Jan 1, 2015 in order to determine which days of the week there is more liquidity. We analyze the bid side of the order book in order to determine which days there is most demand for XRP" and that "this more dynamic strategy *may help maintain XRP prices higher* than the current strategy [emphasis added]."<sup>32</sup> It was economically rational for Ripple to pursue these trading strategies because they could help maximize the amount of money Ripple could raise through its sales of XRP, as long as Ripple did not sell so much XRP

---

<sup>27</sup> Ripple also employed the services of [REDACTED] but it sold less than 2% of Ripple's total XRP sales between November 2014 to September 2019. Source: XRP Programmatic Sales Reporting FY14 to Date v2 (Bates RPLI\_SEC 74559).

<sup>28</sup> Email from [REDACTED] on April 10, 2016 (Bates RPLI\_SEC 0205600).

<sup>29</sup> *ibid.*

<sup>30</sup> Email from Bret Allenbach (CFO) on April 10, 2016 (Bates RPLI\_SEC 0205602).

<sup>31</sup> Email from Brad Garlinghouse on April 10, 2016 (Bates RPLI\_SEC 0205601).

<sup>32</sup> Email from [REDACTED] April 28, 2016 (Bates GSR00012857).

at one given time as to lower its price, since GSR “[has] observed that higher XRP prices result in more money-in and eventually higher volume” and help “distribute more XRP without adversely affecting the price of XRP.”<sup>33</sup>

32. Ripple turned to its programmatic selling partners to implement its XRP selling strategy. Ripple enlisted GSR to provide programmatic sales on behalf of Ripple from November 2014 to January 2017 and from June 2017 to at least September 2019.<sup>34</sup> [REDACTED] provided programmatic sales on behalf of Ripple from September 2017 to at least September 2019.<sup>35</sup> GSR develops high frequency trading algorithms, or “bots”, that programmatically place sales and purchases for XRP. GSR employed a trading bot called bot 2, known at various times as bot 2s, 2t, and 2h, to submit orders programmatically on various trading platforms at the direction of Ripple.<sup>36</sup> For example, between December 2014 to January 2015, comments found in a historical daily sales report (also known as “liquidity extraction report”) of bot 2t seem to show GSR and Ripple coordinating XRP sales in a manner consistent with stopping or reducing sales to mitigate impact when XRP prices are declining.<sup>37</sup> Figure 6 shows an episode from December 31, 2014 to January 8, 2015 where the price of XRP was declining and includes captions from notes contained in GSR’s liquidity extraction report. As seen in the chart, GSR often purposefully stopped selling XRP in an apparent effort to minimize the negative impact on the price of XRP, followed by instructions from Ripple to resume selling at different target sell rates when the prices stabilized.<sup>38</sup>

---

<sup>33</sup> *ibid.*

<sup>34</sup> XRP Programmatic Sales Reporting FY14 to Date v2 (Bates RPLI\_SEC 74559).

<sup>35</sup> *ibid.*

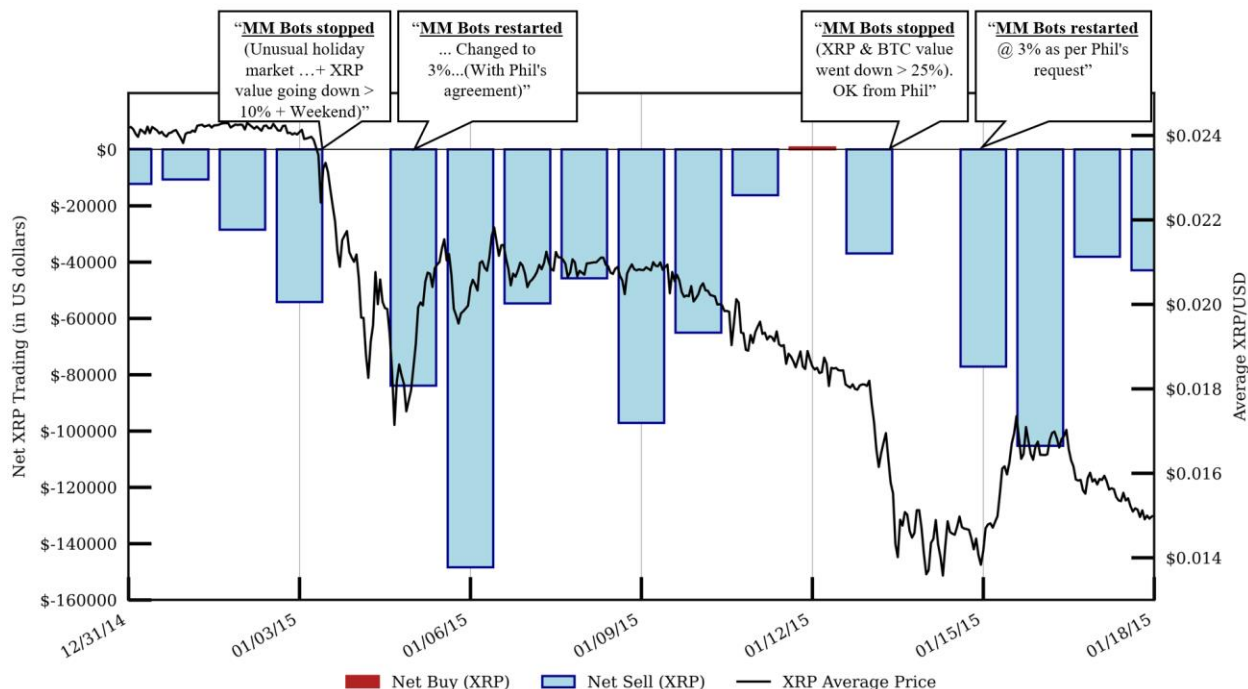
<sup>36</sup> Bot 2s was active from November 2014 to July 2015. Bot 2t was active from July 2015 to January 2016. Bot 2h was active from June 2016 to at least September 2019. Detailed daily purchases and sales of these bots are sourced from Excel Export - 2014-2016 - 2t - Liquidity extraction report (Bates RPLI\_SEC 0679467-467), Excel\_Export\_2017\_OLD\_2h\_Liquidity\_extraction\_report (Bates GSR00000101), Excel\_Export\_2018\_2h\_Ripple\_Liquidity\_Extraction\_Report (Bates GSR00000102), and Excel\_Export\_2019\_2h\_Ripple\_Liquidity\_Extraction\_Report (Bates GSR00000103).

<sup>37</sup> Excel Export - 2014-2016 - 2t - Liquidity extraction report (Bates RPLI\_SEC 0679467-467)

<sup>38</sup> Comments are only reported by dates without timestamps in the liquidity extraction reports.

**Figure 6 – Net XRP Sales vs. Price of XRP.**

This figure plots the net XRP sold by GSR as reported in GSR sales reports (blue bars) and the XRP/USD price (black dashed line). All data are sourced from GSR’s Excel Export - 2014-2016 - 2t - Liquidity extraction report (Bates RPLI\_SEC 0679467-467). The captions show notes from the “Comments” column on a given day in GSR’s liquidity extraction report. The XRP Price, denoted by the black line, was calculated using volume weighted average price at 1-hour intervals across all trades on the XRP ledger involving the XRP-USD trading pair. Vertical gray line signifies 12pm UTC time for each day. As seen in the chart, GSR paused XRP sales when the notes indicate that XRP declined significantly (e.g., “>10%” or “>25”), and subsequently resumed sales upon either receiving specific sales targets or approval from Ripple.<sup>39</sup>



33. To better understand whether the behavior observed in the example shown in Figure 6 is persistent across a wider time period, I next examine whether Ripple’s market makers GSR and ██████ tend to sell less when prices fall and sell more when prices are stabilized or rising. This selling pattern can be observed by analyzing the daily net buy-sell imbalance of XRP by GSR and ██████ on behalf of Ripple. Imbalance is defined as the total number of XRP purchased minus total number of XRP sold in a day normalized by the average circulating supply

<sup>39</sup> Based on an email exchange from December 2014 to January 2015 between GSR and Ripple that discusses XRP sales, it is inferred that the person referenced in GSR’s liquidity extraction report as “Phil”, who is giving instructions/approval to start/stop XRP buys/sales, is ██████ who at the time was the head of Ripple’s XRP Markets Team. Sources: email exchange between ██████ [Ripple], ██████ [Ripple], ██████ [GSR] and ██████ [GSR] (GSR00007297) and Deposition of Patrick Griffin on June 29, 2021, at 75-76.

of XRP over the previous 30 days.<sup>40</sup> Imbalance regressions are often used in the finance literature to understand how different groups of traders react to past prices [(Chordia, Roll, Subrahmanyam (2002), Chordia and Subrahmanyam (2004); [REDACTED] (2003), (2007)].

34. A regression analysis of GSR's and [REDACTED] trading activity shows that when the prior day returns of XRP increase, the amount of XRP that GSR and [REDACTED] sell also increases (Table 1).<sup>41</sup> The previous day return coefficient,  $\beta_1$ , is highly statistically significant and negative—consistent with net selling following a day of positive returns. Lagged 5-day returns and imbalances are added as controls. Based on this analysis of GSR's and [REDACTED] net trading of XRP,<sup>42</sup> I conclude that these sellers, on behalf of Ripple, sold more XRP when the price of XRP was increasing and relatively less when the price was decreasing on the previous day. By selling more XRP the day after XRP prices rise, GSR and [REDACTED] on behalf of Ripple, were able to use rising XRP returns and increased demand to mitigate any potential negative effect of its XRP sales and thus keep XRP prices high.

---

<sup>40</sup> Daily circulating supply is sourced from <https://coinmarketcap.com/currencies/xrp>.

<sup>41</sup> This regression follows the same buy-sell imbalance regression methodology as [REDACTED] (2003).

<sup>42</sup> GSR trading activity is sourced from Excel Export - 2014-2016 - 2t - Liquidity extraction report (Bates RPLI\_SEC 0679467-467), Excel\_Export\_2017\_OLD\_2h\_Liquidity\_extraction\_report (Bates GSR00000101), Excel\_Export\_2018\_2h\_Ripple\_Liquidity\_Extraction\_Report (Bates GSR00000102), and Excel\_Export\_2019\_2h\_Ripple\_Liquidity\_Extraction\_Report (Bates GSR00000103). [REDACTED] trading activity is sourced from 3.d – Ripple XRP Sales – All Trades (SEC-[REDACTED]E-0047622).



**Table 1 – Regression Results of Programmatic Sellers’ Trading Activity and XRP Returns.**

A regression was estimated using XRP returns and net buy-sell imbalance calculated for each date between January 1, 2015 and September 12, 2019. *Imbalance* is defined as the number of XRP purchased minus number of XRP sold per day by GSR and ██████████ on behalf of Ripple, normalized by dividing by the average daily circulating supply of XRP over the previous 30 calendar days. Dates where all named parties reported no activity were excluded from analysis. This regression was performed using heteroscedasticity-consistent standard errors (HC3). The coefficient  $\beta_i$  is signed negative, indicating that as prior day returns increase, the named parties sell more XRP tokens (or buy fewer). For ease of interpretation of coefficient, results are scaled by 100,000. Z-statistics for the regression coefficients are presented in parenthesis. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

$$Imbalance_t = \alpha + \sum_{i=1}^5 \beta_i * Return_{t-i} + \sum_{i=1}^5 \lambda_i * Imbalance_{t-i} + \varepsilon_{t,R}$$

Dep. Var.	$\alpha$	XRP Return					Buy-Sell Imbalance					Adj. R <sup>2</sup>
		$\beta_1$	$\beta_2$	$\beta_3$	$\beta_4$	$\beta_5$	$\lambda_1$	$\lambda_2$	$\lambda_3$	$\lambda_4$	$\lambda_5$	
GSR and ██████████ Trading on Behalf of Ripple												
Imbalance <sub><i>t</i></sub>	-2.26 (-6.06) ***	-14.96 (-2.98) **	-6.89 (-1.64)	0.02 (0.01)	-2.59 (-0.73)	0.64 (0.02)	0.45 (6.56) ***	0.06 (1.07)	0.03 (0.58)	0.04 (0.80)	0.09 (2.39) *	0.285

35. The findings from this regression analysis are also consistent with communications between Ripple and GSR where Ripple expressed a desire to sell XRP when the price of XRP increased. In an earlier mentioned email from ██████████ (VP of Finance) to GSR where she anticipates the rise in the price of XRP based on a Ripple news announcement, she writes, “We want to keep the bots off for now but expect to make a news announcement on Thursday. If the news has positive impact and price rises, we would like to start selling into that. However, if price is not rising we will want to hold off.”<sup>43</sup> This again indicates that Ripple systematically directed sales of XRP in a manner that was consistent with seeking to minimize the negative impact of sales on XRP prices.

<sup>43</sup> Email from ██████████ June 1, 2016 (Bates GSR00004438).

**VII. LARSEN AND GARLINGHOUSE EMPLOYED GSR TO SELL THEIR XRP IN A MANNER THAT MINIMIZED THE NEGATIVE PRICE IMPACT OF THEIR XRP SALES, AND BLOCKCHAIN ANALYSIS CONFIRMS THAT THEY TRANSFERRED LARGE AMOUNTS OF PERSONAL XRP HOLDINGS TO GSR**

**A. Larsen and Garlinghouse Agreements with GSR**

36. Both Larsen and Garlinghouse entered into “Liquidity Extraction Activity” agreements<sup>44</sup> with GSR and retained GSR to sell XRP. These agreements have a “Market Maintenance” clause that stipulates how GSR is required to sell XRP “in a controlled manner taking care not to de-stabilize the global Tokens [XRP] market.”<sup>45</sup> The earliest agreement between Larsen and GSR also adds specific language related to de-stabilization, which is that XRP sales should not “cause a [REDACTED] percent decline in the weighted average interday price of XRP.”<sup>46</sup> That agreement also limited daily sales to “[REDACTED] percent of total network XRP trading volume in the twenty-four (24) hour period immediately preceding any sale of [Larsen’s] XRP.”<sup>47</sup> These contract provisions suggest that Larsen and Garlinghouse employed the services of GSR to minimize the negative impact their XRP sales could have on XRP prices.

**B. Blockchain Tracing of Funds Leaving Larsen’s Addresses**

37. Based on analysis of the XRP blockchain, I conclude that Larsen made significant use of GSR’s liquidity extraction services described in the previous Section VII.A to sell his XRP. Larsen directly transferred 1.5 billion XRP (\$495 million) to GSR out of a total of 4.0 billion XRP

---

<sup>44</sup> 2015 GSR Larsen agreement (Bates LARSEN-SEC-LIT-00004869-70); GSR Loan and Purchase Agreement\_Chris Larsen Trust (final) (Bates GSR00008433-442); and 2017 GSR Garlinghouse Liquidity Extraction agreement (Bates GSR00000673-80).

<sup>45</sup> *ibid.*

<sup>46</sup> 2015 GSR Larsen agreement (Bates LARSEN-SEC-LIT-00004869-70).

<sup>47</sup> *ibid.*

(\$1.1 billion) transferred out of his identified addresses.<sup>48</sup> This can be seen in Figure 7 which shows the cumulative amount of XRP transferred out of Larsen’s identified addresses over time, including direct transfers to GSR. Other destinations receiving direct transfers of XRP from Larsen’s identified addresses include digital asset platforms, other entities such as Coil (a startup where Larsen is a board member), or unidentified addresses. Unidentified addresses could be “over-the-counter” (OTC) trading counterparties or friends of Larsen to whom he sold XRP, as mentioned in his deposition.<sup>49</sup> Additional detail regarding where XRP flowed from Larsen’s identified accounts as well as the methodology for the blockchain tracing can be found in Appendix D and Appendix E.

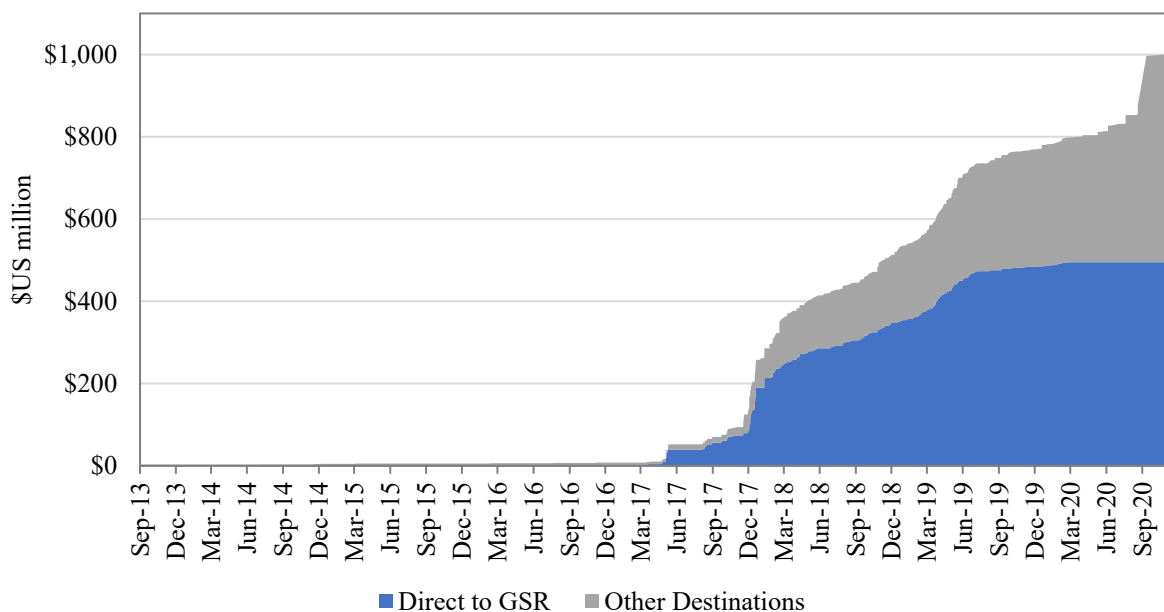
---

<sup>48</sup> The US dollar equivalent shown is the value of the XRP on the date it first left one of Larsen’s identified addresses. The XRP-USD exchange rate is obtained from CoinMarketCap. Larsen’s identified addresses comprise of a list of addresses produced to the SEC by Larsen (Bates LARSEN\_NAT 00000102).

<sup>49</sup> Chris Larsen deposition at 80-83. September 14, 2021.

**Figure 7 – Cumulative Value of Direct Transfers Out of Larsen’s Identified XRP Addresses**

This figure plots the cumulative value, in US dollars, of the XRP that was transferred out of Larsen’s identified addresses. The amount that was directly transferred to GSR is shaded in blue. The US dollar value is based on the XRP-USD exchange rate, obtained from CoinMarketCap, on the day that the XRP was transferred out of Larsen’s identified addresses. Note: Larsen began transferring XRP out of his identified addresses beginning September 2013, but the amounts cannot be seen on the chart because of the scale.



38. The previous analysis is conservative because it looks only at direct transactions from Larsen to GSR. Larsen could have moved funds between blockchain addresses over multiple transfers, or ‘hops’. When analyzing blockchain transactions over multiple hops, the certainty that the initial owner of funds still controls them decreases as the number of hops increases. Additional XRP moved from Larsen’s identified addresses to GSR addresses over multiple hops. If one traces these out as far as seven hops, the total amount that Larsen transferred to GSR could be as high as 1.9 billion XRP (\$599 million). As shown in Table 2, Larsen sent at least 1.50 billion XRP to GSR via one hop, but he could have sent up to 1.90 billion XRP to GSR over up to four hops, or 1.93 billion if tracing up to seven hops. It is worth noting that Larsen could have sold or gifted

XRP to entities or individuals who subsequently transferred the XRP to GSR; this could be a reason why XRP reached GSR from Larsen’s identified wallets over a series of up to seven hops.

**Table 2 – Cumulative Value of XRP Sent from Larsen to GSR Over up to Seven Hops**

This table shows the cumulative amount of XRP sent to GSR from Larsen’s identified addresses, given the number of transfers, as well as the USD equivalent on the date XRP left the identified addresses. For example, 1,496 million XRP was directly sent to GSR over 1 hop and 1,926 million was traced to GSR over up to seven hops. There is a small amount of XRP traced to GSR over 8 hops that is not shown because of rounding; blockchain analysis did not identify additional XRP sent to GSR beyond 8 hops.

<b>Number of Hops</b>	<b>Cumulative XRP Transferred to GSR (million)</b>	<b>USD Equivalent (million)</b>
1	1,496	495
Up to 2	1,519	499
Up to 3	1,860	568
Up to 4	1,901	590
Up to 5	1,906	592
Up to 6	1,916	596
Up to 7	1,926	599

Values rounded to the nearest 1 million XRP and 1 million USD.

### **C. Blockchain Tracing of Funds Leaving Garlinghouse’s Addresses**

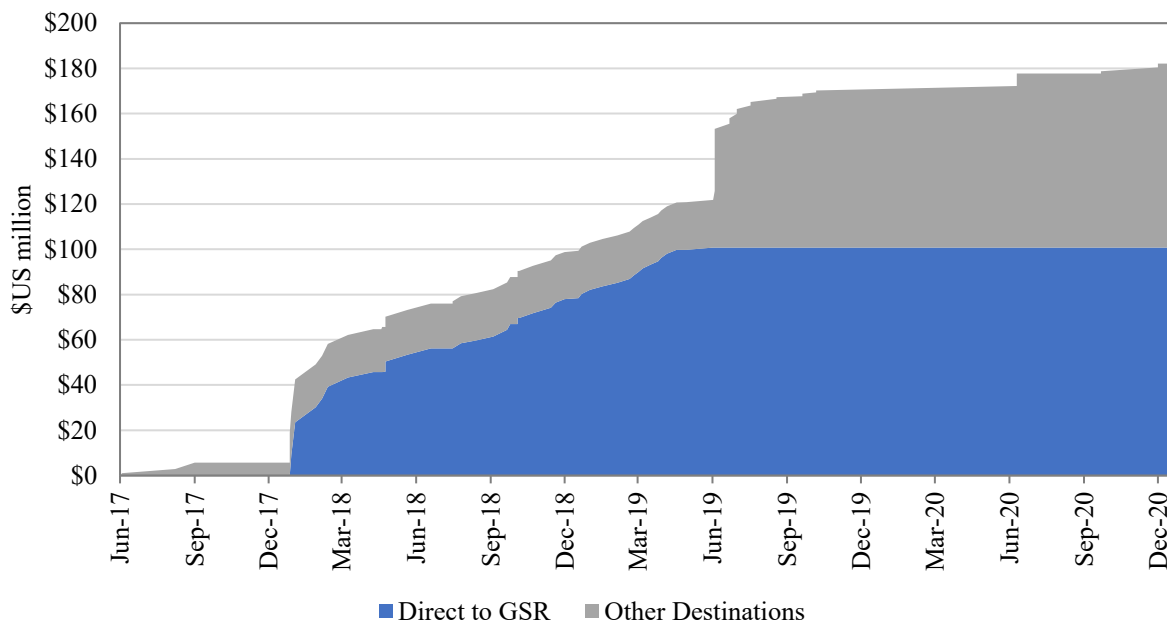
39. Similar to the Larsen analysis above, I also conclude that Garlinghouse made significant use of GSR’s liquidity extraction services to sell his XRP. Garlinghouse directly transferred 167 million XRP (\$104 million) to GSR out of a total of 377 million XRP (\$186 million) transferred out of his identified addresses.<sup>50</sup> This can be seen in Figure 8 which shows the cumulative amount of XRP transferred out of Garlinghouse’s identified addresses over time, including direct transfers to GSR. Other destinations receiving direct transfers of XRP from Garlinghouse identified addresses include digital asset platforms, Ripple, or unidentified addresses. Additional detail regarding where XRP flowed from Garlinghouse’s identified accounts

<sup>50</sup> The US dollar equivalent shown is the value of the XRP on the date it first left one of Larsen’s identified addresses. The XRP-USD exchange rate is obtained from CoinMarketCap. Garlinghouse’s identified addresses comprise of a list of XRP addresses produced to the SEC by Garlinghouse [Garlinghouse Subpoena Response Spreadsheet, “Request 4” Tab (Bates GARL00000001-1) and Garlinghouse XRP Award Addresses (Bates GARL00000002-9)].

as well as the methodology for the blockchain tracing can be found in Appendix D and Appendix E.

**Figure 8 – Cumulative Value of Direct Transfers Out of Garlinghouse’s Identified XRP Addresses**

This figure plots the cumulative value, in US dollars, of the XRP that was transferred out of Garlinghouse’s identified addresses. The amount that was directly transferred to GSR is shaded in blue. The US dollar value is based on the XRP-USD exchange rate, obtained from CoinMarketCap, on the day that the XRP was transferred out of Garlinghouse’s identified addresses.



40. The total amount that Garlinghouse transferred to GSR could be as high as 277 billion XRP (\$139 million)<sup>51</sup> because additional XRP moved from Garlinghouse’s identified addresses to GSR addresses through up to two hops, as shown in Table 3. Unlike with Larsen’s accounts, blockchain analysis does not identify XRP going to GSR beyond two hops.

<sup>51</sup> The US dollar equivalent shown is the value of the XRP on the date it first left one of Larsen’s identified addresses. The XRP-USD exchange rate is obtained from CoinMarketCap.

**Table 3 – Cumulative Value of XRP Sent from Garlinghouse to GSR Over up to Two Hops**

This table shows the cumulative amount of XRP sent to GSR from Garlinghouse’s identified addresses, given the number of hops, as well as the USD equivalent on the date XRP left the identified addresses. The blockchain analysis did not identify additional XRP sent to GSR beyond two hops.

Number of Hops	Cumulative XRP Transferred to GSR (million)	USD Equivalent (million)
1	167	104
Up to 2	277	139

Values rounded to the nearest 1 million XRP and 1 million USD.

#### **VIII. RIPPLE ENTERED INTO PARTNERSHIP AND OTC AGREEMENTS WHICH INCLUDED TERMS THAT WOULD MINIMIZE DOWNWARD PRESSURE ON XRP PRICES**

41. Lock-up provisions are common on Initial Public Offerings (IPOs) of shares, typically last 180 days, and are a means to prohibit or slow insiders, venture capital, and other pre-IPO shareholders from selling shares [Field and Hanka (2001)]. The motivation behind these restrictions is to limit the supply of saleable shares or sellers and thus reduce the downward pressure on shares prices. Similar to these IPO practices, Ripple implemented lock-up periods and selling restrictions on the resale of XRP. By restricting the amount these purchasers and partners could resell on the open market for XRP, Ripple limited the supply of XRP tokens, thereby minimizing downward pressure on the price of XRP as I describe in more detail below.

42. Ripple made use of lock-up periods and selling restrictions in its institutional sales. For example, in October 2014 when [REDACTED] [REDACTED] [REDACTED],<sup>52</sup> purchased [REDACTED] worth of XRP, it was subject to a lock-up period of [REDACTED].<sup>53</sup> When Ripple sold [REDACTED] worth of XRP in June 2016 to [REDACTED] [REDACTED]<sup>54</sup> Ripple required a [REDACTED] lock-up period and a subsequent [REDACTED]

<sup>52</sup> [https://www.linkedin.com/company/\[REDACTED\]about](https://www.linkedin.com/company/[REDACTED]about).

<sup>53</sup> XRP II Master Agreement – [REDACTED] 11.29.2014 (Bates RPLI\_SEC 0259585-593).

<sup>54</sup> [https://fortune.com/\[REDACTED\]](https://fortune.com/[REDACTED]).

period where XRP sales were limited to [REDACTED] of the average daily volume.<sup>55</sup> Subsequent XRP bulk purchase agreements, for example in 2018 to [REDACTED] an investment management firm, also included a “Lockup Period” and a “Daily Sale Limitation.”<sup>56</sup>

43. When distributing XRP as compensation or incentives to service providers and partners, Ripple also made use of lock-up and selling restrictions. In its 2017 agreement with [REDACTED] [REDACTED] which also helped Ripple sell XRP on the open markets, XRP payments from Ripple to [REDACTED] were subject to a lock-up period of [REDACTED], and sales after this lock-up period were limited “to no more than [REDACTED] of daily XRP notional value trading volume on all venues where XRP is listed.”<sup>57</sup> In 2019, Ripple entered into an agreement with [REDACTED] to develop a digital asset wallet and provided an “XRP Incentive” of [REDACTED].<sup>58</sup> In that agreement, [REDACTED] subsequent selling of this XRP incentive could not exceed [REDACTED] of the three-day average total trade volume of XRP.<sup>59</sup> Overall, these lock-up provisions and sales restrictions are consistent with Ripple taking steps to protect the price of XRP.

## **IX. RIPPLE HAD STRONG INCENTIVES TO MAXIMIZE XRP PRICES**

### **A. Funding Operational Costs**

44. Revenue from XRP sales comprise Ripple’s key source of revenue. As seen in Figure 9, from 2013 to 2020, in each year revenue from XRP sales accounted for over 90% of Ripple’s total revenue, and in some years was greater than 99% of total revenue.

---

<sup>55</sup> 2016-06-09 [REDACTED] summary of XRP purchase, (Bates RPLI\_SEC 0000626-631) and 2016-06-23 [REDACTED] summary of XRP purchase, (Bates RPLI\_SEC 0000636-641).

<sup>56</sup> 2018-02-22 [REDACTED] Purchase agreement, (Bates RPLI\_SEC 0233130-148).

<sup>57</sup> 2017-02-14 [REDACTED] MM and programmatic market activity agreement, (Bates RPLI\_SEC 0899145-151).

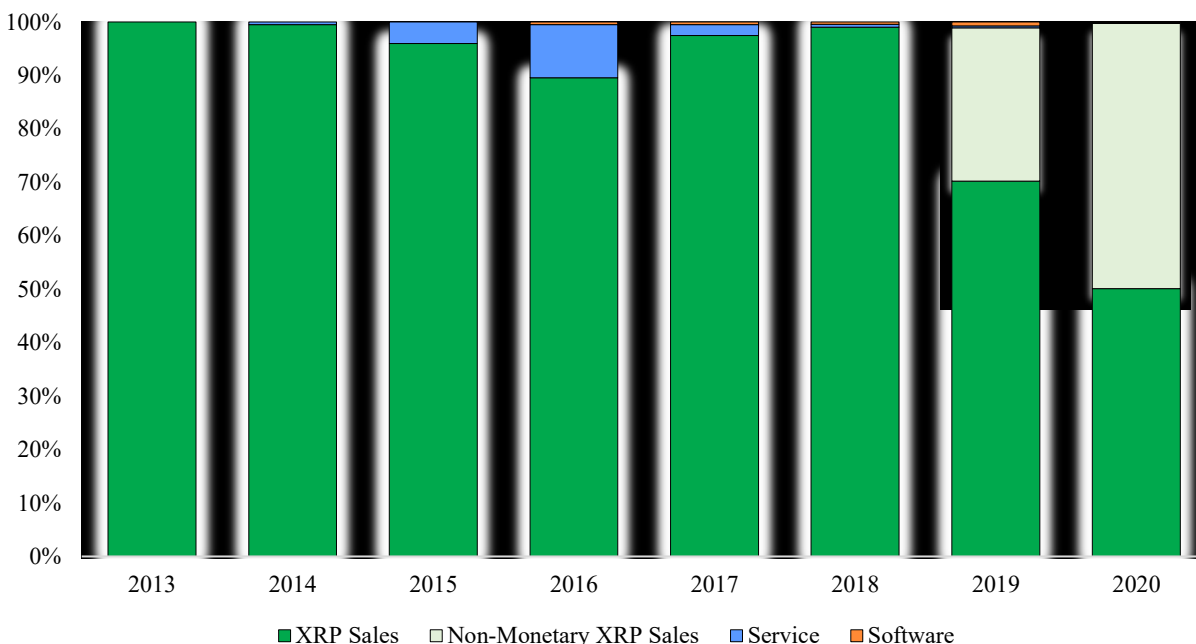
<sup>58</sup> 2019-05-24 [REDACTED] Incentive agreement, (Bates RPLI\_SEC 0298094-102).

<sup>59</sup> *ibid.*



**Figure 9 – Ripple Revenue Stream Proportions, 2013-2020.**

This figure displays Ripple’s revenue streams as a proportion of total revenue from 2013 to 2020. The bars for each year aggregate the XRP sales, XRP non-monetary transactions,<sup>60</sup> service and software revenue to show the total revenue. Data are sourced from the income statements from Ripple audited annual financial statements.<sup>61</sup>



45. Without revenue from XRP sales, Ripple would have faced enormous operating deficits. This is shown in Figure 10, which plots Ripple’s operating expenses (orange line) against Ripple’s revenue excluding revenue from XRP (blue line). Without revenue from XRP sales, Ripple would have operated with significant annual operating deficits (signified by the gap

<sup>60</sup> Ripple’s auditors define non-monetary XRP transactions as follows: “Non-monetary XRP transactions revenue consists of transactions where the Company delivers XRP to customers for consideration other than cash or other monetary consideration and is recognized upon delivery of XRP. Revenue for non-monetary XRP transactions is determined based on the value of consideration expected to be received from the customer. This is typically the value of the XRP delivered to the customer.” Consolidated Financial Statements-as of December 31, 2019 (Bates RPLI\_SEC 0301113-1160).

<sup>61</sup> Ripple Financial Statements 2013 and 2014 - with notes (Bates RPLI\_SEC 0090938-962),

Ripple - 2015 FS (Bates RPLI\_SEC 0426161-187)

Ripple Financial Statements 2016 and 2017 OCR (Bates NY-9875\_T\_00017816-854)

Ripple Financial Statements 2017 and 2018 OCR (Bates RPLI\_SEC 0267872-911)

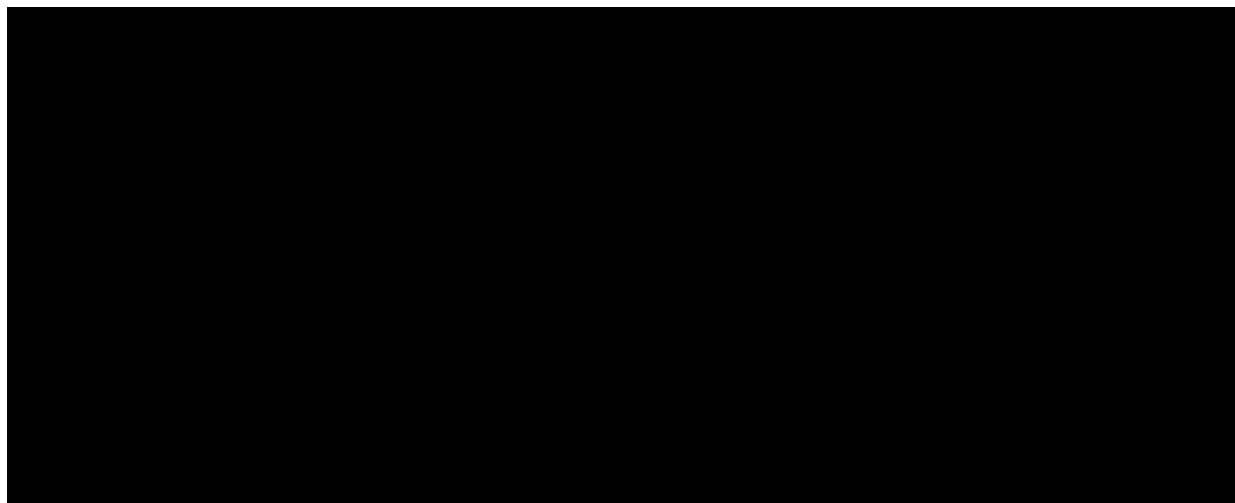
Consolidated Financial Statements-as of December 31, 2019 (Bates RPLI\_SEC 0301113-1160)

2020 and 2019 Audited Financial Statements OCR (Bates RPLI\_SEC 0920429-475)

between orange and blue lines) ranging from [REDACTED] to [REDACTED] per year from 2017 to 2020.

**Figure 10 – Ripple Total Non-XRP Revenue vs. Total Operating Expenses, 2013-2020.**

This figure plots Ripple’s total operating expenses (orange line) against total Ripple revenue excluding revenue from XRP sales (blue line). Without revenue from selling XRP, Ripple would have operated with large annual operating deficits ranging from [REDACTED] to [REDACTED] from 2017 to 2020, which can be seen as the gap between the orange and blue lines. Data comes from the income statements from Ripple audited annual financial statements.

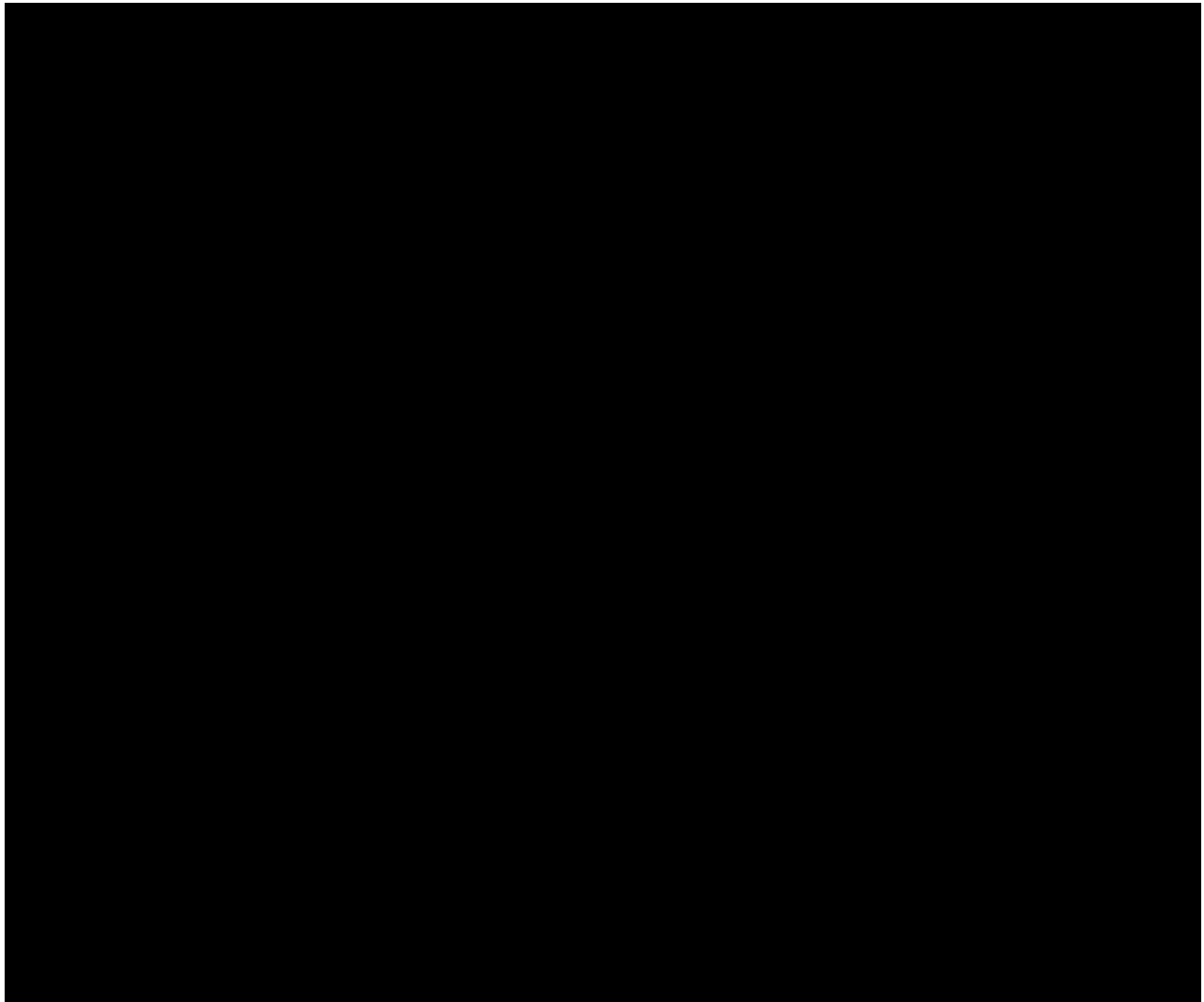


46. From 2013 to 2020, Ripple has also received multiple rounds of outside capital funding, totaling \$284 million, net of issuance fees.<sup>62</sup> While this funding has helped to cover Ripple’s operational deficits to a certain extent, as seen in Figure 11, starting in 2017 Ripple has been dependent on XRP sales to fund its operations. Had Ripple not sold XRP to fund its operations, it would have had an annual funding gap of [REDACTED] in 2017 which would have grown to nearly [REDACTED] by the end of 2020, as denoted by the red line in Figure 11. Without additional funding Ripple could not have stayed in operation, given its cost structure, without its sales of XRP. Indeed, an early Ripple pitch deck stated that part of Ripple’s business model

---

<sup>62</sup> Value calculated from “Cash flows from financing activities” in the cash flow statements from Ripple audited annual financial statements.

included keeping a significant portion of XRP and “occasionally” selling XRP “to fund itself.”<sup>63</sup> However, since 2017 Ripple has been dependent on selling XRP to fund its operations.



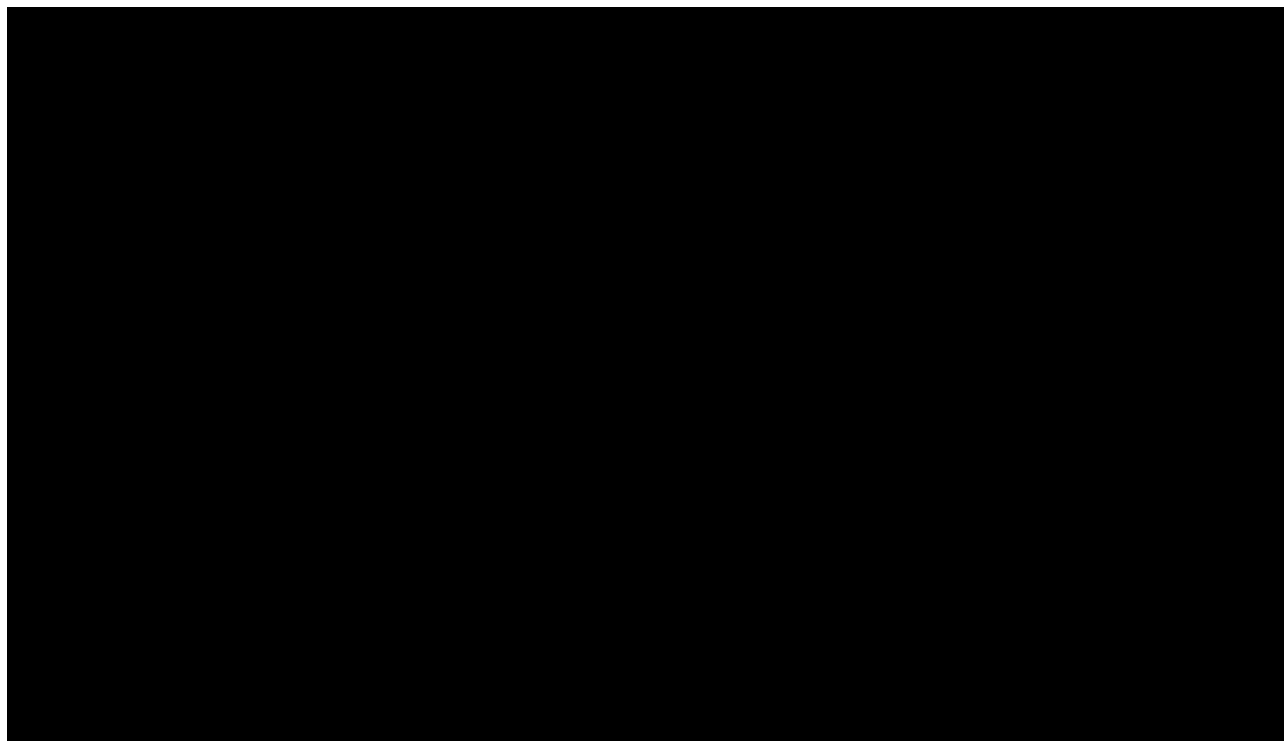
## **B. Funding for Shares Repurchases**

47. Sales of XRP have not only provided critical funding for Ripple’s operations but have also enabled Ripple to undertake private share repurchases that have rewarded existing shareholders, who are likely mostly comprised of early investors, founders, and employees of

---

<sup>63</sup> Ripple Financial Services, July 2013 (Bates RPLI\_SEC 0088287).

Ripple.<sup>64</sup> Ripple has repurchased a total of [REDACTED] in shares previously issued to its early investors and founders (Figure 12). Without XRP sales, Ripple would have had a significant cash deficit (denoted by the red line in Figure 11 above) and would not have had the cash to pay for shares repurchases. However, with XRP sales, Ripple has been able to fund shares repurchases that have rewarded early investors, founders or employees handsomely, as Ripple's private valuation apparently skyrocketed from \$100 million in 2015 to \$10 billion in 2020—a hundred-fold increase.<sup>65</sup>



---

<sup>64</sup> It is possible that early investors, founders or employees may have sold their shares in private markets to other entities or individuals.

<sup>65</sup> Ripple was valued at \$100 million after its funding round in 2015 (<https://www.wsj.com/articles/BL-DGB-40105>), and later valued at \$10 billion after its funding round in 2020 (<https://www.cnbc.com/2019/12/20/ripple-creator-of-xrp-cryptocurrency-is-now-valued-at-10-billion.html>). This valuation does not include the holdings of XRP held in escrow or circulating supply of XRP in market held by public hands.

<sup>66</sup> Ripple Financial Statements 2013 and 2014 - with notes (Bates RPLI\_SEC 0090938-962),

Ripple - 2015 FS (Bates RPLI\_SEC 0426161-187)

Ripple Financial Statements 2016 and 2017 OCR (Bates NY-9875\_T\_00017816-854)

Ripple Financial Statements 2017 and 2018 OCR (Bates RPLI\_SEC 0267872-911)

Consolidated Financial Statements-as of December 31, 2019 (Bates RPLI\_SEC 0301113-1160)

2020 and 2019 Audited Financial Statements OCR (Bates RPLI\_SEC 0920429-475)

### **C. Funding from Outside Investors vs. Through XRP Sales**

48. As established in the previous section, Ripple needed to sell XRP because outside sources of funding, which include venture and institutional investors, and sales of non-XRP related software and services<sup>67</sup> did not provide enough capital to fund its annual operational costs. Internally at Ripple, there was discussion that not being completely dependent on outside institutional investors was beneficial. According to David Schwartz (CTO), Ripple's revenue stream from XRP sales provided an important source of funding that would enable Ripple to be less dependent on outside funding. Specifically, he argues, "XRP price matters because it's a current and future revenue stream, securing our business and maintaining a level of independence of the company from outside funding. The value of the company's XRP holdings is significant and we have an obligation to be sensible stewards."<sup>68</sup>

49. When companies raise funds by issuing equity to outside investors, their management loses a portion of control over the company since their share of equity is diluted with each round of new investments. This is the case when Ripple received venture capital funding from its outside investors.<sup>69</sup> However, the sales of XRP are not subject to a reduction of shareholder voting rights for executives because holders of XRP do not have any voting rights. This provided a further incentive to raise more funds through selling XRP and taking actions to increase its price. In other words, by selling XRP instead of equity, Ripple could enjoy the benefits of capital raising through sale of XRP, without the costs typically associated with such sales. Those costs typically

---

<sup>67</sup> [https://www.crunchbase.com/organization/ripple-labs/company\\_financials](https://www.crunchbase.com/organization/ripple-labs/company_financials).

<sup>68</sup> David Schwartz Deposition Exhibit 84 (RPLI\_SEC 0576405). In his deposition (pp 407-408), Schwartz states that his document, "Why Should We Care About XRP Right Now?" was imported into the referenced document under discussion. The quotation comes from the top of the "Why Should We Care About XRP Right Now?" section.

<sup>69</sup> For example, Ripple's Series A funding round provided voting rights to investors and entitled them to appoint a director to Ripple's Board of Directors, as seen in Ripple Labs, Inc. Consolidated Financial Statements As of December 31, 2014 At 16 (Bates RPLI\_SEC 0090955).

include giving up control of its operations and the costs and scrutiny of complying with regular investor disclosures of financial records.

50. Because sales of XRP helped to fund its operations with less strings attached relative to raising equity, Ripple had the incentive to increase both its sales of XRP and the price of XRP.

#### **D. Executive Compensation**

51. Another incentive for Ripple and its executives to actively manage and increase the price of XRP is that Ripple executives and employees owned XRP and received compensation and bonuses in XRP. As detailed in Section VII, both Larsen and Garlinghouse received and subsequently transferred large amounts of XRP, valued at \$1.1 billion and \$186 million respectively. The average CEO of the top 350 publicly traded company makes approximately \$9.5 million per year through shares and shares options awards.<sup>70</sup> In contrast, Larsen and Garlinghouse on average transferred \$120 million per year out of their addresses,<sup>71</sup> more than 12 times the average annual executive shares and shares option awards at the top 350 publicly traded companies. Yet, Ripple's non-XRP revenue, as shown in Figure 10, is trivial compared to the annual revenue of these companies.

52. Other Ripple executives also received compensation in XRP. For example, a Ripple General Manager was entitled to and received annual bonuses from Ripple of one million XRP.<sup>72</sup> This suggests that the team of Ripple managers and executives who received XRP, including

---

<sup>70</sup> <https://www.epi.org/publication/ceo-compensation-2018>.

<sup>71</sup> Average is based on every full year that Larsen and Garlinghouse transferred funds out of their identified addresses, i.e., 2014-2020 for Larsen and 2018-2020 for Garlinghouse.

<sup>72</sup> Asheesh Birla deposition at 55. June 23, 2021.

Larsen and Garlinghouse, were incentivized to manage and increase the price of XRP and minimize downward pressure on the price of XRP.

### **E. XRP vs. Stock Similarities**

53. Based on my expertise in investments, IPOs,<sup>73</sup> and financial markets, I find that Ripple used XRP in a similar manner as companies use stock. Although Ripple had publicly stated plans to develop uses for XRP beyond the ways that a company uses stock (e.g., to potentially one day serve as a bridge currency for banking transactions), Ripple ultimately primarily used XRP to fund operations and enrich its executives. Companies sell shares either through initial public offerings (“IPOs”) or seasoned equity offerings (“SEOs”) to fund operations and new investments [Ritter and Welch (2002) and DeAngelo, DeAngelo, and Stulz (2010)]. IPOs typically have lock-up provisions on these shares to limit supply and selling pressure. As previously described, Ripple took actions to lock-up XRP tokens to limit supply and selling pressure.

54. Companies also use equity or options on equity as a means to deliver substantial compensation to company executives and top managers [Murphy (2013)]. Ripple used and managed XRP in an almost identical capacity to pay Ripple executives and founders, as well as other key employees who sold significant amounts of XRP over time. Ripple employees who held XRP were incentivized to work together to increase the price of XRP and minimize downward pressure on the price of XRP in the same way that managers and executives holding company shares work to increase the share value of their company. Companies also use funding from IPOs and SEOs to fund new operations, and Ripple similarly funded the vast majority of its operations through XRP sales. Overall, in the way that XRP funded operations and incentivized executives

---

<sup>73</sup> See [REDACTED] (2007) for IPOs. Expertise in areas of investments and financial markets are outlined in many papers and teaching expertise in Appendix A.

and managers through XRP sales, Ripple used XRP in an extremely similar capacity as firms use publicly traded equity.

55. However, Ripple enjoyed the benefits of capital raising through sale of XRP, without the costs typically associated with such sales. XRP did not grant holders any formal voting rights in the governance of Ripple. Thus, Ripple executives did not have to give up any control of company operations as they normally would when selling dilutive shares with voting rights. Additionally, by not issuing publicly traded stock Ripple was not obligated to provide regular investor disclosures of financial records and corporate activities that companies typically make.

56. Another more peculiar Ripple practice not typically present with registered companies is Ripple's close relationship with market makers, wherein Ripple directed them to trade not only in such a way as to sell XRP to raise revenue, but also to buy XRP both to provide a price floor and to push the price upward. Companies may enter repurchase agreements to purchase shares in aftermarket trading, but not in a manner where they actively seek to set price floors at certain prices or push prices upward during news announcements. In other words, publicly traded companies are not allowed to use trading strategies to influence their stock price, but Ripple employed multiple market makers to manage the trading aspects in XRP. The increasing and high price of XRP over the period enabled Ripple executives to profit greatly.



Executed October 13, 2021



 Ph.D.

**X. APPENDIX A: CURRICULUM VITAE**

[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted] • [Redacted] • [Redacted]

**ACADEMIC APPOINTMENTS**

Sept 2015 – Present	[Redacted]
Sept 2012 – Aug 2015	[Redacted] [Redacted]
Spring 2013	[Redacted]
Sept 2009 – Aug 2012	[Redacted] [Redacted] [Redacted]
July 2008 – Feb 2009	[Redacted] [Redacted]
Jan 2004 – Aug 2009	[Redacted] [Redacted]
Jan 2005 – May 2005	[Redacted] [Redacted]
Jan 2003 – Dec 2003	[Redacted] [Redacted]
May 2003 – Jul 2003	[Redacted] [Redacted]
Aug 1997 – May 2003	[Redacted] [Redacted]

**RESEARCH INTERESTS**

Cryptocurrencies, Market Manipulation, Conflicts of Interest, CDOs, MBS, Credit Ratings, International Finance, Insider Trading, Institutional and Individual Investors, Real Estate, Rational and Behavioral Pricing, Hedge Funds

**PUBLISHED OR FORTHCOMING ARTICLES**

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

\_\_\_\_\_

\_\_\_\_\_

[REDACTED]

[REDACTED]

[REDACTED]

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[REDACTED]

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

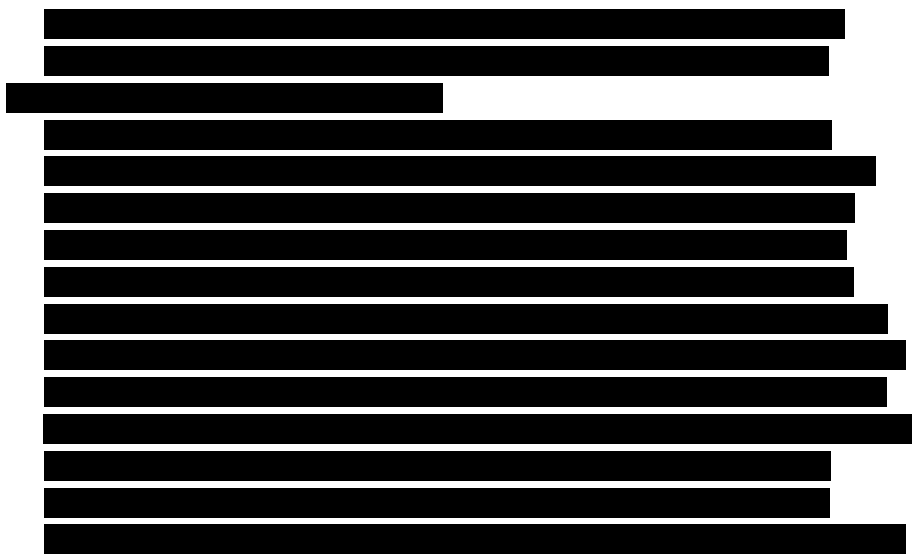
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

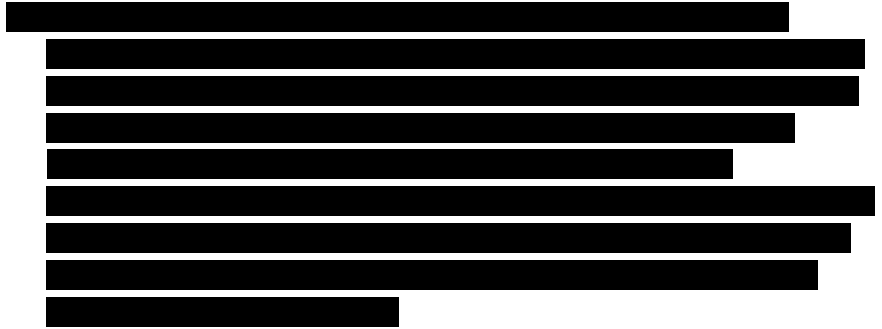
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]



2018-2019



2016-2018



[Redacted]



[Redacted]



[Redacted]



[Redacted]



[Redacted]



[illegible]







[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**XI. APPENDIX B: RECENT TESTIMONY AND COURT-FILED EXPERT REPORTS**

**Testimony in the last four years and court-filed expert reports**

**Case Name:** [REDACTED]

**Case No.:** [REDACTED] (United States District Court, Eastern District of Arkansas, Central Division)

**Date:** [REDACTED]

**Case Name:** [REDACTED]

**Case No.:** [REDACTED] (United States District Court, Western District of Louisiana, Shreveport Division)

**Date:** [REDACTED]

## **XII. APPENDIX C: LIST OF DOCUMENTS RELIED UPON**

2015 GSR Larsen agreement, LARSEN-SEC-LIT-00004869-70.

2016-06-09 [REDACTED] summary of XRP purchase, RPLI\_SEC 0000626-631.

2016-06-23 [REDACTED] summary of XRP purchase, RPLI\_SEC 0000636-641.

2017 GSR Garlinghouse Liquidity Extraction agreement, GSR00000673-80.

2017-02-14 [REDACTED] MM and programmatic market activity agreement,  
RPLI\_SEC 0899145-151.

2017-05-25 GSR Programmatic Market Activity Agreement, GSR00017429.

2017.06.11 CL BG chat, GARL\_Civil\_000877-78.

2018-02-22 [REDACTED] Purchase agreement, RPLI\_SEC 0233130-148.

2018-03-02 GSR amended programmatic market maker agreement, GSR00018580.

2019-05-24 [REDACTED] Incentive agreement, RPLI\_SEC 0298094-102.

2019-09-05 GSR Xrapid master agreement, GSR0000098.

2020 and 2019 Audited Financial Statements OCR, RPLI\_SEC 0920429-475.

XRP Ledger Foundation. (Accessed on September 29, 2021).  
<https://xrpl.org/accounts.html#creating-accounts>.

Announcing Ripple's Global Payments Steering Group. (2016, September 23). Ripple Insights.  
<https://ripple.com/insights/announcing-ripples-global-payments-steering-group>.

Asheesh Birla deposition at 55, June 23, 2021.

Browne, Ryan. Ripple, which uses cryptocurrency for cross-border payments, is now valued at \$10 billion. (Accessed October 4, 2021). CNBC. <https://www.cnbc.com/2019/12/20/ripple-creator-of-xrp-cryptocurrency-is-now-valued-at-10-billion.html>

Built for Bitcoin. (Accessed on September 29, 2021). NYDIG. <https://nydig.com>.

Casey, Michael J. and Chernova, Yuliya. Digital-Payments Company Ripple Labs Is Finalizing a \$30 Million Funding Round. (Accessed October 4, 2021). The Wall Street Journal.  
<https://www.wsj.com/articles/BL-DGB-40105>.

Chordia, T., Roll, R., and Subrahmanyam, A. (2002). Order imbalance, liquidity, and market returns. *Journal of Financial Economics*, 2002, vol. 65, issue 1, 111-130.

Chordia, Tarun and Subrahmanyam, Avanidhar (2004). Order Imbalance and individual stock returns: Theory and evidence. *Journal of Financial Economics*, 2004, vol. 72, issue 3, 485-518.

Coil. Ripple's Xpring Makes 1 Billion XRP Grant to Drive XRP Adoption and Advance Coil's Monetized Platform for Creators. (Accessed on October 2, 2021). PR Newswire.  
<https://www.prnewswire.com/news-releases/ripples-xpring-makes-1-billion-xrp-grant-to-drive-xrp-adoption-and-advance-coils-monetized-platform-for-creators-300902194.html>

Consolidated Financial Statements-as of December 31, 2019, RPLI\_SEC 0301113-1160.

[REDACTED]  
[REDACTED]

David Schwartz Deposition Exhibit 84, RPLI\_SEC 0576405.

DeAngelo, H., DeAngelo, L., and Stulz, R. (2010). Seasoned equity offerings, market timing, and the corporate lifecycle. *Journal of Financial Economics*, 2010, vol. 95, issue 3, 275-295.

Deposition of Patrick Griffin at 75-76, June 29, 2021.

Email from Brad Garlinghouse, April 10, 2016, RPLI\_SEC 0205601.

Email from Brad Garlinghouse, April 10, 2016, RPLI\_SEC 0307781.

Email from Bret Allenbach, April 10, 2016, RPLI\_SEC 0205602.

Email from [REDACTED] June 1, 2016, GSR00004438.

Email from Chris Larsen, April 10, 2016, RPLI\_SEC 0307781.

Email from [REDACTED] April 11, 2016, GSR00011984.

Email from [REDACTED] April 28, 2016, GSR00012857.

Email from Patrick Griffin, September 14, 2016, GSR00020001.

Email from Patrick Griffin, November 1, 2016, GSR00005000.

Email from [REDACTED] April 10, 2016, RPLI\_SEC 0205600.

Excel Export - 2014-2016 - 2t - Liquidity extraction report, RPLI\_SEC 0679467-467.

Excel\_Export\_2017\_OLD\_2h\_Liquidity\_extraction\_report, GSR00000101.

Excel\_Export\_2018\_2h\_Ripple\_Liquidity\_Extraction\_Report, GSR00000102

Excel\_Export\_2019\_2h\_Ripple\_Liquidity\_Extraction\_Report, GSR00000103

Exhibit CG-34, GSR0000104.

Field, Laura Casares and Hanka, Gordon (2001). The expiration of IPO share lockups. The Journal of Finance 56, no. 2, 471-500.

Garlinghouse Subpoena Response Spreadsheet, "Request 4" Tab, GARL00000001-1.

Garlinghouse XRP Award Addresses, GARL00000002-9.

Get Account Activations. (Accessed on September 29, 2021). XRPSCAN API.  
<https://api.xrpscan.com/api/v1/account/{address}/activations>.

Get Account Exchanges. (Accessed on September 29, 2021). Ripple Data API v2.  
<https://data.ripple.com/v2/accounts/{address}/exchanges>.

Get Exchanges. (Accessed on September 29, 2021). Ripple Data API v2.  
[https://data.ripple.com/v2/exchanges/{base\\_currency}+{base\\_issuer}/  
{counter\\_currency}+{counter\\_issuer}](https://data.ripple.com/v2/exchanges/{base_currency}+{base_issuer}/{counter_currency}+{counter_issuer}).

Get Transaction. (Accessed on September 29, 2021). Ripple Data API v2.  
[https://data.ripple.com/v2/transactions/{transaction\\_hash}](https://data.ripple.com/v2/transactions/{transaction_hash}).

[REDACTED]

GSR00000348.

GSR00000467A.

GSR00006693.

GSR00007297.

GSR Loan and Purchase Agreement\_Chris Larsen Trust, GSR00008433-442.

History. (Accessed on September 29, 2021). XRP Ledger Foundation.  
<https://xrpl.org/history.html>.

Joint Submission by the Parties to Hon. Analisa Torres. February 15, 2021, Dkt. No. 45.

Larsen, Chris [@chrislarsensf]. (2020, September 22). *As some of you may have noticed, I moved an \$XRP wallet to NYDIG. I've known the founders for a while, and am impressed by their security and top notch institutional standards -- this is truly custody 2.0. Check them out at nydig.com* [Tweet]. Twitter.  
<https://twitter.com/chrislarsensf/status/1308459310574264325>.

List of Chris Larsen Addresses, LARSEN\_NAT 00000102.

Mishel, Lawrence and Wolfe, Julia. CEO compensation has grown 940% since 1978. (2019, August 14). Economic Policy Institute.  
<https://www.epi.org/publication/ceo-compensation-2018>.

Murphy, Kevin J. Executive compensation: Where we are, and how we got there. In Handbook of the Economics of Finance, vol. 2, pp. 211-356. Elsevier, 2013.

Our Team. (Accessed on September 29, 2021). GSR. <https://www.gsr.io/our-team>.

Polo\_gsr\_trades, [REDACTED]\_00001699.

Q4 2020 XRP Markets Report, <https://ripple.com/insights/q4-2020-xrp-markets-report>.

Q1 2017 XRP Markets Report, <https://ripple.com/insights/q1-2017-xrp-markets-report>.

Q2 2017 XRP Markets Report, <https://ripple.com/insights/q2-2017-xrp-markets-report>.

Q3 2017 XRP Markets Report, <https://ripple.com/insights/q3-2017-xrp-markets-report>.

Q4 2017 XRP Markets Report, <https://ripple.com/insights/q4-2017-xrp-markets-report>.

Ritter, Jay R. and Welch, Ivo (2002). A Review of IPO Activity, Pricing and Allocations. Yale ICF Working Paper No. 02-01 (February 2002). Available at SSRN:  
<http://dx.doi.org/10.2139/ssrn.296393>.

Ripple Adds Several New Banks to Global Network. (2016, September 15). Ripple Press.  
[https://ripple.com/ripple\\_press/ripple-adds-several-new-banks-global-network](https://ripple.com/ripple_press/ripple-adds-several-new-banks-global-network).

Ripple Financial Services, July 2013, RPLI\_SEC 0088287.

Ripple – Funding, Financials, Valuation & Investors. (Accessed on September 29, 2021).  
 Crunchbase. [https://www.crunchbase.com/organization/ripple-labs/company\\_financials](https://www.crunchbase.com/organization/ripple-labs/company_financials).

Ripple Labs, Inc. Consolidated Financial Statements As of December 31, 2014 At 16,  
 RPLI\_SEC 0090955.

Ripple Raises \$55 Million in Series B Funding. (2016, September 15). Ripple Press.  
[https://ripple.com/ripple\\_press/ripple-raises-55-million-series-b-funding](https://ripple.com/ripple_press/ripple-raises-55-million-series-b-funding).

Roberts, Jeff John. [REDACTED] expands crypto footprint with custody acquisition. (2020, May 21).  
 Fortune. [https://fortune.com/2020/05/21/\[REDACTED\]cryptocurrency-volt-bitcoin](https://fortune.com/2020/05/21/[REDACTED]cryptocurrency-volt-bitcoin).

Ripple - 2015 FS, RPLI\_SEC 0426161-187.

Ripple Financial Statements 2013 and 2014 - with notes, RPLI\_SEC 0090938-962.

Ripple Financial Statements 2016 and 2017 OCR, NY-9875\_T\_00017816-854.

Ripple Financial Statements 2017 and 2018 OCR, RPLI\_SEC 0267872-911.



Wind, Wietse. WietseWind/fetch-xrpl-transactions. (Accessed on September 29, 2021). GitHub repository. <https://github.com/WietseWind/fetch-xrpl-transactions>.

XRP. (Accessed on September 29, 2021). XRP Ledger Foundation. <https://xrpl.org/xrp-overview.html>.

XRP Explorer. (Accessed on September 29, 2021). Bithomp. <https://bithomp.com/explorer/rDCgaaSBAWYfsxUYhCk1n26Na7x8PQGmkq>.

XRP Explorer. (Accessed on September 29, 2021). Bithomp. <https://bithomp.com/explorer/rGFuMiw48HdbnrUbKRYuitXTmfrDBNTCnX>.

XRP II Master Agreement – [REDACTED] 11.29.2014, RPLI\_SEC 0259585-593.

XRP price today, XRP to USD live, marketcap and chart. (Accessed on October 4, 2021). CoinMarketCap. <https://coinmarketcap.com/currencies/xrp>.

XRP Programmatic Sales Reporting FY14 to Date v2, RPLI\_SEC 74559.

Any other documents or materials identified in my report, including data obtained from CoinMarketCap and CryptoTick.

### **XIII. APPENDIX D: IDENTIFICATION OF GSR ADDRESSES**

#### *Summary of Sources*

57. The data are sourced from the 2014-2016 GSR liquidity extraction report<sup>74</sup> (“extraction report”), detailing GSR’s activities with respect to Client “Ripple Labs” and Bot “2t”, as well as publicly available blockchain data.<sup>75</sup>

#### *Context: The Liquidity Extraction Report*

58. The “Daily Summary” tab of the extraction report describes daily trading activities of GSR on behalf of Ripple via Bot 2t. The “Comments” column (column S) reports, among other events, payouts to Ripple and commission fees received by GSR. Many cells in the “Comments” column contain transaction hashes on the XRP Ledger, which is inferred to correspond with the aforementioned payouts and commission fees based on other context given in the “Comments” cells and the balance changes of USD and EUR documented in columns Q and R. It is also inferred that “TPWR” as used in the “Comments” column refers to an address (or set of addresses) controlled by Ripple that receives the aforementioned payouts, and “GSR” as used in the “Comments” column refers to an address (or set of addresses) controlled by GSR that receives the aforementioned commission fees.

59. In the “Details” tab of the extraction report, sums of XRP amounts are given daily and correspond with the amount of “Total XRP” owned by GSR for the corresponding date in the

---

<sup>74</sup> Excel Export - 2014-2016 - 2t - Liquidity extraction report (Bates RPLI\_SEC 0679467-467).

<sup>75</sup> This report used XRP blockchain data from two sources: i) an application programming interface (API) provided by Ripple (Ripple Data API v2), available at [https://data.ripple.com/v2/transactions/{transaction\\_hash}](https://data.ripple.com/v2/transactions/{transaction_hash}), [https://data.ripple.com/v2/exchanges/{base\\_currency}+{base\\_issuer}/{counter\\_currency}+{counter\\_issuer}](https://data.ripple.com/v2/exchanges/{base_currency}+{base_issuer}/{counter_currency}+{counter_issuer}) and <https://data.ripple.com/v2/accounts/{address}/exchanges>; and ii) the full history of the XRP Ledger for use in Google’s BigQuery data warehouse, available at <https://github.com/WietseWind/fetch-xrpl-transactions>. The latter source is provided by Wietse Wind, founder of XRPL Labs (<https://wietse.com/bio>).

“Daily Summary” tab;<sup>76</sup> it is inferred that addresses listed in column A of the “Details” tab are GSR-controlled. In particular, it is inferred that [REDACTED]<sup>77</sup> is a GSR-controlled address.

60. Descendants of a certain address ‘N’ are defined to be any address ‘M’ such that ‘N’ activated ‘M’, where activation is meant in the conventional sense that ‘M’ first received XRP from ‘N’.<sup>78</sup> A genealogy of address ‘N’ is the recursively-generated tree with root ‘N’ and branches given by the descendants of ‘N’, the descendants of the descendants of ‘N’, and so on. A depth-first search is performed using XRPScan’s API<sup>79</sup> to construct the genealogy of [REDACTED]. This genealogy tree has depth four, i.e., there are at most four edges between the root and any leaf.

#### *Identification of GSR Addresses Used in Figures 1-4*

61. The term “GSR” as used in Figures 1-4 refers to a set of addresses whose identification is explained in this section. Every string in the “Comments” column in the “Daily Summary” tab of the extraction report with more than 60 characters was extracted and, after removing punctuation and whitespace characters, verified to be a valid transaction hash on the XRP Ledger, with one exception.<sup>80</sup> For each such transaction hash, the date of the transaction was retrieved as well as the associated sending address from the aforementioned BigQuery tables. The resulting set of sending addresses (“candidate wallets”) was analyzed to determine the number of transactions, out of those listed in the “Comments” column, each candidate wallet initiated, as well as the dates of the first and last instances of such transactions. The results can be seen in Table 4.

---

<sup>76</sup> For example, the amount in cell F43, “Details” tab, corresponding to December 1, 2014, matches the amount in cell G3, “Daily Summary” tab, also corresponding to December 1, 2014.

<sup>77</sup> [REDACTED] is an abbreviation for XRP address [REDACTED].

<sup>78</sup> <https://xrpl.org/accounts.html#creating-accounts>.

<sup>79</sup> <https://api.xrpscan.com/api/v1/account/{address}/activations>.

<sup>80</sup> The exception occurs in cell S705, “Daily Summary” tab, with the string “<https://blockchain.info/tx/e5b6ba00fe8c1754bd0e36eecbad5456473eaf61965737d8c0c7b16a55cef2dc>”, corresponding to a transaction made by GSR on the Bitcoin blockchain regarding a purchase of BTC.

**Table 4 – Activity of Candidate Wallets.**

This table provides the summary of the activity of the candidate wallets as discussed in Appendix D. The 195 transaction hashes identified in the “Comments” column of the extraction report were attributed to the candidate wallet that initiated the transaction, and the set of such transactions for each candidate wallet is described.

Address	Number of Transactions	Date of First Transaction	Date of Last Transaction
[REDACTED]	2	November 1, 2016	December 2, 2016
	6	February 15, 2016	November 1, 2016
	3	March 11, 2015	March 11, 2015
	1	March 20, 2015	March 20, 2015
	14	September 10, 2015	November 5, 2015
	20	January 14, 2015	August 21, 2015
	1	March 17, 2015	March 17, 2015
	117	August 21, 2015	January 21, 2017
	1	March 29, 2016	March 29, 2016
	1	August 18, 2016	August 18, 2016
	1	September 28, 2016	September 28, 2016
	23	February 24, 2015	March 19, 2015
	5	March 11, 2015	March 11, 2015

62. The only candidate wallets that made transactions in 2016 are [REDACTED]. The former two, [REDACTED] and [REDACTED], are owned by Poloniex and Bitstamp respectively,<sup>94</sup> and their presence in the candidate wallet set is a result of GSR buying or selling XRP through the respective off-chain digital asset platform.<sup>95</sup> The fourth address, [REDACTED], is used by GSR to collect commission fees and corresponds with “GSR” as used in the “Comments” column

81 [REDACTED]  
82 [REDACTED]  
83 [REDACTED]  
84 [REDACTED]  
85 [REDACTED]  
86 [REDACTED]  
87 [REDACTED]  
88 [REDACTED]  
89 [REDACTED]  
90 [REDACTED]  
91 [REDACTED]  
92 [REDACTED]  
93 [REDACTED]

<sup>94</sup> Identities sourced from <https://bithomp.com/explorer/rDCgaaSBAWYfsxUYhCk1n26Na7x8PQGmkq> and <https://bithomp.com/explorer/rGFuMiw48HdbnrUbKRYuitXTmfrDBNTCnX>.

<sup>95</sup> For example, line 3, cell S705, “Daily Summary” tab.

of the “Daily Summary” tab of the extraction report. The fifth address, [REDACTED], is unidentified, but it can reasonably be excluded from consideration since it was responsible for only one transaction mentioned in the “Comments” column; moreover, this single transaction corresponds to an “order from Patrick to sell... XRP for... [REDACTED].”<sup>96</sup> The sixth address, [REDACTED], is the recipient of “TPWR” payouts throughout the extraction report; the single transaction appearing in the “Comments” column for which [REDACTED] is responsible corresponds to an event where GSR “received 50k from TPWR for buying,”<sup>97</sup> which explains its presence in the candidate wallet set. The final candidate wallet of the six that made at least one transaction in 2016, [REDACTED], was responsible for by far the greatest number of transactions, as seen in Table 4. It is possible to conclude that [REDACTED] is GSR-controlled and is responsible for the aforementioned payout and commission fee transactions. Moreover, it can be inferred that, as far as the extraction report indicates, [REDACTED] is the only GSR-controlled wallet with payout responsibilities in 2016.

63. A table of transactions was constructed in which either the sending address or the receiving address is a candidate wallet; the subset of this table of successful transactions<sup>98</sup> was retrieved in which either the sending address or the receiving address is [REDACTED]. All such transactions in which the *receiving* address is [REDACTED] are of the Payment type, none of which are transfers of XRP.<sup>99</sup> Of the 109 addresses that make Payments to [REDACTED] at least once in 2016, all but four are members of the [REDACTED] genealogy, so it is inferred that these 105 addresses are GSR-controlled. The remaining four addresses that are not members of the genealogy are [REDACTED]

---

<sup>96</sup> Cell S630, “Daily Summary” tab.

<sup>97</sup> Cell S671, “Daily Summary” tab.

<sup>98</sup> Encoded as “tesSUCCESS” on the XRP Ledger.

<sup>99</sup> This, among other factors, suggests that other addresses are exchanging XRP for non-XRP assets (e.g., USD) on the XRP Ledger on behalf of [REDACTED], which in turn uses the non-XRP assets for payouts and commission fees.

████, and █████. These were previously identified as Poloniex, Bitstamp, “TPWR,” and “GSR” (the recipient of commission fees), respectively.

64. The 105 addresses that make at least one Payment to █████ in 2016 and which are not Poloniex, Bitstamp, “TPWR,” or “GSR,” as discussed above, constitute the set of addresses termed “GSR” in Figures 1-4.

#### **XIV. APPENDIX E: METHODOLOGY FOR BLOCKCHAIN ANALYSIS AND FLOW OF XRP FROM LARSEN AND GARLINGHOUSE ADDRESSES**

##### **A. Methodology for Blockchain Tracing**

65. The blockchain tracing analysis starts with i) lists produced to the SEC that identify XRP addresses that are under Larsen’s or Garlinghouse’s control<sup>100</sup> and ii) publicly available XRP blockchain data which includes the full history of every transaction.<sup>101</sup> From the lists produced to the SEC, there are 28 Larsen-identified addresses and 19 Garlinghouse-identified addresses. Then, the “first-in, first-out” (FIFO) forensic accounting methodology is applied to trace the flow of XRP out of those Larsen-identified and Garlinghouse-identified addresses. The XRP from these addresses is traced until one of the following scenarios: i) XRP reaches a “GSR-associated” address,<sup>102</sup> ii) XRP reaches an “identified address” such as a digital asset exchange or other known entities on the XRP blockchain,<sup>103</sup> iii) XRP reaches a non-identified address with over 1,000 transactions (labeled as “high-activity address”),<sup>104</sup> iv) XRP is returned to one of the Larsen-

---

<sup>100</sup> List of Chris Larsen Addresses (Bates LARSEN\_NAT 00000102); Garlinghouse Subpoena Response Spreadsheet, “Request 4” Tab (Bates GARL00000001-1); Garlinghouse XRP Award Addresses (Bates GARL00000002-9).

<sup>101</sup> This report used XRP blockchain data from two sources: i) an application programming interface (API) provided by Ripple (Ripple Data API v2), available at [https://data.ripple.com/v2/transactions/{transaction\\_hash}](https://data.ripple.com/v2/transactions/{transaction_hash}) and ii) the full history of the XRP Ledger for use in Google’s BigQuery data warehouse, available at <https://github.com/WietseWind/fetch-xrpl-transactions>. The latter source is provided by Wietse Wind, founder of XRPL Labs (<https://wietse.com/bio>).

<sup>102</sup> “GSR-associated” addresses were identified from liquidity extraction reports produced to the SEC (Bates RPLI\_SEC 0679467-467, GSR00000102, GSR00000103, GSR00000441, GSR00000442, GSR00000444, GSR00000446, GSR00000447, GSR00000448, GSR00000449, GSR00000452, GSR00000453, GSR00000454, GSR00000455, GSR00000460, GSR00000461, GSR00000462, GSR00000463, GSR00000464, GSR00000465, GSR00000466, GSR00000467). More details can be found in Appendix D.

<sup>103</sup> The identities of certain addresses on the XRP blockchain can be derived from publicly available sources online. These include data from XRP blockchain explorers (blockchain explorers enable users to view blockchain data from a web interface), e.g., bithomp.com which lists the identity behind certain XRP addresses, and from social media sites such as twitter.com.

<sup>104</sup> Addresses that have had over 1,000 transactions and were labelled “high-activity” because it is possible that they are digital asset platforms that have not been identified.

identified or Garlinghouse-identified addresses, v) less than 5 XRP is flowing out of an address,<sup>105</sup> or vi) XRP is transferred over 13 hops.<sup>106</sup>

66. For the purposes of this report, funds are only traced if they involve “Payment” and “AccountDelete” transactions of XRP. Payment transactions entail direct transfers of a certain asset from an address to another address. AccountDelete transactions entail a deletion of an address (its transaction history remains in the ledger history) and a transfer of all assets in that address to another address. There exist Payment transactions of other assets, such as USD, which are excluded from this analysis. Other types of transactions excluded for the purpose of this tracing analysis are other XRP balance-affecting changes on the ledger, such as: i) “offers” – buy/sell offers exchanging XRP for another asset at a given exchange rate, ii) “checks” – IOUs that can be cashed by the receiving party up to an expiration time and iii) “payment channels” – safeboxes where XRP is stored and can be retrieved by the receiving party. To exclude the above balance-affecting transactions means that this report assumed such transactions or changes did not actually occur.

## **B. Flow of XRP from Larsen and Garlinghouse Addresses**

67. This section provides a summary of the flow of XRP out of Larsen’s and Garlinghouse’s identified addresses based on i) direct transfers (1 hop only) and ii) tracing XRP over multiple hops.

---

<sup>105</sup> Tracing was not done for transactions less than 5 XRP because: i) tracing minute amounts is computationally intensive and does not impact the results significantly, so a lower bound is necessary, and ii) 5 XRP has typically been the largest fee that has been charged in the course of a transaction.

<sup>106</sup> Due to the exponential growth in the number of addresses and transactions to trace for each additional hop, the analysis stopped at 13 hops for the Larsen-identified addresses. Less than 20,000 XRP was traced that went beyond 13 hops before reaching one of the criteria above, representing less than 0.001% of the XRP flowing out of Larsen-identified addresses. XRP flowing out of Garlinghouse-identified addresses was not transferred over two hops before it hit one of the other criteria above.



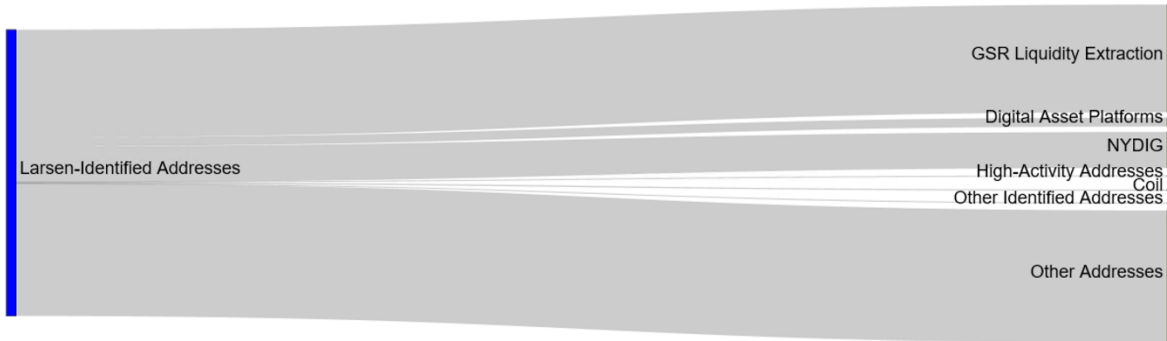
68. As noted in the tracing methodology described above, the XRP flowing from the identified addresses could have been transferred to other XRP addresses up to 13 times before reaching an identified destination, such as a digital asset platform. Hence, it is possible that the ownership of the XRP changed hands between when it left one of the identified addresses and when it reached a digital asset exchange, e.g., through an over-the-counter (OTC) sale, as an exchange for a good or service, as an investment or as a donation. Indeed, this happened with some of Larsen's XRP since, as alluded to the main report, he sold XRP in OTC sales and to friends who themselves could have subsequently sold their XRP on digital asset platforms. In general, fewer transfers of a digital asset provides more confidence that the digital asset is still in the possession of the original holder. As such this Appendix provides an accounting of funds both i) directly transferred over 1 hop from the identified addresses and ii) transferred over multiple hops.

69. In general, the point of the tracing is not to pinpoint where all the funds went and exactly when they were transferred to other parties. Nevertheless, it is possible to infer that significant amounts of XRP originating from Larsen's and Garlinghouse's identified addresses were transferred and traced to GSR as well as digital asset platforms where they could have been sold. Whether or not the traced XRP was actually sold at digital asset platforms would require having detailed account data from all digital asset platforms where XRP was traced to have reached, which was not available at the time of this report's writing.

## Direct Transfers of XRP

**Figure 13 – Visualization of Direct transfers from the Larsen-Identified Addresses.**

This figure illustrates the flow of funds from Larsen’s identified XRP addresses, from left to right. The thickness of each category denotes the relative size, in XRP, of funds traced. The largest recipient of funds was GSR. “Other Addresses” are addresses that were not identified.



**Table 5 – Direct Transfer Amounts from the Larsen-Identified Addresses.**

This table provides the summary of blockchain analysis of the flow of funds out of Larsen’s identified addresses via 1 hop only. The US dollar (USD) equivalent value shown is the value of the XRP at the time that it left one of the Larsen-identified addresses. Analysis is as of December 22, 2020.

Address Type	XRP Transferred (million)	USD Equivalent (million)
GSR Liquidity Extraction	1,496	495
NYDIG <sup>107</sup>	500	117
Bitstamp (Digital Asset Platform)	87	51
Coinbase (Digital Asset Platform)	27	7
Coil (Micropayments Start-up Funded by Ripple) <sup>108</sup>	17	5
Kraken (Digital Asset Platform)	9	3
Other Identified Addresses (Internet Archive & XRP Tip Bot)	0.3	0.1
Other Addresses (not Identified)	1,840	394
<b>Total</b>	<b>3,976</b>	<b>1,072</b>

Values rounded to the nearest 1 million XRP and 1 million USD, except for “Other Identified Addresses” which is rounded to the nearest hundred thousand.

<sup>107</sup> NYDIG is a technology and financial services firm providing digital asset services to institutions and private clients (<https://nydig.com/>); Larsen publicly disclosed that he moved XRP to NYDIG in September 2020 (<https://twitter.com/chrislarsensf/status/1308459310574264325>).

<sup>108</sup> <https://www.prnewswire.com/news-releases/ripples-xpring-makes-1-billion-xrp-grant-to-drive-xrp-adoption-and-advance-coils-monetized-platform-for-creators-300902194.html>.

**Figure 14 – Visualization of Direct transfers from the Garlinghouse-Identified Addresses.**

This figure illustrates the flow of XRP from Garlinghouse’s identified XRP addresses. The largest flows were to GSR. Analysis is as of December 22, 2020.

**Table 6 – Direct Transfer Amounts from the Garlinghouse-Identified Addresses.**

This table provides the summary of blockchain analysis of the flow of funds out of Garlinghouse’s identified addresses via 1 hop only. The US dollar (USD) equivalent value shown is the value of the XRP on the date that it left one of the Garlinghouse-identified addresses. Analysis is as of December 22, 2020.

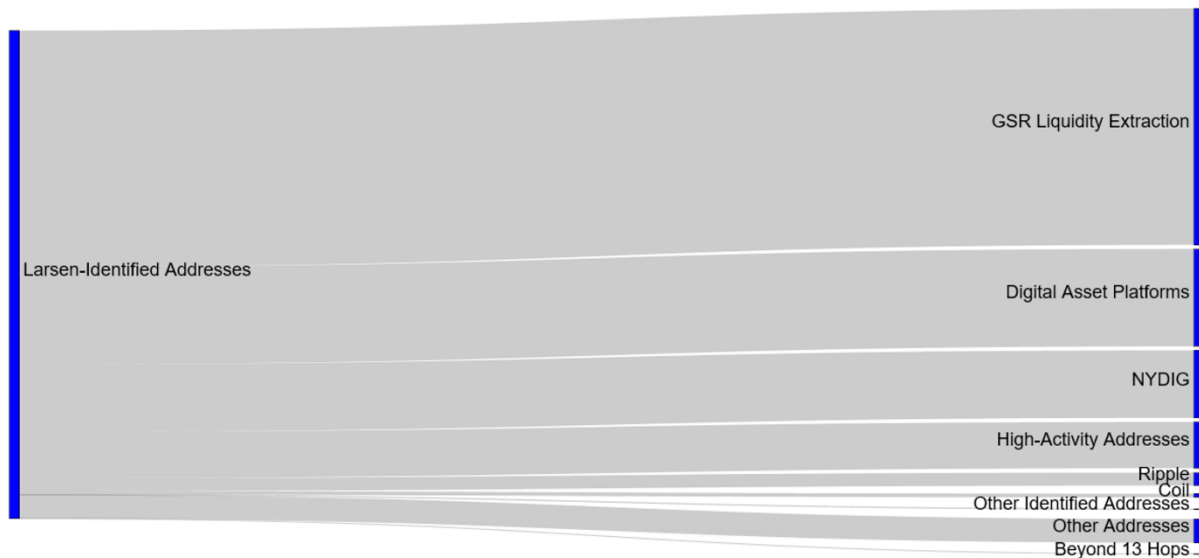
<b>Address Type</b>	<b>XRP Transferred (million)</b>	<b>USD Equivalent (million)</b>
GSR Liquidity Extraction	167	104
Ripple	62	25
Bitstamp (Digital Asset Platform)	36	21
Bitfinex (Digital Asset Platform)	2	1
Coinbase (Digital Asset Platform)	0.3	0.1
Kraken (Digital Asset Platform)	0.2	0.1
Other Addresses (not Identified)	110	35
<b>Total</b>	<b>377</b>	<b>186</b>

Values rounded to the nearest 1 million XRP and 1 million USD, except for Coinbase and Kraken which are rounded to the nearest hundred thousand.

## Tracing of XRP over Multiple Hops

**Figure 15 – Visualization of Flow of Funds from the Larsen-Identified Addresses.**

This figure illustrates the flow of funds from Larsen’s identified XRP addresses, from left to right. The thickness of each category denotes the relative size, in XRP, of funds traced. The largest recipient of funds was GSR, followed by digital asset platforms.



**Table 7 – Value of XRP Traced from the Larsen-Identified Addresses.**

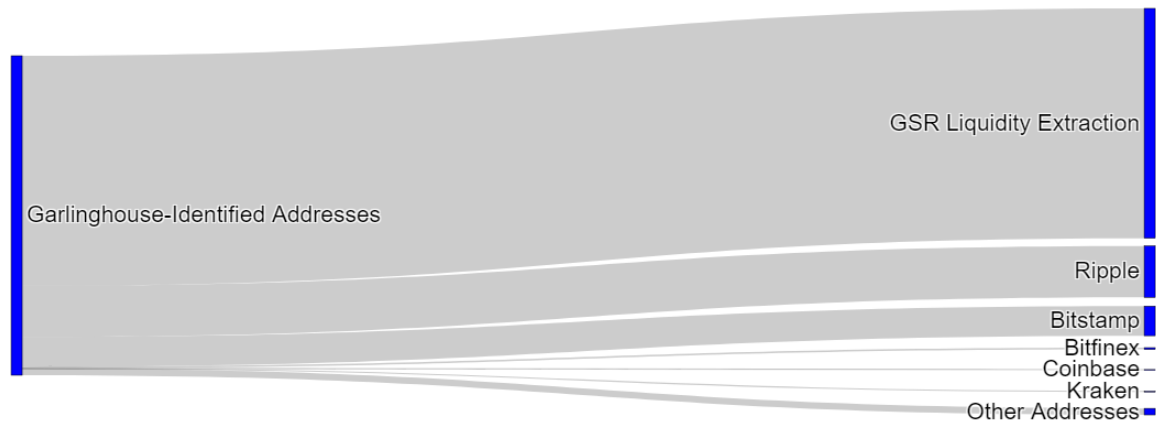
This table provides the summary of blockchain analysis of the flow of funds out of Larsen’s identified addresses. The US dollar (USD) equivalent value shown is the value of the XRP on the date that it left one of the Larsen-identified addresses. Analysis is as of December 22, 2020.

Address Type	XRP Traced (million)	USD Equivalent (million)	Weighted Average Number of Hops
GSR Liquidity Extraction	1,926	599	1.5
Digital Asset Platforms	794	244	2.8
NYDIG <sup>109</sup>	550	131	1.1
High-Activity (Addresses with > 1,000 Transactions)	377	54	3.2
Ripple	106	27	2.0
Coil (Micropayments Start-up Funded by Ripple) <sup>110</sup>	30	5	1.9
Other Identified Addresses (e.g., Internet Archive)	1.0	0.1	4.8
Other Addresses (not Identified) <sup>111</sup>	193	13	2.6
<b>Total</b>	<b>3,976</b>	<b>1,072</b>	<b>1.9</b>

Values rounded to the nearest 1 million XRP and 1 million USD, except for “Other Identified Addresses” which is rounded to the nearest hundred thousand.

**Figure 16 – Visualization of Flow of Funds from the Garlinghouse-Identified Addresses.**

This figure illustrates the flow of XRP from Garlinghouse’s identified XRP addresses. The largest flows were to GSR. Analysis is as of December 22, 2020.



**Table 8 – Value of XRP Traced from the Garlinghouse-Identified Addresses.**

This table provides the summary of blockchain analysis of the flow of funds out of Garlinghouse’s identified addresses. The US dollar (USD) equivalent value shown is the value of the XRP on the date that it left one of the Garlinghouse-identified addresses. Analysis is as of December 22, 2020.

Address Type	XRP Traced (million)	USD Equivalent (million)	Weighted Average Number of Hops
GSR Liquidity Extraction	277	139	1.4
Ripple	62	25	1.0
Bitstamp (Digital Asset Platform)	36	21	1.0
Bitfinex (Digital Asset Platform)	2	1	1.0
Coinbase (Digital Asset Platform)	0.3	0.1	1.0
Kraken (Digital Asset Platform)	0.2	0.1	1.0
Other Addresses (not Identified)	0.0001	0.0001	1.0
<b>Total</b>	<b>377</b>	<b>186</b>	<b>1.2</b>

Values rounded to the nearest 1 million XRP and 1 million USD, except for Coinbase and Kraken which are rounded to the nearest hundred thousand and “Other Addresses” which is rounded to the nearest hundred.

<sup>109</sup> NYDIG is a technology and financial services firm providing digital asset services to institutions and private clients (<https://nydig.com/>); Larsen publicly disclosed that he moved XRP to NYDIG in September 2020 (<https://twitter.com/chrislarsensf/status/1308459310574264325>).

<sup>110</sup> <https://www.prnewswire.com/news-releases/ripples-xpring-makes-1-billion-xrp-grant-to-drive-xrp-adoption-and-advance-coils-monetized-platform-for-creators-300902194.html>.

<sup>111</sup> The XRP that was traced beyond 13 hops is included in “Other Addresses (not identified)”.

# EXHIBIT 2

1 UNITED STATES DISTRICT COURT  
2 SOUTHERN DISTRICT OF NEW YORK

3 SECURITIES AND EXCHANGE §

4 COMMISSION, §

5 PLAINTIFF, §

§ CIVIL ACTION

§ NO. 20-CV-1 (AT) (SN)

6 AGAINST §

7 RIPPLE LABS, INC., §

8 BRADLEY GARLINGHOUSE, §

9 AND CHRISTIAN A. §

10 LARSEN, §

11 DEFENDANTS. §

12 \*\*HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY\*\*

13 ORAL AND VIDEOTAPED DEPOSITION OF

14 [REDACTED]  
15 FEBRUARY 15, 2022

16 ORAL AND VIDEOTAPED DEPOSITION OF [REDACTED]

17 [REDACTED] produced as a witness at the instance of the

18 Defendant and duly sworn, was taken in the above

19 styled and numbered cause on Tuesday,

20 February 15, 2022, from 9:28 a.m. to 6:44 p.m.,

21 before TAMARA CHAPMAN, CSR, RPR-CRR in and for the

22 State of [REDACTED] reported by computerized stenotype

23 machine, at the offices of King & Spalding, LLP, 500

24 West 2nd Street, Austin, [REDACTED] pursuant to the

25 Federal Rules of Civil Procedure and any provisions

26 stated on the record herein.

27 Job No. 205589

## A P P E A R A N C E S

## FOR THE PLAINTIFF:

Pascale Guerrier, Esq.  
Daphna Waxman, Esq.  
U.S. SECURITIES AND EXCHANGE COMMISSION  
200 Vesey Street  
New York, New York 10281

## FOR THE DEFENDANT CHRISTIAN LARSEN:

Kristina Bunting, Esq. (via Zoom)  
Emily Glavin, Esq. (via Zoom)  
PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP  
1285 Avenue of the Americas  
New York, New York 10019

## FOR THE DEFENDANT BRADLEY GARLINGHOUSE:

Matthew Solomon, Esq.  
Caleb Robertson, Esq. (via Zoom)  
CLEARY GOTTlieb STEEN & HAMILTON LLP  
2112 Pennsylvania Avenue, NW  
Washington, D.C. 20037



A P P E A R A N C E S  
(Continued)

FOR THE DEFENDANT RIPPLE LABS, INC.:

Andrew Ceresney, Esq.

Erol Gulay (via Zoom)

Matt Hirsch, Esq. (via Zoom)

Christopher Ford, Esq. (via Zoom)

DEBEVOISE & PLIMPTON LLP

919 Third Avenue

New York, New York 10022

Bradley Oppenheimer, Esq.

Collin White, Esq. (via Zoom)

Eliana Pfeffer, Esq. (via Zoom)

Justin Berg, Esq. (via Zoom)

Bethan Jones, Esq. (via Zoom)

KELLOGG, HANSEN, TODD, FIGEL & FREDERICK, P.L.L.C.

1615 M Street N.W.

Washington, D.C. 20036

A P P E A R A N C E S  
(Continued)

3 ALSO PRESENT:

Brent Kirby, Videographer

4 Stu Alderoty, Ripple Labs

Deborah McCrimmon, Ripple Labs (via Zoom)

5 Reid M. Figel (via Zoom)

Marty Flumenbaum (via Zoom)

6 Ben Hanauer (via Zoom)

Lisa Zornberg (via Zoom)

7 Kyle Chermak (via Zoom)

Christopher Fiore, Compass Lexecon

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

## I N D E X

1		
2		
3		
4		PAGE
5	APPEARANCES.....	2
6	[REDACTED]	
7	EXAMINATION	
8	By Mr. Ceresney.....	7
9	By Ms. Bunting.....	304
10	CORRECTION PAGE.....	349
	SIGNATURE PAGE.....	350
	REPORTER'S CERTIFICATION.....	351

## E X H I B I T S

12		PAGE	LINE
13	Exhibit [REDACTED]-1,	11	11
14	Amended Expert Report of [REDACTED]		
15	(No Bates - 70 pages)		
16	Exhibit [REDACTED]-2,	265	19
17	Rebuttal Report of [REDACTED]		
18	(No Bates - 73 pages)		
19	Exhibit [REDACTED]-3,	139	2
20	Rebuttal Expert Report of Allen		
21	Ferrell, Ph.D.		
22	(No Bates - 52 pages)		
23	Exhibit [REDACTED]-5,	173	11
24	CoinMarketCap price chart of XRP U.S.		
25	dollars, October 1st, 2016 through		
	December 31st, 2016		
	(No Bates - 5 pages)		
	Exhibit [REDACTED]-13,	227	22
	[REDACTED]		
	(No Bates - 38 pages)		
	Exhibit [REDACTED]-15,	274	19
	Expert Report of Allen Ferrell, Ph.D.		
	(No Bates - 128 pages)		

1 [REDACTED] - 2/15/2022

2 THE VIDEOGRAPHER: This is the  
3 videotaped oral deposition of [REDACTED]. Today's  
4 date, February 15, 2022. The approximate time,  
5 9:28 a.m. Central Standard Time. We're recording  
6 and on the record.

7 THE STENOGRAPHER: Would you  
8 introduce yourselves for the record.

9 MR. CERESNEY: Yes. Andrew Ceresney  
10 and Matt Hirsch from Debevoise.

11 MR. SOLOMON: Matt Solomon with  
12 Cleary Gottlieb.

13 MS. BUNTING: Kristina Bunting with  
14 Paul Weiss.

15 MR. OPPENHEIMER: Bradley Oppenheimer  
16 from Kellogg Hansen.

17 MR. ALDEROTY: Stu Alderoty, Ripple.

18 MS. GUERRIER: Pascale Guerrier with  
19 the SEC.

20 MS. WAXMAN: Daphna Waxman from the  
21 SEC.

22 THE WITNESS: [REDACTED], [REDACTED]  
23 [REDACTED].

24 [REDACTED]  
25 having been first duly sworn, testified as follows:

1 [REDACTED] - 2/15/2022

2 EXAMINATION

3 BY MR. CERESNEY:

4 Q. Good morning, [REDACTED].

5 A. Hi.

6 Q. My name is Andrew Ceresney. With me is  
7 my colleague, Matt Hirsch. We're attorneys with  
8 Debevoise & Plimpton and we represent the defendant,  
9 Ripple Labs, in this case.

10 This is an expert deposition in the case  
11 of SEC versus Ripple Labs, which is pending in the  
12 Southern District of New York.

13 Is there any reason why you cannot  
14 testify completely and truthfully today?

15 A. There is not.

16 Q. Are you taking any medication or  
17 suffering any medical or physical condition that  
18 would impact your ability to testify today?

19 A. I'm not.

20 Q. Okay. You have to wait until I finish my  
21 questions to answer. Okay?

22 A. (Nods.)

23 Q. We'll try not to talk over each other  
24 today.

25 Please state and spell your full name for

1 [REDACTED] - 2/15/2022

2 the record.

3 A. [REDACTED]

4 [REDACTED].

5 Q. And what's your home address, [REDACTED]

6 [REDACTED]?

7 [REDACTED]

8 Q. Okay. Your testimony today, [REDACTED]

9 [REDACTED], is under oath. It's being taken down by  
10 the stenographer and videotaped by a videographer.

11 It may be read or played at trial or used  
12 for other purposes relating to this lawsuit.

13 Do you understand that?

14 A. Yes, I do.

15 Q. Because the court reporter is taking down  
16 all the testimony, it's important that all your  
17 answers are verbalized. So please give a spoken  
18 answer to any question. No nodding or shaking.  
19 Okay?

20 A. (Nods.)

21 Q. Yes.

22 A. Yes.

23 Q. There you go. Okay. And, again, it's  
24 important that you allow me to finish my question  
25 before you answer so that we're not talking over

1 [REDACTED] - 2/15/2022

2 each other. We're going to take breaks during the  
3 deposition. If at any time you need a break, just  
4 let me know. And as long as there is not a question  
5 pending, we'll break. Okay?

6 A. Yes.

7 Q. Have you ever been deposed before?

8 A. Yes.

9 Q. How many times?

10 A. Twice.

11 Q. What were those cases?

12 A. It was in the [REDACTED]

13 [REDACTED]. It is listed in my appendix.

14 Q. It is listed in your appendix?

15 A. My appendix and report. But it's listed  
16 in the appendix to the report, but since the  
17 appendix of the report I did a deposition the second  
18 time in the same case.

19 Q. Same case?

20 A. So there is two depositions in that case.

21 Q. And what issues are -- what's the issue  
22 that you testified about in that case, in a general  
23 level?

24 A. It's regarding a stock drop as a 10(b)(5)  
25 case.

1 [REDACTED] - 2/15/2022

2 (Reporter admonishment.)

3 Q. It's a stock drop class action?

4 A. Stock drop class action. Yes, sir.

5 Q. And you're representing the plaintiff or  
6 the defendant?

7 A. Plaintiff.

8 Q. For the purposes of the deposition I'm  
9 going to refer to Ripple Labs as "Ripple" and I'm  
10 going to refer to the defendants, Ripple, Brad  
11 Garlinghouse, and Chris Larsen, either individually  
12 or collectively as "defendants."

13 Is that okay? Do we agree on that?

14 A. Yes.

15 Q. Okay. [REDACTED], you understand  
16 that in this case the SEC is alleging that Ripple's  
17 sales or offers of XRP constituted investment  
18 contracts under the securities laws.

19 Do you understand that?

20 A. Yes.

21 Q. And you understand that the ultimate  
22 legal issue for the court or the jury to decide in  
23 the case is whether Ripple's sales or offers of XRP  
24 constituted investment contracts under the  
25 securities laws?



1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection.

3 Go ahead.

4 A. Yes, I understand that's a matter of the  
5 case.

6 Q. You're not offering an opinion in this  
7 matter about whether XRP itself is a security. Is  
8 that correct?

9 MS. GUERRIER: Objection.

10 A. That's correct.

11 (Exhibit [REDACTED]-1 was marked.)

12 Q. Now, [REDACTED], I'm going to show  
13 you what's been marked as Defendant Exhibit [REDACTED]-1.  
14 I want you to just look at that report.

15 Is that a copy of the amended report that  
16 you prepared in connection with this case?

17 A. Yes, it is.

18 Q. And if you look at Page 42, do you see  
19 your signature on that page?

20 A. Yes.

21 Q. And this report is dated October 13th,  
22 2021. Is this the current version of your report?

23 A. Yes, it is.

24 Q. And throughout this deposition I'm going  
25 to refer to this as your report. Okay? Just so you

1 [REDACTED] - 2/15/2022

2 understand that.

3 Can I ask you to look at Appendix C of  
4 this report. And I believe that's on Page 54. Do  
5 you see that?

6 A. Yes.

7 Q. Do you understand that you're obligated  
8 to disclose any facts or data that you considered in  
9 forming your opinion in this case?

10 A. Yes.

11 Q. And apart from the information contained  
12 in the documents identified in either the report or  
13 in Appendix C of the report, did you consider any  
14 other facts or data in forming your opinions that  
15 are in your report?

16 MS. GUERRIER: Objection.

17 Yes or no.

18 A. I have a general understanding of a lot  
19 of things. These are documents that I thought  
20 should be cited. So I have a general understanding  
21 of a lot of things that I thought didn't -- that  
22 don't require citation. So I applied similar  
23 standards to citation that I would use in my  
24 academic literature, but I have a general knowledge  
25 of things. So I'm not going to say like all of my

1 [REDACTED] - 2/15/2022

2 knowledge that might be relevant is written in this,  
3 but...

4 Q. I understand that, but in terms of  
5 specific documents that you reviewed in connection  
6 with rendering your opinion that might have been  
7 relevant to that opinion, are all of those documents  
8 listed in this appendix?

9 MS. GUERRIER: Objection.

10 Go ahead and answer.

11 A. I believe so.

12 Q. And in preparing your report did any of  
13 the attorneys at the SEC provide you with any  
14 documents or information that are not reflected in  
15 Appendix C?

16 MS. GUERRIER: Objection.

17 And I'm going to instruct you not to  
18 answer that question on the grounds of work product.

19 MR. CERESNEY: You're instructing him  
20 not to answer whether the SEC provided him with  
21 documents that are not listed in Appendix C?

22 MS. GUERRIER: Yes, on grounds of  
23 work product.

24 MR. CERESNEY: On grounds of work  
25 product?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Yeah. So those are  
3 documents that are not considered. Right. They're  
4 not in --

5 MR. CERESNEY: So you --

6 Q. So did the SEC -- so let me ask you a  
7 "yes" or "no" question.

8 Did the SEC provide you with documents  
9 that are not listed on Appendix C?

10 MS. GUERRIER: Objection; work  
11 product.

12 MR. CERESNEY: He can answer "yes" or  
13 "no."

14 MS. GUERRIER: Again --

15 MR. CERESNEY: He can answer that  
16 question "yes" or "no," Pascale.

17 MS. GUERRIER: Okay. I'm objecting  
18 to your question on grounds of work product. You're  
19 asking him for documents that are not listed.

20 MR. CERESNEY: I'm not asking him for  
21 the documents. I'm asking him a "yes" or "no"  
22 question, are there documents.

23 MS. GUERRIER: Okay. My objection is  
24 that you're asking him for work product information  
25 and I'm going to instruct him not to answer.

1 [REDACTED] - 2/15/2022

2 MR. CERESNEY: You're instructing him  
3 not to answer whether or not there are documents  
4 that fall into that category?

5 MS. GUERRIER: Outside of the  
6 documents that are listed in his Appendix C, I'm  
7 going to instruct him not to answer on grounds of  
8 work product, Andrew.

9 MR. CERESNEY: Okay. We'll move on.  
10 We'll come back to that probably.

11 Q. Have you reviewed any documents after you  
12 completed your report that are relevant to your  
13 opinions in your report?

14 MS. GUERRIER: Objection; "yes" or  
15 "no."

16 A. I stand behind my report and I think  
17 these documents are the ones that are relevant.

18 Q. Okay. I want to -- I want you to look at  
19 Page 3 of your report. And you say -- on Page 3 of  
20 your report you say in the first paragraph: First  
21 the SEC asked me to opine on whether Ripple Labs,  
22 Chris Larsen, and Brad Garlinghouse took steps to  
23 influence XRP's prices. Second, I have also been  
24 retained to opine on the incentives that might have  
25 been present for Ripple to attempt to influence the

1 [REDACTED] - 2/15/2022

2 price of XRP.

3 Are those the two purposes -- the two  
4 things, the two issues on which the SEC asked you to  
5 opine?

6 A. Yes. The two main issues.

7 Q. Are there any other issues, at least in  
8 this initial report, where the SEC asked you to  
9 opine?

10 MS. GUERRIER: Objection to form.

11 Go ahead and answer.

12 A. No, this is the major issue. It's  
13 obviously a summary of the issue, but yeah.

14 Q. These are the -- these are the two main  
15 issues --

16 A. These are the two main issues in the  
17 original report. Obviously, as you alluded to,  
18 there is a rebuttal report.

19 Q. Okay. I'm just focused on this report at  
20 the moment.

21 In connection with this work on -- with  
22 your work on this case, have you reviewed the  
23 Complaint that the SEC filed in this matter?

24 A. Yes.

25 Q. Now, in looking at Page -- I want you to

1 [REDACTED] - 2/15/2022

2 look at Page 6 of this -- of your report and you see  
3 there that there are six subsections of Paragraph 9.  
4 And I want to just ask you to look at those  
5 Subparts A through F. Read those to yourself. And  
6 I want to just ask, are these a summary of the  
7 opinions that you've given in this report?

8 A. Would you like me to read them all now?

9 Q. Read them to yourself. I mean just look  
10 at them yourself and I'm just asking you whether  
11 these summarize your opinions in the report.

12 A. (Pause.)

13 Yes. These are a summary of my opinions.

14 Q. And beyond the opinions that are listed  
15 in the summary, are you offering any other opinions  
16 in connection with this report?

17 MS. GUERRIER: Objection to form.

18 A. No.

19 Q. Okay. I want to ask you some questions  
20 about your work on this case and [REDACTED] in general.  
21 How much are you being compensated for your work on  
22 this case?

23 A. [REDACTED] an hour.

24 Q. Do you generally charge on an hourly  
25 basis for your expert witness engagements?

1 [REDACTED] - 2/15/2022

2 A. Yes, I do.

3 Q. Is your compensation in any way  
4 contingent on the outcome of this case?

5 A. No, it's not. At the beginning of every  
6 engagement, I make sure that the other party knows  
7 that my testimony is not for sale, that I will  
8 testify only to the truth, and I will not bend the  
9 truth any way and I will speak to the facts of the  
10 case no matter where they lead. And if they're not  
11 comfortable with that, they -- they can hire someone  
12 else.

13 Q. How many hours have you worked on this  
14 case?

15 A. Approximately, 150 hours.

16 Q. And your report says that you're the  
17 president and owner of something called [REDACTED]  
18 LLC. Is that correct?

19 A. That's correct.

20 Q. I'll call that [REDACTED] for the purposes  
21 of this deposition. What is [REDACTED]

22 A. [REDACTED] is a financial economic  
23 consulting firm in Austin, Texas, down the street  
24 near the university, 180- -- 1801 Lavaca. It works  
25 on complex matters and complex securities issues



1 [REDACTED] - 2/15/2022

2 often related to misrepresentation or fraud or -- or  
3 complex matters.

4 Q. How many employees does [REDACTED] have?

5 A. Approximately, 15.

6 Q. How long have you been the president and  
7 owner of [REDACTED]

8 A. Since its inception, around 2010.

9 Q. And did you found --

10 (Simultaneous speaking.)

11 Q. -- [REDACTED]

12 A. Yeah, I founded -- I'm the owner and  
13 founder of [REDACTED]

14 Q. Okay. And of those 15 employees, what do  
15 those -- what types of activities do those 15  
16 employees engage in?

17 MS. GUERRIER: Objection to form.

18 THE WITNESS: Can I answer?

19 MS. GUERRIER: Uh-huh.

20 A. Well, we have, like, analysts that will  
21 analyze data. We have directors. We have senior  
22 data -- we have data scientists and -- and we have  
23 directors and a vice president and a COO.

24 Q. Does -- are you aware of other [REDACTED]  
25 employees working on this matter?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 Go ahead.

4 A. Yes.

5 Q. Which ones?

6 MS. GUERRIER: Objection to form.

7 A. There is members of my team that have  
8 assisted me with this and then there is -- Pat Doody  
9 is also working on this.

10 Q. And is [REDACTED] an employee of [REDACTED]

11 A. Yes.

12 Q. Does he have any other jobs other than  
13 being employed by [REDACTED]

14 A. I don't think so.

15 Q. Okay. So he's a full-time employee of

16 [REDACTED]

17 A. Full-time.

18 Q. How long has he been a full-time employee  
19 of [REDACTED]

20 A. About four years.

21 Q. And how did it come to happen that  
22 [REDACTED] became an expert in this case?

23 MS. GUERRIER: Objection to form.

24 THE WITNESS: Can I answer?

25 MS. GUERRIER: Can you clarify

1 [REDACTED] - 2/15/2022

2 what --

3 Q. I said, how did it come to happen that

4 [REDACTED] became an expert in this case.

5 MS. GUERRIER: Okay. Are you asking  
6 in connection with his report or --

7 MR. CERESNEY: I'm asking how -- his  
8 knowledge of how [REDACTED] became an expert on this  
9 case.

10 MS. GUERRIER: My objection stands.  
11 Objection --

12 A. I'm not sure exactly. I think the SEC  
13 was contacting people regarding -- interviewed a  
14 number of experts and I think that the typical  
15 process is that most organizations interview experts  
16 and they decide who to take.

17 Q. Did you have anything to do with -- with  
18 [REDACTED] becoming an expert in this case?

19 MS. GUERRIER: Objection to form.

20 A. I think ultimately the -- I think  
21 ultimately the SEC decides.

22 Q. Did you introduce [REDACTED] to the SEC?

23 MS. GUERRIER: Objection to form.

24 A. I don't know.

25 Q. Did you have any discussions along with

1 [REDACTED] - 2/15/2022

2 [REDACTED] with the SEC?

3 MS. GUERRIER: Objection to form.

4 And I'm going to caution you not to  
5 disclose any attorney communication.

6 MR. CERESNEY: It's a "yes" or "no"  
7 question.

8 Q. Did you have any discussions with  
9 [REDACTED] with the SEC, together?

10 MS. GUERRIER: Again, objection and  
11 I'm going to --

12 THE WITNESS: I'm not sure.

13 MS. GUERRIER: Let me finish --

14 THE WITNESS: Okay.

15 MS. GUERRIER: Let me finish with my  
16 objection and I instruct you not to disclose any  
17 attorney communication. Go ahead and answer.

18 THE WITNESS: I don't -- I don't know  
19 if I'm -- I don't know if I'm supposed to answer the  
20 question or not.

21 MS. GUERRIER: Well, if you can  
22 answer the question without disclosing attorney  
23 communication, go ahead and answer. If you cannot  
24 answer the question without disclosing attorney  
25 communication then, you know.

1 [REDACTED] - 2/15/2022

2 Q. I think it's a "yes" or "no" question, at  
3 least initially.

4 A. Can you repeat the question, sir?

5 Q. I'm asking whether you had discussions  
6 along with [REDACTED] with the SEC, together?

7 MS. GUERRIER: And I'm going to state  
8 my objection again on the record and instruct you  
9 to -- not to disclose any communications with the  
10 SEC.

11 MR. CERESNEY: Are you instructing  
12 him not to disclose the fact of communications?

13 MS. GUERRIER: Not at all. I said  
14 not to disclose any communications that --

15 MR. CERESNEY: The substance?

16 (Simultaneous speaking.)

17 MS. GUERRIER: (Unintelligible)  
18 exactly.

19 Q. Okay. You can answer the question.

20 MS. GUERRIER: Yes or no?

21 A. I'm not sure.

22 Q. Did you review [REDACTED] report in this  
23 case?

24 A. I did not.

25 Q. Have you had discussions with [REDACTED]

1 [REDACTED] - 2/15/2022

2 outside the presence of the SEC about his -- his  
3 testimony in -- about his report in this case?

4 A. Not about his report.

5 Q. Have you had discussions about this  
6 matter at all with [REDACTED] outside the presence of  
7 the SEC?

8 MS. GUERRIER: Objection to form.

9 A. Not about -- not about this precise --  
10 not about this precise matter. We -- but he's  
11 obviously at [REDACTED] so we talk about a number of  
12 issues but not this case since he's an expert on  
13 this case and I'm an expert so we want to -- not  
14 discussing the case.

15 Q. Well, how about [REDACTED] is he also  
16 retained through [REDACTED]

17 A. I don't think so.

18 Q. So there's no connection between  
19 [REDACTED] and [REDACTED]

20 MS. GUERRIER: Objection to form.

21 A. I -- he's -- he may -- I don't -- I'm not  
22 sure how he's actually paid, if the SEC pays him  
23 through [REDACTED] or if they pay him directly. I'm  
24 honestly not sure. I don't -- he's not an  
25 employee --

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: We don't want you to  
3 speculate.

4 A. He's not an employee of [REDACTED] He's  
5 not.

6 Q. So you're saying it's possible that  
7 [REDACTED] is being compensated for his expert  
8 report and testimony through [REDACTED]

9 MS. GUERRIER: Objection.

10 And don't speculate.

11 A. I don't know.

12 Q. Back to [REDACTED]. Do you get any  
13 portion of the compensation that [REDACTED] gets as  
14 part of his testimony in this case?

15 A. I'm not sure.

16 Q. Do you know how the compensation is split  
17 between [REDACTED] and [REDACTED]

18 A. We don't have a precise arrangement on  
19 deposition testimony.

20 Q. Well, the -- is [REDACTED] being paid by  
21 the hour like you are?

22 MS. GUERRIER: Objection to form.

23 A. I'm not sure how he's -- ultimately  
24 that -- his compensation will be determined by [REDACTED]  
25 [REDACTED], and they haven't worked through that

1 [REDACTED] - 2/15/2022

2 yet.

3 Q. They haven't worked through his -- his  
4 compensation yet?

5 A. Not -- I don't -- I don't know exactly --  
6 compensation is -- yeah, we worked through his  
7 compensation for last year, but not for his  
8 compensation for the next year.

9 Q. So his expert -- the payments for his  
10 expert testimony are going to [REDACTED] Is that what  
11 you're saying?

12 MS. GUERRIER: Objection to form.

13 Go ahead.

14 A. Yes.

15 Q. And then [REDACTED] will decide how much to  
16 pay to [REDACTED]?

17 MS. GUERRIER: Objection to form.

18 A. I don't -- I don't think that's an  
19 accurate characterization saying [REDACTED] will  
20 decide. I mean, that's -- they pay people fairly  
21 for their -- for their work so...

22 Q. Well, you're the [REDACTED] of [REDACTED] Right?

23 A. Yes.

24 Q. And, ultimately, compensation decisions  
25 are made by you. Correct?



1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 A. That's -- it's not a -- I don't make all  
4 of the decisions like a dictator.

5 Q. Okay. So how do you make compensation  
6 decisions at [REDACTED]

7 A. We sit down collaboratively with the  
8 managers, and we discuss these issues, what people  
9 think they're -- they're worth and -- and what --  
10 what -- you know, kind of like the law firms would  
11 do, I guess, in terms of you guys sit down and talk  
12 about things and -- and have iterated discussions  
13 what market salaries are and so on.

14 Q. And who makes the final decision?

15 A. [REDACTED] [REDACTED] and myself.

16 Q. Okay. And so you are one of the two  
17 people who make the final decision on compensation?

18 A. That's correct.

19 Q. And so with regard to [REDACTED]  
20 compensation, at the end of the year, in 2022, you  
21 and Mr. [REDACTED] will decide what he's compensated?

22 A. I guess.

23 Q. And the payments that are being made by  
24 the SEC with regard to [REDACTED] report and  
25 testimony are paid to [REDACTED] directly?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 Go ahead.

4 A. That's correct.

5 Q. Okay. You mentioned that you're being  
6 paid [REDACTED] an hour for your work for the SEC on this  
7 case. Has [REDACTED] done other work for the SEC?

8 A. Yes, it has.

9 Q. Tell me about that work.

10 MS. GUERRIER: Objection.

11 And I'm going to instruct you not to  
12 disclose any communications with attorneys.

13 A. Yeah, ultimately --

14 MR. CERESNEY: Wait. Hold on, hold  
15 on.

16 What's your instruction?

17 MS. GUERRIER: We can read it back  
18 for you.

19 MR. CERESNEY: You said not to  
20 disclose any communications with the attorneys?

21 MS. GUERRIER: Yes.

22 Q. Okay. I'm asking you about the nature of  
23 the work you do with the SEC. I don't -- I'm not  
24 asking about specific discussions. So tell me the  
25 nature of the work you do for the SEC.

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: And I'm going to renew  
3 my discussion not to discuss any discussions with  
4 the SEC. Go ahead.

5 THE WITNESS: Sure.

6 MR. CERESNEY: Wait. Hold on, hold  
7 on.

8 MS. GUERRIER: Uh-huh.

9 MR. CERESNEY: No communications with  
10 the SEC at all, or with attorneys at the SEC?

11 MS. GUERRIER: Well, clearly,  
12 attorneys at the SEC. Okay?

13 MR. CERESNEY: Okay.

14 (Discussion off the written record.)

15 Q. You can go.

16 A. I can go? Oh, can -- I'm sorry. Can you  
17 repeat the question?

18 Q. I asked you what the nature of your work  
19 with the SEC is.

20 MS. GUERRIER: And I'm going to  
21 instruct you not to disclose any communications that  
22 you had with SEC lawyers.

23 Q. Okay.

24 A. So most of the work I do -- most of the  
25 work that [REDACTED] does at the SEC is to -- is

1 [REDACTED] - 2/15/2022

2 governed by nondisclosure agreements, but I can say  
3 just generally that [REDACTED] consults on matters  
4 related to complex financial instruments and -- and  
5 does work for the SEC in terms of helping them  
6 understand -- helping them understand these  
7 securities and potential investigations.

8 Q. Okay. Let me just understand the -- when  
9 you say [REDACTED] does this work, do you personally do  
10 some of that work?

11 A. Yes.

12 Q. So you personally do other work for the  
13 SEC?

14 A. Yes.

15 Q. And you said that some of that work is  
16 governed by NDAs, nondisclosure agreements?

17 A. Well, most of it's governed by NDAs.

18 Q. And --

19 A. Well, probably all of it, I guess.

20 Q. And so you're saying basically today that  
21 you're testifying as an expert for the SEC on this  
22 matter, and yet you're refusing to disclose the  
23 nature of what your other work for the SEC is. Is  
24 that what I'm hearing?

25 MS. GUERRIER: Objection.

1 [REDACTED] - 2/15/2022

2 MR. CERESNEY: And is that the SEC's  
3 position?

4 MS. GUERRIER: I'm not sure what --  
5 I'm not on -- this is who you're deposing, not me.  
6 I stated my objection that I'm going --

7 Q. Okay. Tell us --

8 MS. GUERRIER: I instructed him not  
9 to disclose attorney communications.

10 Q. Okay. So tell us about all the work that  
11 you're doing for the SEC.

12 A. Obviously, I can't --

13 MS. GUERRIER: Hold on. Again, I'm  
14 going to object and -- first of all, to form, and  
15 then I'm also instructing you not to disclose  
16 attorney communications with the SEC. Okay?

17 THE WITNESS: Sure.

18 A. Well, obviously, anything governed by an  
19 NDA, I can't discuss that. I don't -- I think most  
20 lawyers would understand that. I don't think you  
21 violate your NDA with clients either, so obviously I  
22 can't opine on -- I -- I can't answer specifics.

23 I can tell you that we do work for the  
24 SEC. And I told you generally what the nature of  
25 the work was.

1 [REDACTED] - 2/15/2022

2 Q. Okay. Just to be clear, I'm not  
3 testifying as an expert in a litigated case, you  
4 are, so I understand your point about NDAs, but  
5 that's -- this is a different situation. That's not  
6 for you to decide.

7 A. I don't understand how it's different.

8 MS. GUERRIER: Okay. Hold on. I'm  
9 going to object to this. All right. Just ask him  
10 the question, but trying to get (unintelligible).

11 MR. CERESNEY: Yeah.

12 Q. So you mentioned that your work for the  
13 SEC relates to understanding complex products and  
14 the financial implications of those products. I  
15 think that's what basically you said. Is that  
16 correct?

17 A. Something like that.

18 Q. Okay. How much have you billed over the  
19 last five years to the SEC for those matters?

20 MS. GUERRIER: Objection to form.

21 A. I'm honestly not sure.

22 Q. Can you give me a sense? Is it millions  
23 of dollars?

24 MS. GUERRIER: Objection to form.

25 Go ahead and answer.

1 [REDACTED] - 2/15/2022

2 [REDACTED]

3 [REDACTED]

4 Q. Okay. [REDACTED]

5 A. [REDACTED]

6 [REDACTED]

7 Q. [REDACTED] [REDACTED]

8 A. I don't know.

9 Q. So would you estimate it's between [REDACTED]

10 [REDACTED]

11 A. I'm not sure of the exact amount. I  
12 would -- I know it's more than 5 million.

13 Q. And what percentage -- what's [REDACTED]  
14 annual revenue?

15 A. I'm not sure exactly.

16 Q. Can you give me a ballpark?

17 A. Somewhere around -- somewhere around [REDACTED]

18 [REDACTED]

19 Q. A year or --

20 A. A year.

21 Q. [REDACTED] a year for how many years has  
22 that been the case?

23 A. I don't know. It varies from year to  
24 year. I know last year. It was around 5 million  
25 last year.

1 [REDACTED] - 2/15/2022

2 Q. Okay. How about the year before? Do you  
3 have a recollection, maybe?

4 A. Probably close or slightly lower. It was  
5 slightly lower than that.

6 Q. Okay. And in those two years, what  
7 percentage of that [REDACTED]-each-year revenue was  
8 from the SEC?

9 A. I haven't calculated that. I don't know  
10 exactly.

11 Q. Do you have a sense for that?

12 A. I would say it's -- it's -- I would say  
13 it's greater than [REDACTED]

14 Q. Okay. So more than 50 percent of the  
15 annual revenue of [REDACTED] for the past two years is  
16 from the SEC?

17 A. Yeah.

18 Q. Would that also be the case three years  
19 ago?

20 A. I'm not sure about three years ago.

21 Q. Okay. And would it also be more than  
22 [REDACTED], or is it between [REDACTED] for  
23 the last two years?

24 A. I'm honestly not sure whether it's --  
25 whether it's more than [REDACTED] or not, no.



1 [REDACTED] - 2/15/2022

2 Q. Okay. And what were --

3 A. I also -- I also should say, in matters  
4 related to that, that we also get invitations to  
5 work on a lot of things that we decline to work on,  
6 and -- because we want to work on matters where we  
7 can -- we want to work on matters that -- that --  
8 that -- and clients that appreciate the fact that  
9 we're going to tell the truth and are okay with that  
10 understanding at the beginning of our engagement.  
11 So we -- I -- I probably turn down -- I turn down  
12 quite a few engagements every year.

13 Q. And that's because those engagements, the  
14 people who are trying to retain you don't want you  
15 to tell the truth?

16 MS. GUERRIER: Objection.

17 A. I would say -- or -- or I don't believe  
18 in the matter, I don't believe that I could opine on  
19 the matter accurately that -- or take the position  
20 that they might want to take, I wouldn't feel  
21 comfortable taking that position, or don't want  
22 [REDACTED] -- people at [REDACTED] opining on something  
23 that we don't believe is the truth. So we turn down  
24 quite a few engagements.

25 Q. Okay. Back to your revenue for the last

1 [REDACTED] - 2/15/2022

2 two years. Now, you said the SEC was [REDACTED]  
3 [REDACTED] of that revenue. What are the other  
4 sources of that revenue in terms of other entities?

5 A. Sure. We work for plaintiff firms. We  
6 also work for the Department of Justice. We also  
7 work for defense -- defense firms. And the other --  
8 other government agencies.

9 Q. Okay. I want to focus on DOJ and other  
10 government agencies. You said the SEC was a little  
11 bit [REDACTED] of your  
12 revenue. What percentage of your revenue was from  
13 DOJ or other government agencies?

14 MS. GUERRIER: Objection. Do you  
15 want to give him a time frame?

16 Q. For the past two years.

17 A. I'm not -- I'm not sure exactly for each  
18 client we can go through this, but I'm not sure how  
19 much is from the -- from the DOJ. I would say maybe

20 [REDACTED]

21 Q. Okay. And then how about other  
22 government agencies?

23 A. Yeah. It may be [REDACTED] for  
24 the DOJ. So it may be [REDACTED] for the  
25 DOJ. I'm not -- so -- yeah -- and some of the

1 [REDACTED] - 2/15/2022

2 agencies we work for, I'm not allowed to disclose  
3 the nature of the engagement.

4 Q. Okay. So, again, DOJ, so [REDACTED]  
5 [REDACTED] it sounds like, and then other government  
6 agencies. Between the SEC, DOJ, and other  
7 government agencies, what percentage of your revenue  
8 in the past two years, let's just start with that,  
9 were from those entities?

10 A. Yeah. If you're going to say like SEC, I  
11 would say approximately -- approximately more than  
12 70 percent.

13 Q. Okay.

14 A. Approximately [REDACTED] or maybe --  
15 maybe more.

16 Q. [REDACTED]

17 A. Yeah.

18 Q. And has that been the case for the last  
19 five years?

20 A. No. It hasn't been the case the last  
21 five years. It kind of fluctuates from year to  
22 year.

23 Q. Has it ever gone [REDACTED] I  
24 mean, when I say "ever," in the last five years has  
25 it gone [REDACTED] in terms of revenue that

1 [REDACTED] - 2/15/2022

2 you got from government agencies, including DOJ and  
3 SEC?

4 A. Yeah. If you go back at least -- looking  
5 back -- looking back over the last six years at  
6 least I know that it [REDACTED] from  
7 government agencies in some years.

8 Q. So that would be in Year 6?

9 A. I don't know exactly if it was in Year 6  
10 or 7, but I'm saying if you look back at the history  
11 of [REDACTED] I can't remember. All the years are  
12 running together as I get the gray hair, but I can  
13 tell you that there are some years -- yes, there is  
14 private clients have been the majority on some  
15 years.

16 Q. And what -- by the way, have you ever  
17 been turned down for an SEC engagement?

18 A. Yes.

19 Q. How many times did that happen?

20 A. I don't know.

21 Q. Is that -- was that your decision not to  
22 take it on or was it the SEC's decision?

23 A. I'm not sure. I'm not sure in those  
24 cases. I have been turned down a number of times.

25 Q. And I guess my question is you said

1 [REDACTED] - 2/15/2022

2 earlier that you don't take engagements where you  
3 don't believe in the opinions that you are giving in  
4 those engagements.

5 Have there been times when the SEC has  
6 asked you to be an expert and you've refused because  
7 you don't believe in the opinions that they're  
8 asserting?

9 MS. GUERRIER: Objection to form.

10 And I instruct you not to disclose  
11 the terms -- communications that you had with the  
12 SEC.

13 Go ahead and answer.

14 Q. That's a "yes" or "no" question.

15 A. I'm not -- I'm not sure.

16 Q. Okay. How many hours -- actually, what's  
17 your overall compensation from [REDACTED] over the last  
18 two years?

19 A. Over the last two years?

20 Q. Yeah.

21 A. I would say somewhere -- well, I'm not  
22 sure how to answer this because I'm paid directly  
23 from [REDACTED] as -- as an owner, but there is -- I'm  
24 paid directly from [REDACTED] as like a salary, and  
25 then I get a 1099 worker, and then obviously I'm

1 [REDACTED] - 2/15/2022

2 also a residual claimant, so my salary directly from  
3 [REDACTED] -- directly from [REDACTED] is somewhere in the  
4 nature of probably [REDACTED] -- probably around [REDACTED] a  
5 year.

6 Q. Okay. And then how about your residuals  
7 for the last two years?

8 A. That depends on the -- that depends on  
9 how -- you know, how much everybody else is -- that  
10 depends on what's left over and so forth, and it's  
11 often complex how that's paid out. I would say I'm  
12 a residual claimant.

13 Q. Okay. But have you gotten a distribution  
14 from [REDACTED] for the last two years?

15 A. It's -- not -- not directly. So I  
16 don't -- I don't -- I don't want to go into my  
17 personal [REDACTED] I feel like this is like  
18 intrude -- if you want to ask me am I the -- am I  
19 paid from the SEC if I'm paid, yeah, I'm a residual  
20 claimant of [REDACTED] but I don't -- I don't want to  
21 answer -- go into all the details about my personal  
22 [REDACTED]

23 Q. I appreciate you don't want to. You're  
24 testifying today as an expert witness in this case.  
25 I am entitled to ask you about your compensation

1 [REDACTED] - 2/15/2022

2 from the entity that you are working as an expert  
3 for the SEC on.

4 A. Sure. I'm happy to answer questions  
5 about the compensation from --

6 Q. Distributions includes compensation. And  
7 so my question is will you tell us what the  
8 distributions you've obtained from [REDACTED] have been  
9 over the last two years?

10 A. Probably -- probably on the nature of [REDACTED]  
11 [REDACTED].

12 Q. And that's total over the last two years?

13 A. Over the last two years, yeah.

14 Q. And just expanding it to five years,  
15 what's the total over the five-year period?

16 A. I'm not sure. There was -- the year  
17 before that, in Year 3, was close to breakeven.

18 Q. Okay.

19 A. It was close to a breakeven year, so  
20 there wasn't much in terms of distributions. But I  
21 think -- I would say, you know, rough -- the year --  
22 the two years before that may have been around -- so  
23 maybe another -- add another [REDACTED] to that  
24 maybe.

25 Q. Okay. Is it fair to say, just from your

1 [REDACTED] - 2/15/2022

2 testimony so far, that your work for government  
3 entities has increased over the last five years?

4 A. I'd say that's generally the case.

5 Q. Okay. And you're a professor at the  
6 [REDACTED] Right?

7 A. That's correct.

8 Q. You get a salary from the [REDACTED]  
9 [REDACTED] Right?

10 A. Yes.

11 Q. How much is your annual salary there?

12 A. I don't know exactly, but it's somewhere  
13 around -- north of [REDACTED]

14 Q. Fair to say your income from [REDACTED] is  
15 much higher than your salary as a --

16 A. That's --

17 Q. -- professor?

18 A. -- correct.

19 Q. And how many hours a week would you say  
20 that you devote to [REDACTED] matters?

21 A. It varies at different times of the year,  
22 but sometimes it's one day a week and at certain  
23 seasons it can be two days a week.

24 Q. Okay. Does [REDACTED] have government  
25 contracts?



1 [REDACTED] - 2/15/2022

2 A. Yes.

3 Q. Do you know the total amount of those  
4 government contracts from May 2017 forward? So the  
5 last four years, say.

6 A. No, but one could look them up.

7 Q. I have actually.

8 A. Okay.

9 Q. And it amounts to almost [REDACTED]

10 Does that sound about right?

11 A. That's probably right.

12 Q. And those would be contracts for various  
13 government agencies. Correct?

14 A. That's correct.

15 Q. That includes the SEC. Correct?

16 A. That's correct.

17 Q. Do you know how much of that [REDACTED]

18 is the SEC?

19 A. I do not. I imagine one could look it  
20 up.

21 Q. One could.

22 Okay. By the way, in your prior work for  
23 the SEC have you worked with any of the same  
24 attorneys that are on this case?

25 A. I don't think so. I may have worked --

1 [REDACTED] - 2/15/2022

2 I'm not sure if I worked with Daphna before.

3 Q. Okay. Have you provided services to a  
4 client prior to this in connection with digital  
5 assets, prior to this case?

6 A. With -- with digital assets?

7 Q. Digital assets, yes.

8 A. Is the question have I worked on it or  
9 provided testimony?

10 Q. Well, let's start with testimony. Have  
11 you provided testimony in any matters relating to  
12 the --

13 (Simultaneous speaking.)

14 A. No. The testimony has only --

15 Q. Have you testified on behalf of a  
16 client -- let me ask you -- strike that question.

17 Have you provided expert services in  
18 connection to any clients relating to digital assets  
19 in the past?

20 A. Yes.

21 Q. Which -- how many instances? How many  
22 matters?

23 A. I'm not sure exactly. I would say maybe  
24 at least 12 or 13.

25 Q. And have those all been SEC matters or

1 [REDACTED] - 2/15/2022

2 other clients?

3 A. Other clients as well.

4 Q. Okay. And what generally have those  
5 matters related to in connection with digital  
6 assets?

7 MS. GUERRIER: I'm going to object to  
8 form and also with regards to any matters concerning  
9 the SEC, not to disclose any communications with  
10 counsel.

11 A. Can you repeat the question?

12 Q. What have those matters generally related  
13 to?

14 MS. GUERRIER: And I'll renew my  
15 objection.

16 Go ahead.

17 A. Those matters have related to digital  
18 assets.

19 Q. What about digital assets? That's a  
20 pretty broad category. Can you give me a sense for  
21 what other than digital assets -- what relating to  
22 digital assets they relate to?

23 A. Yeah. Some issues related to Ponzi  
24 schemes, for instance, with digital assets. That's  
25 actually a big one, Ponzi schemes. Or in one case

1 [REDACTED] - 2/15/2022

2 there was a matter that [REDACTED] worked on where it  
3 was a -- an exchange was accused --

4 MS. GUERRIER: May I interrupt?  
5 Instructed you not to disclose any communications  
6 with SEC counsel.

7 THE WITNESS: Yeah.

8 MS. GUERRIER: Also anything that's  
9 subject to an NDA.

10 THE WITNESS: Okay.

11 A. So I was being -- you know, I'm trying to  
12 be vague so I'm not violating any NDAs.

13 But I -- yeah, I think we -- we worked on  
14 matters related to digital assets, Ponzi schemes,  
15 exchange -- exchanges, solvency of exchanges.

16 Q. Okay.

17 A. And -- yeah, in terms of -- in terms  
18 of -- yeah, solvency of -- it's solvency of  
19 exchanges and -- and also accusations of -- of  
20 impropriety of -- of exchanges.

21 Q. Of exchanges?

22 A. (Nods.)

23 Q. Okay. Have any of those prior matters  
24 involved trading of digital assets?

25 A. Yes.

1 [REDACTED] - 2/15/2022

2 Q. Okay. Have -- by the way, in this case,  
3 is it fair to say that there was no allegation of  
4 fraud or misrepresentation against Ripple or the  
5 defendants in this case?

6 MS. GUERRIER: Objection to form.

7 But go ahead and answer.

8 A. That's my understanding, securities case,  
9 yeah.

10 Q. In fact, the allegation in this case  
11 is -- is the sale of investment contracts in  
12 violation of Section 5 of the Securities Act. Is  
13 that your understanding?

14 A. That's my understanding.

15 Q. Have you ever given testimony in  
16 connection with any matter relating to alleged  
17 violations of Section 5 of the Securities Act?

18 A. No, I haven't given testimony.

19 Q. Have you ever served as an expert on a  
20 matter relating to alleged violations of Section 5  
21 of the Securities Act?

22 A. Yes.

23 Q. Which matter was that?

24 MS. GUERRIER: Again, I'm going to  
25 instruct you that if it's a matter that's subject to

1 [REDACTED] - 2/15/2022

2 NDA with caution.

3 A. Yeah. I can't -- I can't discuss matters  
4 that are subject to an NDA which -- which I can't  
5 name entities that were subject to NDAs.

6 Q. Okay. So you're saying there are  
7 potential SEC matters where -- which fall into that  
8 category. Is that what you're saying?

9 MS. GUERRIER: Objection to form.

10 THE WITNESS: Can I answer?

11 MS. GUERRIER: Yes.

12 A. Yes. Potential SEC matters.

13 Q. Other than the SEC matters which you  
14 claim are subject to an NDA and which I assume the  
15 SEC -- let me just sort of clarify it for the  
16 record. I take it the SEC has taken the position  
17 that it cannot talk about those cases.

18 MR. CERESNEY: Is that the SEC's  
19 position?

20 MS. GUERRIER: I've instructed  
21 [REDACTED]. I cautioned him not to discuss  
22 matters that are subject to an NDA and so that's the  
23 position that we're taking.

24 MR. CERESNEY: Okay. I just want to  
25 clarify.

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Okay.

3 MR. CERESNEY: I can ask him ten more  
4 questions, but my point is you're going to instruct  
5 him not to answer any question about any matter that  
6 the SEC has an NDA with him about.

7 MS. GUERRIER: I -- correct.

8 MR. CERESNEY: Even if those matters  
9 are related to Section 5 violations.

10 MS. GUERRIER: If there is an NDA  
11 involved, I'm not going to instruct him to violate  
12 the NDA.

13 MR. CERESNEY: Okay.

14 MS. GUERRIER: Okay.

15 MR. CERESNEY: Fair enough.

16 Q. Other than those matters which the SEC  
17 has just discussed, are there any other matters that  
18 you've been retained as an expert in connection with  
19 potential violations of Section 5?

20 A. I don't believe so.

21 Q. Now, [REDACTED] -- by the way,  
22 have you -- when did you first become involved in  
23 research or other activities relating to blockchain  
24 technologies?

25 A. In 2017.

1 [REDACTED] - 2/15/2022

2 Q. And how did that -- how did you get  
3 involved in that?

4 A. I just became interested in the space.  
5 It was a space that is growing rapidly. There was a  
6 lot of hype around the space. [REDACTED] was surging.  
7 There was interesting questions regarding it. I  
8 like to -- I like to research new things.

9 Q. And when did you first become aware of  
10 XRP?

11 A. I'm not sure exactly when. It would  
12 probably have been in -- sometime when I was  
13 performing my research in 200- -- in -- it probably  
14 would have been sometime in 2017 or '18.

15 Q. Okay. And when you say performing your  
16 research, I take it when you first got involved with  
17 blockchain technology, you did research on  
18 blockchain technology. Is that fair?

19 A. I wrote the paper on -- on [REDACTED]

20 [REDACTED] [REDACTED] [REDACTED]

21 Q. Okay. Is that the paper called -- "Is

22 [REDACTED]

23 A. That's correct.

24 Q. Other than that paper that you wrote --  
25 and what year did you write that paper?



1 [REDACTED] - 2/15/2022

2 A. I wrote the paper in 2018, I believe, was  
3 when the first draft came out, but it -- it went  
4 through a revision process and we revised it several  
5 times. It was published in 2020.

6 Q. Okay. Other than that one article [REDACTED]  
7 [REDACTED] have you published any other  
8 articles about digital assets?

9 A. I've worked on things, but I haven't  
10 published anything.

11 Q. Do you have works in progress, you're  
12 saying?

13 A. I released a -- I released a paper on  
14 [REDACTED] a -- I released a [REDACTED] on [REDACTED]

15 Q. Did you list that in your CV?

16 A. No. It's not -- it's not a published  
17 piece of work.

18 Q. What's the difference between a white  
19 paper and a published piece of work?

20 A. Well, a published piece of work is -- is  
21 one that goes through the academic process and you  
22 want to publish it in a journal. This is just  
23 something I released through [REDACTED] and posted it  
24 on the [REDACTED] website.

25 Q. Why not publish that as an academic work?

1 [REDACTED] - 2/15/2022

2 A. It was about one firm, one -- one digital  
3 asset and one -- or one digital asset or one token.  
4 So, generally, if you're publishing a paper, it  
5 needs to be about broader topics. Like, you might  
6 want to have, like, a paper about multiple digital  
7 tokens or show a pattern that's -- that's relevant  
8 to all those. So I decided it was probably not  
9 broad enough topic to kind of pursue for -- for  
10 academic -- for an academic term.

11 Q. And what -- what was the -- what was the  
12 thesis of the article about [REDACTED]

13 A. It looked at -- it looked at a [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]

18 Q. So did it -- did it look at a  
19 potential -- is that a fraudulent scheme that you're  
20 suggesting or that you were researching?

21 A. I think -- I don't know if we used the  
22 word "fraud." I don't think we used the word  
23 "fraud" in the -- in the paper, no.

24 Q. But a potential manipulation?

25 A. Potential manipulation.

1 [REDACTED] - 2/15/2022

2 Q. Okay. Other than that [REDACTED] on  
3 [REDACTED] any other publications you've had relating to  
4 digital assets?

5 A. No.

6 Q. Okay. And you've never published  
7 anything related to XRP. Is that fair?

8 A. The [REDACTED] has XRP in the paper,  
9 but it's not about XRP.

10 Q. It references XRP?

11 A. It has -- it -- XRP is one of the digital  
12 assets that's in the paper.

13 Q. But it's not the main topic of --

14 A. It's not at all the main topic. It  
15 just -- it's just in some summary and statistics.

16 Q. Okay. Now, we talked about some of the  
17 cases in which you've been retained as an expert  
18 that may relate to digital assets. Is it fair to  
19 say that you've never offered expert testimony in a  
20 case or an enforcement action involving blockchain  
21 technology other than this matter?

22 MS. GUERRIER: Objection to form.

23 You can answer.

24 A. I've worked on many issues related to  
25 digital assets. This is the only -- this is the

1 [REDACTED] - 2/15/2022

2 only case, at least at this point, that -- that I've  
3 given a deposition in.

4 Q. Okay. And looking at your CV, which I  
5 think is at Page 43 of your report, you list, in  
6 terms of research interests, cryptocurrencies first.  
7 Do you see that?

8 A. Yes.

9 Q. How long have you listed cryptocurrencies  
10 as the first research interest in your CV?

11 MS. GUERRIER: Objection to form.

12 A. I don't know exactly when, but usually, I  
13 put my new topics that I'm working on on the front  
14 of the résumé like you'll see related to that, like  
15 [REDACTED] listed next and I worked on a  
16 paper [REDACTED] before that. You'll  
17 see that I covered the conflicts of interest, I  
18 had -- a number of papers were about conflicts of  
19 interest as a general term. But, like, [REDACTED] was  
20 listed next. I had a number of papers about C- --  
21 [REDACTED] and ratings and credit ratings so I've kind of  
22 list them in terms of the new papers first, new  
23 topics first.

24 Q. Okay. Now, going back to the "[REDACTED]  
25 [REDACTED]" [REDACTED] that you referenced earlier.

1 [REDACTED] - 2/15/2022

2 Can you sort of just sum up for us what the basic  
3 thesis of that article was?

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

1 [REDACTED] - 2/15/2022

2 Q. Okay.

3 A. I'm happy to go to -- into any of those  
4 things in more detail, if you'd like.

5 Q. No. That's enough for now, but a couple  
6 of questions about it. First, it sounds like the  
7 article was [REDACTED]  
8 [REDACTED]. Is that  
9 fair?

10 A. That's correct. But we also did  
11 investigate -- we also did show that it was -- [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 Q. Okay. Do you understand that bitcoin is  
15 not a security under the U.S. securities laws?

16 MS. GUERRIER: Objection to form.

17 A. I'm not a lawyer, so I'm not -- I don't  
18 know what the U.S. security law is on bitcoin.

19 Q. Well, are you aware that the former  
20 chairman of the SEC, Jay Clayton, stated publicly  
21 that he did not believe bitcoin was a security?

22 MS. GUERRIER: Objection.

23 Go ahead.

24 A. Yeah, I -- that's probably the case,  
25 then, if he testified that.

1 [REDACTED] - 2/15/2022

2 Q. But you generally are aware of that. Is  
3 that fair?

4 MS. GUERRIER: Objection.

5 A. I'm generally aware that Clayton talked  
6 about these matters, but also he did -- he did  
7 caveat the way he talked about digital asset space  
8 and had a number of -- a number of caveats. So I  
9 would have to look carefully at his statement and  
10 see exactly what he said. I don't know if I want to  
11 be speaking off-the-cuff about what Clayton said. I  
12 did meet the guy once, but I don't -- I didn't -- I  
13 don't know him well or --

14 Q. What were the circumstances of you  
15 meeting Chair Clayton?

16 A. He gave a talk at the [REDACTED]  
17 [REDACTED] and I think I met him at that time. I was  
18 also a [REDACTED] once at the SEC, but no, I  
19 didn't -- I don't think I met him at that time.

20 Q. Did you actually speak to him when he  
21 came to visit the [REDACTED]

22 A. I didn't have an in-depth conversation  
23 with him. I think I maybe shook his hand.

24 Q. Did you have any discussion with him?

25 A. I don't think so.

1 [REDACTED] - 2/15/2022

2 Q. What was he speaking about at the  
3 [REDACTED] when you saw him?

4 A. I'm not sure.

5 Q. Was he talking about crypto?

6 A. I actually didn't go to his talk.

7 Q. Okay. All right. And just so we're  
8 clear, you didn't go to his talk?

9 A. I don't think I went to his talk, yeah.

10 Q. You didn't think it was that relevant to  
11 you?

12 MS. GUERRIER: Objection.

13 A. I'm not sure if it wasn't that relevant  
14 or I was teaching a class at the time or -- I may  
15 have been teaching that semester, in which case I --  
16 you know, I can't just cut class off.

17 Q. Fair enough.

18 I want to go back to the [REDACTED]  
19 [REDACTED] article. Did you ever revise that  
20 article after its initial publication?

21 A. Sure. Not after publication, but after  
22 the initial draft we had multiple revisions, as is  
23 standard in the review process in terms of we get  
24 comments from the referee, from audience  
25 participants. We presented the paper at numerous



1 [REDACTED] - 2/15/2022

2 places. We incorporated all of that feedback into  
3 the paper and revised the paper --

4 Q. And --

5 A. -- over time.

6 Q. And can you just summarize briefly what  
7 the nature of the changes you made were?

8 A. Sure. I think we did a number of  
9 [REDACTED]. I think that would be the best  
10 way to describe. We did a litany of [REDACTED]

11 [REDACTED]

12 But -- and we also looked at whether the  
13 paper -- some more precise -- [REDACTED]  
14 [REDACTED].

15 We also did drill down and found that  
16 rather than -- we found one particular account  
17 address. So we were able to -- [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

1 [REDACTED] - 2/15/2022

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 Q. Okay. Have you ever had any of your  
13 articles withdrawn from publication?

14 A. Yes.

15 Q. Tell me about that.

16 A. Well, it was a -- how much detail would  
17 you like? I could tell you at a high level, or I  
18 can give it to you --

19 Q. How about the high-level version? Let's  
20 start there.

21 A. I had a paper that -- I had a paper that  
22 was forthcoming at the [REDACTED] I will  
23 point out the paper to you. The -- yeah, the paper,  
24 [REDACTED]  
25 this paper, as you can see, won the -- at that point

1 [REDACTED] - 2/15/2022

2 had won a -- a [REDACTED] at an  
3 academic conference. It was presented at a lot of  
4 conferences. And the [REDACTED] accepted  
5 the paper rather -- rather quickly through one  
6 round.

7           There was also another paper at the time  
8 [REDACTED] that  
9 found similar findings, and both of our papers were  
10 under review at the [REDACTED]. They put  
11 our paper forward.

12           And our paper was -- our -- at the time,  
13 the disclosure policies at the journals were  
14 changing. I disclosed to the journal that I was  
15 engaged in consulting and litigation against --  
16 against banks, a -- consulting and litigation  
17 against banks, and I disclosed that to the journal.

18           I also wrote to the journal editor on  
19 the -- on the second round noting that I had -- I  
20 had gone into consulting on these issues, that --  
21 and I had pointed him to the disclaimer in the  
22 paper.

23           So I -- when the journal editor came to  
24 the [REDACTED] I also said, "I want" --  
25 and the paper was accepted at the journal, I said --

1 [REDACTED] - 2/15/2022

2 I also told him, "I wanted to draw your attention to  
3 the fact" -- and in my letter to the journal, I  
4 said, "if you need more information on these issues,  
5 please let me know." But the journal editor came to  
6 the [REDACTED].

7 I also personally met with him, and he  
8 said, "that was a wonderful paper, it was a fabulous  
9 paper," so forth. And I said, "Well, I wanted to  
10 let you know I'm consulting on these issues, and I  
11 don't know what exactly the -- you know, I want  
12 to -- I want you to be aware of that in case anybody  
13 comes to you and asks you about my consulting."

14 And he's like, "Fine, yeah. People  
15 consult all the time. We understand that."

16 Well -- and I had disclosed that we were  
17 involved in litigation. What had happened is that  
18 we filed [REDACTED] lawsuits against most of the major  
19 banks around the country regarding [REDACTED]

20 I went to the [REDACTED] I had -- I  
21 had gone to -- I had gone to [REDACTED]  
22 [REDACTED] independently, first of all,  
23 contacted them and said, "I believe you were  
24 defrauded. We don't see lawsuits."

25 And members of my team had reached out to

1 [REDACTED] - 2/15/2022

2 most of the major -- a lot of the major [REDACTED]  
3 [REDACTED] that we thought had losses and had not pursued  
4 their losses, at least according to public --  
5 according to public filings.

6 I think the [REDACTED] were, in some  
7 cases, apt not to do anything, maybe because they  
8 that had relationships with the banks, or maybe it  
9 made the managers look bad that they had taken  
10 losses. In fact, in some cases, I met with -- it's  
11 subject to NDAs, but I got to -- so I won't name  
12 names, but I met with [REDACTED] managers that  
13 basically indicated they were apt to filing any  
14 lawsuits.

15 So the -- so the nature of -- we had  
16 filed [REDACTED] lawsuits on behalf of -- so in  
17 combination with my friend, [REDACTED]  
18 [REDACTED], a firm that's here in town. We were  
19 friends before this. We were friends from our  
20 church before this.

21 We filed [REDACTED] lawsuits on behalf of  
22 [REDACTED] of various states using certain  
23 jurisdictions. Most of the jurisdictions were time  
24 barred because of -- but there were certain  
25 jurisdictions where there was either a long clock or

1 [REDACTED] - 2/15/2022

2 there was some novel laws in terms of the time bar  
3 length, and we filed [REDACTED] lawsuits at numerous  
4 places all around the country.

5 So one of those firms hired a consulting  
6 house when [REDACTED] was forthcoming, and they went  
7 to the [REDACTED] and they said, "Oh,  
8 [REDACTED] done this and that." The [REDACTED]  
9 [REDACTED] said, "We don't see anything wrong with what  
10 he's done. He's been upfront with everything."

11 They went to the journal -- they went to  
12 the [REDACTED]  
13 said -- asked me why I did not fill out a disclosure  
14 form. And they sent me a long disclosure form, and  
15 they said, "Members of the MBR, finish -- fill out  
16 this disclosure form, and members of the -- and AER  
17 submissions, fill out the disclosure form."

18 And I said, "Well, I'm not a member of  
19 the MBR. I didn't present -- I didn't send the  
20 paper to the AER. I looked on the [REDACTED]  
21 [REDACTED] website. I looked what the standards are.  
22 I disclosed in a footnote of the paper, which is  
23 what I see other papers doing in the journal."

24 They reviewed the communication, and they  
25 asked me what all -- my relationship, what the

1 [REDACTED] - 2/15/2022

2 lawsuits were and so forth. They sent the paper out  
3 to the referees. They said, "Well, we will  
4 re-review the paper." And they sent the paper out  
5 to the referees. One of the referees didn't like  
6 the paper to start with, so the referee said, "Yes,  
7 we should reject this paper."

8           So they sent me a message back saying,  
9 "We re-reviewed the paper, and we've decided to --  
10 we've decided to rescind -- you're not -- you're  
11 not -- you didn't do anything -- we're not saying  
12 you did anything wrong, but we have re-reviewed the  
13 paper, and we've decided not to publish the paper at  
14 this point."

15           So I -- by the way, this is the first  
16 time I'm telling this on --

17           THE WITNESS: Sounds like somebody's  
18 hand is raised.

19           MR. CERESNEY: No, that's fine.

20       A.     By the way, this is the first time I'm  
21 telling this on -- in any kind of public forum,  
22 because I have decided not to, but I'm not governed  
23 by any NDA. I've just decided not to make an issue  
24 of it with the journal editors. But I do feel like  
25 I was wronged.

1 [REDACTED] - 2/15/2022

2 So I -- at that point, I wrote the -- I  
3 wrote the journal back. I said, "I think this  
4 process is completely unfair. Here is the standard,  
5 which there is no disclosure form. There was no  
6 disclosure form on your website. There was nothing  
7 for me to fill out."

8 I told -- I told him in private  
9 communication, "Here is the letter that I wrote to  
10 the editor, here is what -- I told you I was engaged  
11 in consulting and litigation." And they said,  
12 "Well, we believe you should have known this" -- and  
13 I said, "Ask me more if you want more -- more  
14 careful -- more information."

15 So at that -- I also pointed out that I  
16 went through the previous like five years. I had a  
17 research assistant go through the previous five  
18 years of journal publications. And in the -- all of  
19 those publications I -- I found something like 21  
20 instances where professors have footnoted their  
21 consulting activity. Very rare, even though I knew  
22 some of those professors were engaged in consulting.

23 And I said my disclosure statement was at  
24 least as complete as every single professor that had  
25 disclosed consulting activities. But I think



1 [REDACTED] - 2/15/2022

2 because there is a lawsuit and they didn't want to  
3 be maybe in the middle of it, I don't know what the  
4 reasoning was, they said, "well, we're not saying  
5 you did anything wrong, we're not offering you  
6 for -- we're not going to pursue any like censoring  
7 of you in the profession or anything, but we are --  
8 the referee has reconsidered your paper and your  
9 paper is no longer forthcoming in the [REDACTED]

10 [REDACTED]

11 Yeah, I'd like to finish my story.

12 Q. This was the high-level version?

13 A. Well, it's an important question about my  
14 character.

15 So at that point I took the -- I mean, I  
16 take accusations of my character seriously, so I did  
17 take this quite seriously. At that point I took the  
18 paper to -- I took the paper and my communications.

19 I turned them over to the [REDACTED]

20 [REDACTED]

21 Q. And just to be clear, the [REDACTED]

22 [REDACTED] is the [REDACTED] in the field?

23 A. It's generally considered to be the [REDACTED]

24 [REDACTED]

25 Q. Okay.

1 [REDACTED] - 2/15/2022

2 A. And I took it to the [REDACTED]  
3 [REDACTED] I said this is -- oh, and by the way, at  
4 the other time I had a second paper, the one that's  
5 listed on there, is [REDACTED]

6 [REDACTED]  
7 At the same time they offered me a revise  
8 and resubmit at the [REDACTED] on that  
9 paper. They said, "well, we'll let you go forward  
10 through the review process, revise and resubmit on  
11 this paper. You can publish that one, but we're  
12 going to pull this one from the journal."

13 So I took my communications to the [REDACTED]  
14 [REDACTED]. They took the team of all  
15 their editors. I also talked ad nauseam with at  
16 least five former editors of the field. They all  
17 believe that I had done nothing wrong in terms of  
18 the disclosure standards. They took the paper to  
19 the [REDACTED]. Their editorial  
20 team met. They reviewed all my correspondence.  
21 They then reviewed the paper themselves and they  
22 said -- they came back and said, "I'll tell you what  
23 we'll do, we will publish the paper, but we want to  
24 public both your papers. Will you pull the other  
25 paper that's revised and resubmit from the -- from

1 [REDACTED] - 2/15/2022

2 the dubious [REDACTED] and we can handle  
3 both papers. Would you allow us to handle both  
4 papers?"

5 And so I did. I told the [REDACTED]  
6 [REDACTED] I was not going to proceed with the revise  
7 and resubmit, and I sent both papers to the [REDACTED].  
8 They went through the review process and they were  
9 quickly published. And as you can see, the [REDACTED]  
10 gives a best paper prize every year, and they gave  
11 my co-author and I, [REDACTED], who was a more  
12 junior colleague not involved in the lawsuits, had  
13 to go through all this, but they gave both of us the  
14 [REDACTED]  
15 [REDACTED].

16 Q. Okay.

17 A. So that's what happened. I'm happy to  
18 answer more questions about it.

19 Q. That's plenty. A couple of other  
20 questions and then we'll take a break.

21 Your CV lists presentations you've given.  
22 Right? I think it lists 36 presentations. Does  
23 that sound about right?

24 A. I'm sure I've given more than that  
25 probably. That's probably not a complete list of

1 [REDACTED] - 2/15/2022

2 all the presentations I've given.

3 Q. Okay. But those are the -- I counted 36  
4 presentations, does that sound about right, as to  
5 what's on your CV?

6 A. It may be what's on my CV. I imagine  
7 I've given a lot more than 36 presentations. I  
8 don't necessarily write down -- I sometimes forget  
9 to write down all the places I present.

10 Q. Okay. So your CV, you're saying, is not  
11 complete?

12 A. In terms of the publications I believe it  
13 is, but in terms of the -- in terms of like  
14 presenting, if I presented -- you know, sometimes  
15 what constitutes a presentation is -- is like a  
16 formal presentation, like sometimes people ask me,  
17 "hey, would you present on Zoom about your paper,  
18 would you give us some thoughts about your paper,"  
19 and I sit down with four people from the Fed or the  
20 OCC, and they want to know about [REDACTED]. I don't  
21 consider that a presentation. It's not like a --

22 Q. Okay. But you list all of you -- what  
23 you consider presentations?

24 A. I may have forgotten some is what I'm  
25 saying.

1 [REDACTED] - 2/15/2022

2 Q. Okay. All right. Of the 36  
3 presentations you list there, only one of those  
4 relates to cryptocurrency. Is that fair?

5 MS. GUERRIER: Objection to form.

6 Go ahead.

7 A. I think that's probably incorrect then  
8 because I have presented -- I've presented on  
9 cryptocurrencies. I can recall -- where does it  
10 say where I presented on cryptocurrencies?

11 Q. If you look at your presentations, they  
12 start on Page 47 and then they go through the next  
13 four pages, and I count only a single  
14 presentation --

15 A. Well, if you look at [REDACTED] -- [REDACTED]

16 [REDACTED]

17 Q. That's right.

18 A. That paper.

19 Q. That's one.

20 A. I presented it at [REDACTED]

21 [REDACTED]

22 Q. No, no, no.

23 A. I presented it at --

24 Q. I'm asking topics. Okay? I'm not asking  
25 number of presentations about the same paper.

1 [REDACTED] - 2/15/2022

2 A. Well, you already asked me if I had --

3 MS. GUERRIER: Hold on a second.

4 Could you please just ask the question again --

5 MR. CERESNEY: Yes.

6 MS. GUERRIER: -- so we can get a  
7 clear record?

8 MR. CERESNEY: Yes.

9 Q. You list a number of presentations here.

10 Right? You list topics of the presentations.

11 Correct? Fair enough?

12 A. Yes.

13 Q. Let's just start at the beginning. 2021  
14 you list [REDACTED]

15 Right? Do you see that?

16 A. Yes.

17 Q. That's one topic. Right?

18 A. (Nods.)

19 Q. Then you have a number of places where  
20 you presented on that topic. Correct?

21 A. That's correct.

22 Q. Okay. And so I count up 36 topics on  
23 which you presented. Okay?

24 And my question is, I see one of these 36  
25 topics [REDACTED] relates to

1 [REDACTED] - 2/15/2022

2 cryptocurrency. Correct?

3 A. That's correct. As we discussed earlier,  
4 my -- the "[REDACTED]" is the only academic  
5 paper I have on the space, but your earlier question  
6 was how many times have I presented, and it looks  
7 like everything listed under -- "[REDACTED]  
8 [REDACTED]" that is a presentation, so [REDACTED]  
9 [REDACTED] my  
10 co-author presented, but I was there and answered  
11 questions.

12 Q. Let me just stop you. We can read the  
13 CV, so no need to go through it.

14 A. Well, there's at least like 12  
15 presentations --

16 (Simultaneous speaking.)

17 MS. GUERRIER: Just complete the  
18 answer. Are you stating that the items under the --  
19 what exactly are you --

20 THE WITNESS: Well, I was asked how  
21 many presentation -- the original question that I  
22 was asked was how many presentations I have done.  
23 And -- on digital assets, and is it true that only  
24 one of those is -- and that's not correct. I have  
25 one with my co-author, two, three, four, five, six,

1 [REDACTED] - 2/15/2022

2 seven, eight, nine --

3 Q. Let me stop you. I'm going to concede  
4 that it's a number of presentations.

5 A. -- ten, 11, 12, 13. It looks like at  
6 least 15.

7 Q. Okay.

8 A. Maybe 20. I don't know.

9 Q. But look at all other topics of  
10 presentations in your CV.

11 A. Sure.

12 Q. Is there any other topic of any other  
13 presentation that relates to cryptocurrencies?  
14 That's my question.

15 A. No. Not in relationship to one of these  
16 papers. I may have given talks related to  
17 nonacademic papers that are not -- that are not on  
18 the topic. I guess I did -- like I gave a talk to  
19 the [REDACTED] conference. In that paper I discussed  
20 the [REDACTED] paper, but I also discussed  
21 broader issues with digital assets at the same talk.

22 Q. The last question and then we'll take a  
23 break. Have you ever purchased digital assets?

24 A. No, I have not.

25 Q. Have you ever sold digital assets?



1 [REDACTED] - 2/15/2022

2 A. No, I have not.

3 Q. So you're not engaged in any transaction  
4 relating to digital assets?

5 A. No, I have not.

6 MR. CERESNEY: Now let's take a  
7 break.

8 THE VIDEOGRAPHER: Go off record,  
9 10:44.

10 (Break.)

11 THE VIDEOGRAPHER: This is Segment  
12 No. 2. We're back on the record, 11:05.

13 Q. [REDACTED], one other question on  
14 your -- on the digital asset transactions. You said  
15 you had never engaged in any transactions in digital  
16 assets. Right?

17 A. That's correct.

18 Q. Why? Why not, I guess is the more  
19 accurate question?

20 A. I generally -- I generally like to invest  
21 in -- in -- I generally like to invest in things  
22 that I can -- has cash flows and the fact that it  
23 doesn't have cash flows, it's -- it's much more  
24 risky.

25 Q. Okay.

1 [REDACTED] - 2/15/2022

2 A. Or has a prospect of cash flow.

3 Q. Okay. All right. Let's move to  
4 questions about your report in this case. One of  
5 your conclusions in your report -- and if you want  
6 to look, Page 10 of your report in the header.

7 A. I guess I'd like to clarify my answer  
8 from the digital assets --

9 Q. Oh, sure. Go ahead.

10 A. I mean, also, a large part of my  
11 conclusion on the [REDACTED]

12 [REDACTED]

13 [REDACTED] So if an asset had been manipulated, I  
14 wouldn't want to get into a situation where I was  
15 adverse to somebody manipulating the currency. So,  
16 in other words, if there was a lot of randomness  
17 driving the variation, it's much more like  
18 speculation and less like an investment.

19 Q. Okay.

20 A. And also, it means probably if there is a  
21 large player in the space that's manipulating the  
22 currency, that for every winner, there's a loser so  
23 it's -- the odds are -- the odds are a little bit  
24 stacked against you.

25 Q. Okay. And so you come to digital assets

1 [REDACTED] - 2/15/2022

2 with some skepticism, it sounds like?

3 MS. GUERRIER: Objection.

4 A. I approach life with skepticism so I like  
5 to examine things and -- yeah, I -- I approach -- I  
6 approach everything with some skepticism and I go  
7 where the facts -- the facts lead.

8 Q. You haven't overcome that skepticism with  
9 regard to digital assets, it sounds like?

10 MS. GUERRIER: Objection.

11 A. I do -- I don't think it's -- I don't  
12 think -- personally, I think it's speculation to --  
13 to put money into most crypto digital assets, given  
14 where they trade, who the players are, so forth,  
15 issues related to my research so I think it is -- it  
16 is more speculative.

17 Q. Okay. All right. Take a look at Page 10  
18 of your report. You see the header there, one of  
19 your conclusions there is that: Ripple coordinated  
20 with GSR to buy XRP in a manner consistent with  
21 positively influencing XRP prices.

22 MS. GUERRIER: Objection.

23 Q. Do you see that on Page 10, the header?  
24 I just quoted the header there.

25 A. Yes, I see the -- I see the header.

1 [REDACTED] - 2/15/2022

2 Q. And that was one of your observations in  
3 your report. Correct?

4 MS. GUERRIER: Objection.

5 A. It's a section header that summarizes --  
6 that summarizes some of the issues discussed in that  
7 section.

8 Q. Okay.

9 A. Yeah.

10 Q. And it looks like in this section of your  
11 report, Section 4 of the report, you analyzed  
12 specific transactions for specific dates and times  
13 in five different figures. Am I right about that?

14 A. That's correct.

15 MS. GUERRIER: Objection. Let me --  
16 one second. Let me state my objection on the  
17 record. So it's objection to form.

18 Q. So this section of the report contains  
19 five different figures. Correct?

20 MS. GUERRIER: Objection to form.

21 Q. Actually, let me -- let me amend that.  
22 Four different figures. Correct?

23 MS. GUERRIER: Objection.

24 A. This section contains four figures and  
25 discusses the emails and contacts around those

1 [REDACTED] - 2/15/2022

2 papers.

3 Q. Okay. And then the -- the next section,  
4 Section 5 of the report, contains a fifth figure.  
5 Correct?

6 A. That's correct.

7 Q. Now, I just want to go through those  
8 various figures and the times that are -- timing  
9 that's covered by those.

10 Figure 1 covers September 15th, 2016.  
11 Right?

12 MS. GUERRIER: Objection.

13 A. What date did you say?

14 Q. I said September 15, 2016.

15 A. That's correct.

16 Q. Figure 2 covered November 1st, 2016.  
17 Correct?

18 MS. GUERRIER: Objection.

19 A. Figure 2 analyzes events on November 1st,  
20 2016.

21 Q. Okay. Figure 3 analyzes events on  
22 September 25th and 26th. Right?

23 MS. GUERRIER: Objection.

24 A. That's correct.

25 Q. And then Figure 4 analyzes transactions

1 [REDACTED] - 2/15/2022

2 on April 10th and 11th, 2016. Correct?

3 MS. GUERRIER: Objection.

4 A. 10 --

5 Q. April 10th and 11th, 2016.

6 A. 10th and 11th. It may have an event  
7 right there at midnight, but I'm not sure. Yes.  
8 The 12th is listed in the figure, but I think the  
9 figure stops right there on the left.

10 Q. Well, just the header on the figure.

11 A. Yeah. I'm just looking at the bottom  
12 where it cuts off. Yes.

13 Q. Okay.

14 A. So it's on the 11th.

15 Q. But the header on the figure says  
16 April 10th at --

17 (Simultaneous speaking.)

18 A. That's correct.

19 Q. Is that -- you have to wait for my  
20 question to answer.

21 Is that correct?

22 A. That's correct.

23 Q. Okay. So -- and those four figures are  
24 trading by GSR on behalf -- in connection with XRP  
25 provided by Ripple. Correct?

1 [REDACTED] - 2/15/2022

2 MR. CERESNEY: Objection.

3 A. I don't know if I would characterize it  
4 just like that.

5 Q. Well, it's trading by GSR?

6 A. It's traded by --

7 MS. GUERRIER: Objection -- let me  
8 just -- one second. Objection.

9 Go ahead.

10 Q. Trading by GSR?

11 MS. GUERRIER: Objection.

12 MR. CERESNEY: Pascale, we'll get  
13 through this more quickly if -- I will stipulate  
14 that if you make an objection, then I ask the very  
15 same question, your objection still lasts. Okay?

16 MS. GUERRIER: Okay. That's fine.

17 MR. CERESNEY: That will make this go  
18 easier.

19 MS. GUERRIER: That's fine. Yes.

20 MR. CERESNEY: Okay. So with that  
21 stipulation.

22 THE WITNESS: What was the  
23 stipulation? I'm sorry.

24 MS. GUERRIER: No.

25 Q. This is trading by GSR.

1 [REDACTED] - 2/15/2022

2 A. Everything has an objection on it now?

3 Q. Apparently, yes.

4 This is trading by GSR. Correct?

5 A. This is trading on -- by GSR on behalf of  
6 Ripple.

7 Q. Good. We're in agreement.

8 So you analyzed six trading days in the  
9 2016 period where GSR traded on behalf of Ripple.

10 Is that correct?

11 MS. GUERRIER: Objection.

12 A. In these figures.

13 Q. In these figures, yes.

14 A. Yes.

15 Q. And so -- and you -- and just to be

16 clear, these act- -- these dates are between

17 April 10th, 2016, and November 1st, 2016. Is that  
18 fair?

19 MS. GUERRIER: Objection.

20 And I'm just trying to -- which dates  
21 are you referring to, Andrew?

22 MR. CERESNEY: I referred to the  
23 dates that we just went over, April 10th, 2016, to  
24 November 1st, 2016.

25 A. That appears to be correct.



1 [REDACTED] - 2/15/2022

2 Q. And six days within that period.

3 Correct?

4 A. That appears to be the case.

5 Q. And in this section of the report, you're  
6 not offering any view of GSR's trading activities on  
7 behalf of Ripple before April 2016. Is that fair?

8 MS. GUERRIER: Objection to form.

9 A. In this section of the report, I'm  
10 analyzing events around these dates.

11 Q. Okay. And -- and that's -- that period  
12 of time -- and then there is in Figure 5, you  
13 analyzed trading that GSR did on behalf of  
14 Mr. Larsen. Correct?

15 A. That's correct.

16 Q. And that was for June 3rd through 14th of  
17 2017. Correct?

18 A. That's correct.

19 Q. And that's the only time period of GSR's  
20 trading on behalf of Mr. Larsen that you analyzed in  
21 connection with the report. Correct?

22 MS. GUERRIER: Objection.

23 Go ahead and answer.

24 A. Well, for this particular type of trading  
25 activity, obviously, we talk about Mr. Larsen's

1 [REDACTED] - 2/15/2022

2 activity in the -- in the later parts of the report.

3 Q. You talk about the hop analysis that you  
4 did?

5 A. Yes.

6 Q. Okay. Setting aside that hop analysis,  
7 this is the only analysis that you did of trading  
8 activity by GSR on behalf of Mr. Larsen?

9 A. That's correct.

10 Q. Okay. And we'll get to the regression  
11 analysis that you did, which we're going to talk  
12 about in some detail.

13 But other than that regression analysis,  
14 these analyses of Ripple trading -- of GSR trading  
15 on behalf of Ripple, in Figures 1 through 4 -- and  
16 actually, I'll add Figure 6 which is on Page 24, so  
17 there's five figures that relate to trading on  
18 behalf of -- GSR trading on behalf of Ripple.

19 Other than those five figures, which  
20 constitute a number of trading days, you didn't  
21 analyze any other trading by GSR on behalf of Ripple  
22 in this report. Correct?

23 MS. GUERRIER: Objection to form.

24 A. The -- you did mention Table 1. Table 1  
25 is a -- is an examination of the whole period.

1 [REDACTED] - 2/15/2022

2 Q. Table 1 being the regression analysis?

3 A. The regression analysis. So the  
4 regression -- this is -- these graphs are specific  
5 events and the regression analysis is over the whole  
6 period.

7 Q. And just to be clear, on the regression  
8 analysis, the regression analysis deals with a  
9 separate issue. Correct?

10 MS. GUERRIER: Objection.

11 A. I don't -- I don't -- I wouldn't  
12 summarize it as such.

13 Q. Well, Figures 1 through 6 deal with the  
14 potential impact of GSR trading on XRP's prices.  
15 Correct?

16 MS. GUERRIER: Objection to form.

17 A. That's one of the issues it deals with.

18 Q. Okay. The regression analysis deals with  
19 the question of GSR's imbalances in trading after a  
20 day after a movement in XRP's prices. Correct?

21 MS. GUERRIER: Objection to form.

22 A. I would -- I would like to characterize  
23 my own -- I don't know if I would characterize a  
24 regression analysis as such.

25 Q. How would you characterize a regression

1 [REDACTED] - 2/15/2022

2 analysis?

3 A. Well, I would characterize the regression  
4 analysis as looking at whether imbalances -- I look  
5 at whether imbalances are related to past returns,  
6 so whether GSR is trading in such a way as to -- as  
7 such a way to potentially minimize their price  
8 impact or even have a positive price impact.

9 Q. But you don't analyze the impact of GSR's  
10 trading on the prices. Correct?

11 A. That's correct.

12 Q. Okay. So the only place that you analyze  
13 the potential impact of GSR's trading on XRP's  
14 prices is in Figures 1 through 4 and 6 --

15 MS. GUERRIER: Objection.

16 Q. -- correct?

17 A. I don't think that's an accurate -- as I  
18 alluded to earlier, I don't think that's an accurate  
19 characterization of my Figures 1 through 5. If we  
20 want, I can go into what the figures are about, but  
21 I'm not going to characterize them as that's the  
22 main thing.

23 Q. Okay. Well, that's -- we're going to go  
24 into specifics on each, so that's fine. Let's put  
25 that aside for a moment.

1 [REDACTED] - 2/15/2022

2 Can you explain to us how these -- in  
3 Figures 1 through 4 how these six days were  
4 selected?

5 A. Sure. I was -- I had a list -- I had  
6 some correspondence from -- correspondence that was  
7 between GSR -- between executives at Ripple and GSR.  
8 I looked for examples of specific correspondence  
9 where it was clear -- it was a directive from  
10 someone at Ripple to trade -- a directive from  
11 someone at Ripple corresponding with someone at GSR  
12 in terms of a trading directive. And so I looked at  
13 those cases and found examples of those cases.

14 Q. Okay. Where did you get the  
15 correspondence that you looked at for these  
16 purposes?

17 A. From the SEC.

18 Q. So the SEC selected the correspondence  
19 that you reviewed?

20 MS. GUERRIER: Objection.

21 A. I don't know if I -- I don't know what  
22 process the SEC had.

23 Q. Okay. But you did not select those for  
24 that correspondence. Correct?

25 MS. GUERRIER: Objection.

1 [REDACTED] - 2/15/2022

2 A. I did have -- I did have access to  
3 broader correspondence, and those are the events  
4 that I picked within those correspondence.

5 Q. Did you --

6 A. I don't know that that was a complete --  
7 I don't know to what extent -- whether that  
8 correspondence was complete or not complete.

9 Q. So the SEC gave you access to a broader  
10 group of correspondence than the correspondence that  
11 you actually ended up using for these purposes?

12 MS. GUERRIER: Objection to form.

13 THE WITNESS: Can I answer?

14 MS. GUERRIER: Yes or no.

15 A. Yes.

16 Q. And did you list in your Appendix C,  
17 which has all of the documents that you relied upon  
18 in your analysis, all of the documents that you  
19 received from the SEC?

20 A. No. I listed the documents that I relied  
21 upon in this report. I didn't rely on those -- on  
22 those other -- I didn't -- if those other documents  
23 didn't have specific directives from Ripple execs to  
24 GSR, they -- they may have just been discussing  
25 issues related to the bot or something like that, so

1 [REDACTED] - 2/15/2022

2 they weren't relevant to this analysis.

3 Q. And how many documents did you initially  
4 receive from the SEC for this -- the purposes of  
5 this analysis?

6 A. I'm not sure --

7 MS. GUERRIER: Objection -- hold on.

8 THE WITNESS: Okay.

9 MS. GUERRIER: I'm going to instruct  
10 you to -- documents that you considered, you can  
11 answer with respect to that.

12 MR. CERESNEY: Are you -- is the SEC  
13 taking the position that if he reviews a document  
14 and then decides that it's not something he's going  
15 to use in the report, that that is not something he  
16 considers or relies upon for the report?

17 MS. GUERRIER: That's not my  
18 instruction. So I have asked him to disclose the  
19 documents that he considered that the SEC provided,  
20 and that's all that I've asked him to do.

21 Q. Well, did you -- let me ask you this, let  
22 me ask you a different question. Did you consider  
23 all of the documents that the SEC provided you in  
24 the course of your analysis?

25 MS. GUERRIER: And I'm going to

1 [REDACTED] - 2/15/2022

2 object to the form.

3 But go ahead and answer.

4 A. I'm not sure.

5 Q. Well, you reviewed the documents, didn't  
6 you?

7 MS. GUERRIER: Objection.

8 A. I'm not sure if I reviewed every document  
9 in some folder. A lot of times, there is folders  
10 with documents that get lost. I mean, I think  
11 anyone that's part of the legal context knows  
12 there's lots of documents.

13 Q. Okay. So you're saying the SEC might  
14 have provided you documents you just didn't look at?

15 MS. GUERRIER: Objection to form.

16 A. Members of my -- members of my staff  
17 reviewed various documents, and the directive for  
18 that was to look at documents --

19 MS. GUERRIER: Objection -- actually,  
20 I'm going to instruct you not to disclose any SEC  
21 communications.

22 THE WITNESS: Yeah, this is -- okay.

23 A. Directives that I gave to members of my  
24 staff was I wanted any documents related to  
25 communication between -- between trading activity,



1 [REDACTED] - 2/15/2022

2 directives to trading on -- directives to GSR on  
3 trading.

4 Q. And the instances and correspondence that  
5 you include -- the correspondence that you include  
6 references to in your report, were those all of the  
7 documents that your staff provided you?

8 MS. GUERRIER: Objection to form.

9 A. I believe there were other documents.

10 Q. Okay. How many other documents were  
11 there?

12 A. I'm not sure.

13 Q. Did you perform any analysis of the  
14 trading in connection with those other documents?

15 MS. GUERRIER: Objection.

16 And to the extent that this is  
17 information that you have obtained from the SEC  
18 that's not included in your appendix, I'm going to  
19 instruct you not to answer.

20 MR. CERESNEY: Oh, hold on a second.  
21 You're instructing him if it's not included in his  
22 appendix. My question is what did he consider.

23 MS. GUERRIER: Right. And he already  
24 told you that it's included in the appendix, so --

25 MR. CERESNEY: That's not what he

1 [REDACTED] - 2/15/2022

2 said.

3 MS. GUERRIER: All right. Let --  
4 let's clear this -- have him answer, but my  
5 understanding is you're asking him what he  
6 considered outside of what's included on the  
7 appendix.

8 MR. CERESNEY: No. What I'm asking  
9 him is what he considered. Put the appendix aside  
10 for the moment.

11 Q. In connection with your report, in  
12 deciding what to include in your report, you said  
13 that you received a broader set of documents than  
14 the ones that you cited in your report. Correct?

15 MS. GUERRIER: I'm going to object  
16 and also instruct you not to disclose documents,  
17 communications with the SEC that include documents  
18 outside of the ones listed on Appendix C.

19 MR. CERESNEY: You're instructing him  
20 not to discuss anything that he received from the  
21 SEC, even if he considered it?

22 MS. GUERRIER: No, I did not --  
23 that's not my --

24 MR. CERESNEY: Okay. That's what you  
25 instructed him.

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: That -- that is not.  
3 I can -- we -- I can read you what I instructed him,  
4 if you would like.

5 Q. Going back to the -- the documents that  
6 you received from your staff, pursuant to your  
7 instructions, did you perform any analysis on the  
8 instances of trading that were referenced in those  
9 documents, other than the ones that you cite in your  
10 report?

11 MS. GUERRIER: I'm going to renew my  
12 objection and instruction.

13 A. One issue with constructing the analysis  
14 is that one has to have the relevant trading  
15 identity, as I describe in the appendix.

16 So the reason 2016 is examined here is  
17 that there is GSR -- most of GSR trading is on the  
18 blockchain. It's a publicly available source, and  
19 it has relevant data on that.

20 So there are actually six events that --  
21 relative to my five, there is actually six events.  
22 There is one other event that's very similar to  
23 Figure 3, and so it was -- it's essentially showing  
24 the same pattern in Figure 3, so I didn't find that  
25 that was relevant to include.

1 [REDACTED] - 2/15/2022

2 Q. Okay. Fair enough. So you had another  
3 instance that was similar to Figure 3?

4 A. Yes.

5 Q. Any other instances similar to that, that  
6 you did not include?

7 A. No.

8 Q. Okay. So, basically, there were six  
9 instances, and you included five of them?

10 A. That's correct.

11 Q. And other than those six instances, you  
12 did not review correspondence that suggested that  
13 Ripple had instructed GSR to do certain types of  
14 trading?

15 MS. GUERRIER: Objection to form.

16 A. That's a -- that's incorrect summary of  
17 what I said earlier. I said part of the -- part of  
18 the limiting factor with this analysis is that one  
19 had to have relevant data over the period. So the  
20 analysis -- that's why the events are in 2016,  
21 because of the -- because of the data constraints.

22 Q. So the SEC --

23 A. So there may have been -- there may have  
24 been correspondence -- that's -- I'll just leave it  
25 at that.

1 [REDACTED] - 2/15/2022

2 Q. Okay. The SEC did not provide you any  
3 trading data that GSR might have produced to the SEC  
4 for the period after 2016. Is that what you're  
5 saying?

6 MS. GUERRIER: Objection.

7 And also my instructions are not to  
8 disclose any communications with the SEC outside of  
9 what's on your Appendix C.

10 A. My -- my understanding -- more than just  
11 having some trading data, the data has to be  
12 complete, and it has to overlap with emails and so  
13 forth. So this is the set of data that had complete  
14 data to examine.

15 Q. Okay.

16 A. I think that there -- I believe there may  
17 have been other data, but I think it had holes in  
18 it. (Unintelligible.)

19 Q. Okay. So fair enough. So I just want to  
20 just establish, your -- your opinion on these issues  
21 is solely related to 2016. Right? You're not  
22 asserting an opinion for any period, other than the  
23 2016 period. Is that fair?

24 MS. GUERRIER: Objection to form.

25 A. I disagree with the premise.

1 [REDACTED] - 2/15/2022

2 Q. Why do you disagree with that premise?

3 A. Well, my regression analysis is broader  
4 than that. It's over the whole period.

5 And then, also, the examples I know are  
6 over this period where there is relevant data, but  
7 to the extent that this is a characterization or a  
8 relationship that that -- that occurs, oftentimes  
9 that relationship is broader than just a one-off --  
10 one-off thing.

11 In other words, if somebody has a -- if  
12 you've employed a firm like GSR and they're trading  
13 on your behalf, and it continues to trade on your  
14 behalf, I'm not sure why the relationship would --  
15 would change.

16 Q. Do you have any basis at all in facts for  
17 that assertion you just made?

18 MS. GUERRIER: Objection.

19 Q. Other than your common sense or your  
20 speculation?

21 MS. GUERRIER: Objection.

22 A. I wouldn't call it speculation. I would  
23 say common sense is a good -- that people do employ  
24 firms and they generally keep those -- if they're  
25 using a trading firm. I've analyzed -- I've

1 [REDACTED] - 2/15/2022

2 analyzed NASDAQ trading over six years and generally  
3 when I found a relationship in Year 1, it continued  
4 to Year 6.

5 So I do have a basis for that. I had  
6 NASDAQ data, I analyzed it, and then oftentimes  
7 relationships or trading patterns would persist for  
8 long periods of time.

9 Q. Did you, in your report, include any --  
10 any opinion or any assertion, just like you made  
11 here, about a period outside of 2016?

12 MS. GUERRIER: Objection.

13 Q. Show me in your report where you include  
14 such an assertion.

15 A. I have a regression that talks about the  
16 whole period.

17 Q. Okay. Setting aside the regression  
18 analysis -- and we'll get to that -- but setting  
19 aside the regression analysis, do you have any part  
20 of this opinion that references anything beyond  
21 2016 --

22 A. My analysis is focused on --

23 MS. GUERRIER: Hold on. Objection;  
24 go ahead and answer.

25 A. Again, my analysis is focused on

1 [REDACTED] - 2/15/2022

2 particular events where I have relevant data and I  
3 analyze those events.

4 Q. Okay. And so your opinion here is  
5 related to those events only. Is that fair?

6 MS. GUERRIER: Objection; and asked  
7 and answered.

8 Q. You can answer it.

9 A. I think that's an unfair characterization  
10 of my report.

11 Q. Where in your report do you make the  
12 assertion that the facts that you set forth or that  
13 the -- strike that.

14 Where in your report do you make the  
15 assertion that the opinions you are offering on 2016  
16 trading by GSR apply beyond 2016?

17 MS. GUERRIER: Objection.

18 Go ahead.

19 A. In the regression analysis.

20 Q. Okay. Fair enough. Other than the  
21 regression analysis, do you make that assertion in  
22 your report?

23 A. Well, that's like saying --

24 MS. GUERRIER: Hold on. Asked and  
25 answered.



1 [REDACTED] - 2/15/2022

2 Go ahead.

3 A. In the regression analysis I analyzed  
4 that.

5 Q. In the regression analysis, which we'll  
6 get to, relates to trading and balances by GSR.

7 Correct?

8 MS. GUERRIER: Objection.

9 Go ahead.

10 A. Yeah. Trading of balances and buying and  
11 selling are very related concepts.

12 Q. Okay. But the impact on the XRP price,  
13 that is not covered by the regression analysis. I  
14 thought we covered that.

15 MS. GUERRIER: Objection.

16 A. I don't want to characterize my figures  
17 in the way you're characterizing them, in terms  
18 of -- you're trying to say my figure's about --

19 Q. Okay.

20 A. -- about something it's not. So I'm not  
21 sure what you're trying to characterize my figures,  
22 but I would like to not have my figures  
23 characterized for me in terms of what they show and  
24 don't show. We can talk about them specifically.  
25 And I'm happy to go over what they show or don't

1 [REDACTED] - 2/15/2022

2 show.

3 Q. Let me just try this one more time.

4 I want to set aside the regression  
5 analysis, which we're going to deal with.

6 Other than the regression analysis, is  
7 there any place in this report that you're offering  
8 an opinion on a period of time beyond 2016?

9 MS. GUERRIER: Asked and answered.

10 Go ahead.

11 A. Yes. In the later parts of the report I  
12 also look at periods beyond 2016.

13 Q. Show me where in the report.

14 A. Well, Figure 7, Figure 8, Table 2,  
15 Table 3, Figure 9, Figure 10, Figure 11, 12.

16 Q. Okay.

17 A. And the appendix just talks about --

18 Q. Okay.

19 A. -- those matters.

20 Q. Any of those figures that you've just  
21 cited relate to GSR trading on behalf of Ripple?

22 A. The -- the figure let me review it to  
23 see.

24 Q. Take your time.

25 A. (Pause.)

1 [REDACTED] - 2/15/2022

2 The -- Table 1 regards to GSR trading on  
3 behalf of Ripple.

4 Q. And Table 1 is the regression analysis?

5 A. The regression.

6 Q. Okay.

7 A. And Figure 7, 8, and Table 2 regard  
8 transfers to Ripple, not GSR trading -- I'm sorry.  
9 Transfers regarding direct and indirect transfers.

10 Q. Figures 7 and 8 relate to  
11 Mr. Garlinghouse and Mr. Larsen, don't they?

12 MS. GUERRIER: Objection.

13 Q. Not to Ripple?

14 MS. GUERRIER: Objection.

15 A. That's correct.

16 Q. Okay. So I was asking about Ripple. So  
17 do you want to revise your answer? Is it just  
18 Table 1?

19 MS. GUERRIER: Objection.

20 A. I don't know what question I'm being  
21 asked. The original question I was asked was, was  
22 there any part of my report that doesn't deal with  
23 2016. That was the question I was asked. So when I  
24 answered that question, I pointed to all the other  
25 figures that I have that are outside of 2016.

1 [REDACTED] - 2/15/2022

2 Now, if we're modifying the question, I'm  
3 happy to answer a modified version, but the question  
4 I was asked, which I could be wrong in what I was  
5 asked, but I thought I was asked whether any part of  
6 my report was about anything outside of 2016, other  
7 than Table 1.

8 Q. Right. And then I modified the question  
9 to relate to GSR trading on behalf of Ripple.

10 A. Okay.

11 Q. And then you answered "Table 1," which is  
12 the regression analysis.

13 A. Yes.

14 Q. And I just want to make sure that's the  
15 answer.

16 A. I think so.

17 Q. Okay. That's it.

18 Now, [REDACTED], we're going to go  
19 through the various figures in a moment, but before  
20 we do that, and go in-depth into each one -- before  
21 we do that, I want to just ask you.

22 In terms of the methodology that you used  
23 here, which is looking at specific trading days and  
24 activities on those days, were there any other  
25 methodologies that could be used to analyze the

1 [REDACTED] - 2/15/2022

2 impact of GSR trading on XRP prices over time?

3 MS. GUERRIER: Objection to form, and  
4 also foundation.

5 A. If one looks at the assignment of my  
6 report -- let me read from the assignment of my  
7 report.

8 It says: The SEC has retained me to  
9 independently analyze and comment on two areas.

10 First, the SEC has asked me to opine on whether  
11 Ripple Labs (Ripple), Chris Larsen, and Brad  
12 Garlinghouse took steps to influence XRP prices.

13 Second, I've also been asked to opine on the  
14 incentives that might have been present for Ripple  
15 to attempt to influence the price of XRP.

16 So the first examination was whether they  
17 took steps to influence the prices. I'm not opining  
18 on whether the price -- the price was influenced.

19 Q. I see. Okay. So your opinion is just  
20 whether Ripple took steps to influence the price  
21 through GSR's trading and not on whether, in fact,  
22 the price was impacted. Is that fair?

23 MS. GUERRIER: Objection.

24 A. I do state in my report that the price on  
25 certain events moved in a manner consistent with --

1 [REDACTED] - 2/15/2022

2 consistent with the -- what the steps that Ripple  
3 took. So I do -- I do say that the price moved in  
4 such a manner on those specific dates.

5 Q. Well, this is important, though. You say  
6 it moved in such a manner consistent with being  
7 impacted by the trading. That's a different matter  
8 than saying it was impacted. Is that fair?

9 MS. GUERRIER: Objection.

10 A. My report is not analyzing what caused  
11 the -- what caused the price movement. That's not  
12 the subject of my report.

13 Q. And is there a reason why -- could you  
14 have opined on that?

15 MS. GUERRIER: Objection.

16 And I instruct you not to disclose  
17 discussions with SEC lawyers.

18 Q. Okay. I'm going to ask you a different  
19 question. I don't want to hear anything about your  
20 discussions with SEC lawyers. I want to know  
21 whether you could have analyzed the impact of GSR's  
22 trading on Ripple's prices during particular periods  
23 of time.

24 MS. GUERRIER: I renew my objection  
25 and my instruction.

1 [REDACTED] - 2/15/2022

2 Go ahead.

3 A. The analysis of pricing -- price impact  
4 is a much -- is a very -- is a much -- is a very  
5 difficult thing to examine because one has to  
6 have -- one has to have not just the trades, but  
7 when the orders were submitted, the nature of the  
8 orders, the order book, how the order book moves  
9 prices, the players that were involved, and moving  
10 that.

11 And one would -- there -- there could be  
12 other -- in this case over this period there is  
13 other exchanges that are traded on which -- on which  
14 the security -- on which -- on which there is other  
15 platforms where XRP traded. And so the  
16 combination -- the combination of all those things  
17 would make an analysis quite difficult.

18 Q. And you didn't look at any of those other  
19 things that you just listed. Correct?

20 MS. GUERRIER: Objection.

21 Again, do not disclose any  
22 communications or anything done at the direction of  
23 the SEC.

24 Q. I'm just -- I'm not asking about  
25 communications. I'm asking whether you did that as

1 [REDACTED] - 2/15/2022

2 part of your analysis in this case.

3 MS. GUERRIER: And I'm renewing my  
4 objection and instruction.

5 Q. Did you -- did you look at any of those  
6 other factors that you just listed that are  
7 important to determining whether GSR's trading  
8 actually impacted the price?

9 A. My --

10 MS. GUERRIER: Same objection.

11 A. My opinion is that the data and the  
12 nature of -- of this would make -- would make it --  
13 would -- the data -- the data limitations would make  
14 such analysis -- I -- such analysis difficult.

15 Now, as part of the rebuttal -- as part  
16 of the rebuttal report in response to Professor  
17 Ferrell, Professor Ferrell looked at some things  
18 related to this, and I did examine his methodology,  
19 what Professor Ferrell used and what he claimed his  
20 result.

21 Q. And -- well, we'll get to Professor  
22 Ferrell in -- in a few minutes, but you did that  
23 analysis after you submitted this report?

24 MS. GUERRIER: Objection.

25 A. What -- I don't know what analysis you're



1 [REDACTED] - 2/15/2022

2 referring to.

3 Q. What you just referred to, your analysis,  
4 of Professor Ferrell's analysis. When did you do  
5 the analysis?

6 A. I didn't say analysis -- I don't -- I  
7 didn't mean to say analysis of Professor Ferrell's.  
8 I said analyzing Professor Ferrell's analysis. I  
9 looked at Professor Ferrell's analysis.

10 Q. Okay. And did you take any action in  
11 connection with that analysis?

12 MS. GUERRIER: Objection. And, also,  
13 instructing you not to disclose anything you've done  
14 at the direction of the SEC --

15 MR. CERESNEY: Wait a minute. Hold  
16 on.

17 MS. GUERRIER: -- outside of --

18 MR. CERESNEY: Go ahead.

19 MS. GUERRIER: -- outside of the work  
20 that you've done for your report and subject to the  
21 disclosures in your report.

22 MR. CERESNEY: I'm asking about work  
23 that he's done since reviewing Professor Ferrell's  
24 rebuttal report. Are you instructing him not to  
25 answer the questions about that issue?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Work product. Yes, if  
3 it's -- if it's done at the direction of the SEC,  
4 absolutely.

5 Q. Well, let's explore this. Did you do any  
6 work on behalf of the SEC in connection with  
7 Professor Ferrell's rebuttal?

8 MS. GUERRIER: Objection.

9 Q. Yes or no?

10 MS. GUERRIER: You have a time frame?  
11 Like --

12 Q. Since Professor Rebuttal (sic)  
13 submitted his -- since Professor Ferrell submitted  
14 his rebuttal report, did you do any work on behalf  
15 of the SEC in connection with that report?

16 MS. GUERRIER: I'm going to instruct  
17 you not to answer on work product grounds.

18 MR. CERESNEY: Yes or no. I can ask  
19 a "yes" or "no" question. Are you instructing him  
20 not to answer "yes" or "no"?

21 MS. GUERRIER: Yes.

22 MR. CERESNEY: And you're claiming  
23 work product over a disclosed expert who's looking  
24 at a report of another expert that was rebutted?

25 MS. GUERRIER: No. You asked him

1 [REDACTED] - 2/15/2022

2 whether he did any work -- let me make sure I get  
3 your question -- after the rebuttal was submitted.

4 MR. CERESNEY: Yes.

5 MS. GUERRIER: And I'm instructing  
6 him not -- he didn't -- he didn't provide a report  
7 after the rebuttal was submitted so I'm instructing  
8 him not to disclose -- not to answer because this is  
9 work product. You don't have a report from him  
10 after the rebuttal.

11 MR. CERESNEY: It's not work product  
12 if he doesn't produce a report. Are you claiming  
13 any -- any analysis he did of Professor Ferrell's  
14 rebuttal --

15 MS. GUERRIER: Anything that's done  
16 at the instruction of the SEC is work product. So,  
17 yes, I'm instructing him not to answer.

18 MR. CERESNEY: This is a disclosed  
19 expert witness who's testifying as an expert for the  
20 SEC. If you had him do analysis of that report,  
21 that's going to be disclosable.

22 MS. GUERRIER: That's work product  
23 and I'm not saying that if -- any instructions that  
24 the SEC gave him after the fact is work product.

25 MR. CERESNEY: Are you going to let

1 [REDACTED] - 2/15/2022

2 him testify to anything relating to Professor  
3 Ferrell's rebuttal report?

4 MS. GUERRIER: Of course. When you  
5 asked him about Professor Ferrell's report, he can  
6 testify to the extent that there are no privileged  
7 issues. Absolutely. But you're -- you're asking  
8 him for stuff that he's done outside of the report  
9 and I've instructed him not to testify about  
10 anything that the SEC has instructed him to do.

11 MR. CERESNEY: I don't understand the  
12 distinction you're drawing. I'm asking him about  
13 work that he did on Professor Ferrell's rebuttal  
14 report. You're saying you're going to allow him to  
15 testify to that.

16 MS. GUERRIER: Uh-huh.

17 MR. CERESNEY: And so I'm only asking  
18 what work he did that he can to testify to.

19 MS. GUERRIER: Do you want to give a  
20 time frame? I mean, you know --

21 MR. CERESNEY: After -- I've given a  
22 time frame. After Professor Ferrell's rebuttal was  
23 submitted, what work did he did to -- do to analyze  
24 that report.

25 MS. GUERRIER: Yeah, I think that

1 [REDACTED] - 2/15/2022

2 we're going to have an issue here because this is  
3 work product.

4 So I'm instructing you not to answer.

5 MR. CERESNEY: Let's go off the  
6 record.

7 THE VIDEOGRAPHER: Off the record at  
8 11:45.

9 (Break.)

10 THE VIDEOGRAPHER: Segment No. 3.  
11 We're back on the record, 12:05.

12 MS. GUERRIER: We're going to mark  
13 the transcript as highly confidential.

14 Q. So I was asking you before the break  
15 about an analysis that you had conducted of  
16 Professor Ferrell's rebuttal report.

17 Did you conduct any analysis of that  
18 rebuttal report once you reviewed it?

19 MS. GUERRIER: I'm going to give you  
20 the same instructions that I gave you prior to this.

21 A. I read his report and analyzed what --  
22 looked carefully at what he was criticizing me in  
23 and can -- I'm happy to talk about that.

24 Q. Did you do -- thank you.

25 Did you do any analyses of the analyses

1 [REDACTED] - 2/15/2022

2 that he did in his rebuttal report? In other words,  
3 did you do any data analysis of those conclusions?

4 MS. GUERRIER: Same instructions.

5 THE WITNESS: Should I say I can't  
6 answer, I guess?

7 MS. GUERRIER: If you can -- I mean,  
8 anything that was done at the direction of the SEC  
9 is work product so I'll instruct you not to answer.

10 Q. So you can't answer that question?

11 A. I guess I can't answer that question.

12 (Discussion off the written record.)

13 Q. By the way, [REDACTED] do you  
14 understand what a factor analysis is?

15 A. Yes.

16 Q. Can you explain your understanding of  
17 what a factor analysis is?

18 A. Sure. It's actually a subject that [REDACTED]  
19 [REDACTED] in my Ph.D. [REDACTED]. So there  
20 is different -- there is different ways to -- to do  
21 it. I think that the term and the way you're  
22 describing it is -- is not exactly the way that  
23 Professor Ferrell did it.

24 But the factor analysis, basically, it's  
25 similar to principal components analysis. One looks

1 [REDACTED] - 2/15/2022

2 for covariation patterns in returns and one can  
3 determine if there -- how many factors there are in  
4 returns and -- and one can look at the -- basically,  
5 there was -- original asset pricing would do factor  
6 analysis and they would say, well, there's, like,  
7 three factors or five factors or six factors in  
8 returns and that would be because they -- they're  
9 basically analyzing the covariance factor and seeing  
10 how many common factors or how many systematic  
11 sources of variation there is in returns. That was  
12 kind of the original Phase 1 of factor analysis.

13 And then Phase 2 of factor analysis -- or  
14 I'm saying Phase 2, Phase 1 lightly. There was  
15 still overlap between the two methods, but the  
16 second method would be that they would pick  
17 macroeconomic factors like Chen and --  
18 Chen-Roll-Ross' 1986, for instance, was a seminal  
19 paper that started picking macroeconomic factors and  
20 run those -- run those factors to control things. I  
21 have [REDACTED]  
22 [REDACTED], so forth. So -- so,  
23 basically, when you're in a factor analysis, you're  
24 asking what percent of the -- are these -- which  
25 factors are important testing those factors.

1 [REDACTED] - 2/15/2022

2 Q. Would a factor analysis be an appropriate  
3 methodology to determine the causes of changes in  
4 the price of XRP?

5 A. One could control for changes in the  
6 prices of XRP, but I -- I do not think that -- I do  
7 not think that Professor Ferrell's factor analysis  
8 is -- is relevant to -- to the matter -- to the  
9 matter here.

10 Q. Why not?

11 A. Well, the question is not whether there  
12 is covariation in returns. Obviously, all crypto  
13 assets move together.

14 The -- the question that I'm seeking to  
15 answer and the -- and the -- the -- what I was asked  
16 to opine on was whether the Ripple Labs took steps  
17 to influence the price of XRP. So -- so I'm  
18 answering the question of whether they took steps to  
19 influence the price of XRP or another way to phrase  
20 that is I'm looking at whether Ripple Labs --  
21 actions at Ripple Labs is related to XRP.

22 One could -- as I point out in my  
23 rebuttal report, one could perform a factor analysis  
24 of Apple stock, for instance, and one would see that  
25 if you perform a factor analysis of Apple stock,



1 [REDACTED] - 2/15/2022

2 whether you perform a market factor analysis or  
3 three factor, five factor, I've written papers  
4 talking about criticizing number of factors and how  
5 many factors are appropriate and criticizing the  
6 various factor models. But whether one takes that  
7 approach, all the questions you're going to answer  
8 is, is there covariation in returns.

9 Now, we know that Apple moves up and down  
10 with the market, and so Professor Ferrell looks at  
11 that and says, "Well, XRP moves up and down with the  
12 market, therefore, XRP is related -- XRP is related  
13 to the price of bitcoin." Yes, that's correct.  
14 That's nothing new. Everybody knows that, that  
15 cryptocurrency assets are very related.

16 But you would never point to that and  
17 say, ah-hah, Apple moves with the price of the  
18 market, therefore, Tim Cook has no say -- therefore,  
19 Tim Cook has no influence on the price of Apple, or  
20 managers of Apple have no influence on the stock  
21 price. So that piece of evidence really has no  
22 bearing on this case, as far as I'm concerned.

23 Q. Would you have expected to see -- if  
24 Ripple had an impact on the price of XRP, would you  
25 have expected to see an alpha in connection with the

1 [REDACTED] - 2/15/2022

2 analysis?

3 MS. GUERRIER: Objection to form.

4 Q. Do you know what I mean by alpha?

5 A. Yes, I know what you mean by it.

6 Q. What do I mean? What do you understand  
7 alpha to mean?

8 A. Yeah. So there is various -- I do [REDACTED]  
9 PHC-level asset pricing, so I can talk about alpha.

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 So that's one way one could look at it  
14 and say, Okay. Is -- does the stock have positive  
15 or negative alpha? Usually, one looks for positive  
16 or negative alpha around particular events. One  
17 could do an event study, look at particular events.  
18 One could see that if you have an alpha.

19 But, in general, just saying that there  
20 is an alpha over a period doesn't -- doesn't  
21 necessarily tell you much. Because when the asset  
22 pricing literature looks at alpha, they're talking  
23 about groups of stocks, portfolios of stocks. And  
24 so they're looking at whether the portfolio and you  
25 can earn an abnormal return on that portfolio

1 [REDACTED] - 2/15/2022

2 relative to some other portfolio, so, like, whether  
3 you have a trading strategy that's making money.

4 But if you looked at Apple and you  
5 calculated the -- the alpha on Apple, one would say,  
6 okay, Apple does have a positive alpha over the last  
7 five years. It probably has a pretty positive  
8 alpha. That doesn't -- or it could have a negative  
9 alpha. Other stocks can have negative alpha.

10 But that is -- I don't see how that's  
11 related to the question that I'm opining on here.

12 Q. Okay. I'm not asking about the question  
13 you're opining on. I'm just asking where you would  
14 expect in your analysis if Ripple had an impact on  
15 the price of XRP -- if Ripple's actions had an  
16 impact on the price of XRP, you would expect some  
17 sort of alpha in your analysis. Correct?

18 MS. GUERRIER: Objection to form.

19 A. The -- there is a lot of factors to go  
20 into that. Whether the alpha -- how you measure the  
21 alpha, when you're looking, if -- if the firm is  
22 trading in a way to minimize alpha, that could  
23 minimize the impact of alpha. So -- so if one ran a  
24 regression over the period and had a positive or a  
25 negative alpha, I don't think that would have any

1 [REDACTED] - 2/15/2022

2 bearing on whether it took steps to influence.

3 Now, depending on the way the test was  
4 set up and so forth, there could be a scenario where  
5 it could be related, but just -- if we're just  
6 talking about, okay, over a five-year period, and  
7 XRP had a positive or a negative alpha, I don't  
8 think that really tells us anything.

9 Q. Well, wouldn't it tell you, if there was  
10 a positive alpha, that Ripple's actions may well  
11 have had an impact on the price of XRP?

12 MS. GUERRIER: Objection to form.

13 A. It could -- there's -- there could -- it  
14 could be completely random, the reason they had a  
15 positive alpha, or it could be -- there is many  
16 reasons you could have a positive or a negative  
17 alpha. So I don't -- again, I don't think that  
18 that's the appropriate test to look at in this  
19 context.

20 Now, there could be -- there could be  
21 context where it's important, and I would need to  
22 study those contexts. But just looking at an alpha  
23 over a whole period -- just looking at an alpha over  
24 a whole period, I mean, you could have a scenario  
25 where the alpha is negative, and that could be --

1 [REDACTED] - 2/15/2022

2 that could be that -- that could be because alpha  
3 could be negative on alpha -- on Apple, and it could  
4 be because maybe -- maybe cell phone industry  
5 changed, or that Apple had a new competitor, they  
6 could have a negative alpha.

7 Or they could have a positive alpha  
8 because Tim Cook is a smart guy, and they have a  
9 good computer team.

10 So I think there is many reasons why  
11 stocks can have a positive and negative output,  
12 but --

13 So I'm not -- yeah, I'm not ruling out  
14 the possibility that it could be considered as --  
15 considered, but I don't know exactly where you're  
16 leading with that question.

17 Q. Okay. One last thing. You said,  
18 "Obviously, all crypto assets move together."

19 Is that a fair statement?

20 MS. GUERRIER: Objection to form.

21 Q. That was -- I'm just quoting you, you  
22 said that.

23 A. I -- as a general statement, crypto  
24 assets generally move together. Now, obviously,  
25 there is periods of time where certain crypto assets

1 [REDACTED] - 2/15/2022

2 diverge, and over a short run, they're less  
3 correlated than they are over longer intervals.

4 Q. But over the long-term, crypto assets are  
5 correlated. Is that fair?

6 A. There is --

7 MS. GUERRIER: Objection.

8 (Simultaneous speaking.)

9 A. -- there is papers that look at the  
10 correlation of crypto assets.

11 MS. GUERRIER: Hold on. Let me state  
12 the objection.

13 THE WITNESS: Yep. Sorry.

14 MS. GUERRIER: I'm sorry. Objection  
15 (unintelligible).

16 But you can answer.

17 Q. You said there is papers that look at --

18 A. There's papers that show that there's  
19 correlation among crypto -- among crypto assets that  
20 can be -- that can be analyzed, yes.

21 Q. Okay. Let's look at Figure 1 in your  
22 report, which is on Page 13 of your report. You got  
23 that in front you?

24 A. Yes.

25 Q. I want to just establish what this shows.

1 [REDACTED] - 2/15/2022

2 So you see the red and blue bars in the -- in the  
3 figure. Those represent GSR's trading active on  
4 behalf of Ripple during each hour. Is that fair?

5 A. That's correct.

6 Q. And the red bar indicates a net buy  
7 during that hour. Right?

8 A. That's correct.

9 Q. And the blue bar represents a net sale  
10 during that period. Right?

11 A. Yes.

12 Q. And the scale on the right side of the Y  
13 axis shows there's millions of XRP. Correct?

14 A. Yes.

15 Q. The black line in the middle of the  
16 figure shows the price of XRP measured against U.S.  
17 dollars. Correct?

18 A. Yes.

19 Q. And the -- on the left-hand side, there  
20 is the price of XRP in U.S. dollars ranging from six  
21 one-thousandths of a penny -- I'm sorry -- six  
22 one-thousandths -- let me make sure.

23 A. Six-tenths of a percent?

24 Q. Six-tenths of a percent. So what would  
25 that be? That would be six-thousandths of a penny?

1 [REDACTED] - 2/15/2022

2 Is that what that is?

3 A. No, that's --

4 Q. Six-hundredths of a penny?

5 A. -- that's one -- that's six-tenths of a  
6 penny.

7 Q. Six-tenths of a penny. Okay. And so  
8 it's ranging from six-tenths to a penny to around  
9 nine cents -- nine-tenths of a penny?

10 A. That's correct.

11 Q. Okay. And the timeline across the bottom  
12 of that is September 15, 2016, at 6:00 a.m. to  
13 September 16, 2016, at 12:00 noon. Is that  
14 accurate?

15 A. That's correct.

16 Q. So that's a 30-hour window of time.  
17 Correct?

18 A. Yes.

19 Q. Okay. And based on the title of  
20 Figure 1 -- and I think you said this earlier, by  
21 the way, when you talked about GSR data that you had  
22 available to you -- isn't it -- is it correct that  
23 the analysis here is limited only to GSR's trading  
24 on the XRP ledger?

25 MS. GUERRIER: Object to form.



1 [REDACTED] - 2/15/2022

2 A. The analysis is limited to the trading on  
3 the XRP. The analysis is limited to the trading on  
4 the XRP ledger.

5 Q. And are you aware of whether there was  
6 off-ledger trading by GSR on this date?

7 A. I'm aware there was off-ledger trading  
8 by -- off-ledger trading, but not on this date.

9 Q. So you don't think there was off-ledger  
10 trading?

11 A. I don't know.

12 Q. You don't know?

13 A. Yeah.

14 Q. Okay. So just to be clear, so the record  
15 is clear, you don't know one way or the other  
16 whether there was off-ledger trading on the dates  
17 covered by Figure 1 by GSR?

18 A. That's correct.

19 Q. Okay. And are you aware whether other  
20 market participants traded XRP off ledger on this  
21 date?

22 MS. GUERRIER: Objection; form.

23 A. I believe they did.

24 Q. Okay. So would off-ledger trading  
25 activity be relevant to your analysis and

1 [REDACTED] - 2/15/2022

2 conclusions in Figure 1?

3 A. No.

4 Q. And why would it not be relevant?

5 A. Because I'm looking at whether they  
6 followed the directives -- of whether they followed  
7 the directives of Ripple, and whether they, in fact,  
8 traded in a manner as directed.

9 So if -- I'm showing that they traded in  
10 such a manner consistent with that. And I suppose  
11 if -- if they had another bot that exactly -- was --  
12 if they had another bot that was exactly -- or had  
13 another trading algorithm that exactly unwound that  
14 at another exchange, then it would be relevant. But  
15 in terms of just analyzing what they did on the GSR  
16 ledger, my -- that's what I did here.

17 MS. GUERRIER: (Unintelligible.)

18 A. I'm sorry. XRP ledger.

19 Q. And you don't know, just to be clear,  
20 whether they had some other bot that was unwinding  
21 this trading on some other off-ledger venue.

22 Correct?

23 MS. GUERRIER: Objection.

24 A. All I know is that the communication does  
25 not describe such activity.

1 [REDACTED] - 2/15/2022

2 Q. Okay.

3 A. So the communication seems to indicate --  
4 the communication seems to indicate that this is  
5 the -- this is the bot that they're trading. So  
6 based on the communication, I would infer that this  
7 is the major place that they're trading at the time.

8 Q. Okay. But you -- but other than the  
9 communication, you have no basis for that  
10 determination?

11 MS. GUERRIER: Objection.

12 A. I think the communication is important,  
13 but I don't -- I'm not -- again, I'm not sure what  
14 activity they may have placed on exchanges on this  
15 date.

16 Q. Okay. And just to be clear, again,  
17 you're not analyzing the impact that the GSR trading  
18 had on the price, only that they followed the  
19 direction that the communication gave to GSR, that  
20 the Ripple communication gave to GSR?

21 A. Yes, I do -- I do make -- I do note that  
22 the price did increase at the same time that GSR was  
23 net buying, that the price had a large increase, and  
24 it stayed above that point.

25 Q. Okay. You note that, but you are not --

1 [REDACTED] - 2/15/2022

2 you don't analyze whether there was any causation of  
3 the trading on that price. Correct?

4 A. I'm not opining on whether there is  
5 causation. That's beyond the scope of my  
6 assignment.

7 Q. Okay. Now, it looks like in Figure 1,  
8 right before 6:00 p.m. UTC is when there is the  
9 highest volume of GSR net buys. Is that right?

10 MS. GUERRIER: Objection.

11 A. Can you rephrase the question or repeat  
12 the question? Sorry.

13 Q. Yeah.

14 18 -- if you look at 18:00 on 9/15.

15 Right? Do you see that point in the X axis there?

16 A. Yes.

17 Q. Okay. And that was the point where GSR  
18 had the highest volume of net buys during this  
19 period. Correct?

20 MS. GUERRIER: Objection.

21 A. The -- it's the window prior to 18:00, I  
22 believe, that had the highest, the hour from 17 to  
23 18:00 that had the highest amount of net buy.

24 Q. And the price of XRP rose at 18:00 to  
25 above .009 at that time. Correct?

1 [REDACTED] - 2/15/2022

2 A. That is correct.

3 MS. GUERRIER: Objection.

4 Q. But in the hour after that, the price of  
5 XRP dropped. Right?

6 MS. GUERRIER: Objection.

7 A. The price did -- the price did fall after  
8 that, but at no point did the price go below the  
9 \$0.06 starting point in this graph.

10 Q. At no point in this graph did it go below  
11 the \$0.06 starting point, the .006 starting point.

12 Correct?

13 A. That's correct.

14 Q. It's not \$0.06, it's six-tenths?

15 A. Six-tenths.

16 Q. So is it fair to say that the increase in  
17 the price of XRP, soon after the net buy by GSR --  
18 I'm sorry -- strike that.

19 Is it fair to say that the price of XRP  
20 began to decline after the net buy between 17:00 and  
21 18:00 hours?

22 MS. GUERRIER: Objection.

23 A. It appears from the graph that the price  
24 did decline slightly from 18:00 and then it fell to  
25 approximately 19:50, and then the price rebounded --

1 [REDACTED] - 2/15/2022

2 then the price rebounded close to the nine cents and  
3 then the price drifted downward and then flattened  
4 out later in the day.

5 Q. Okay. And did your analysis assess the  
6 impact of this activity beyond the 30-hour window  
7 represented in this figure?

8 A. My analysis did not assess the impact.  
9 My analysis analyzed whether GSR traded in a manner  
10 consistent with the direction from Ripple executives  
11 in the email.

12 Q. Okay. But you didn't look outside the  
13 window that's included in this figure. Fair?

14 A. This figure only reports this window  
15 because I thought this was the relevant -- the  
16 relevant window.

17 Q. Okay. And just to be clear, we're  
18 talking here about the difference between six-tenths  
19 of a cent and just above nine-tenths of a cent.

20 Right?

21 MS. GUERRIER: Objection.

22 A. Yes, it's going from six-tenths of a cent  
23 to nine-tenths of a cent.

24 Q. So the price moving here was essentially  
25 between three-tenths and four-tenths of a cent.

1 [REDACTED] - 2/15/2022

2 Correct?

3 A. It was a 50 percent movement in the price  
4 in a six-hour window.

5 Q. In absolute terms it was tiny. Correct?

6 MS. GUERRIER: Objection.

7 A. In absolute terms it was quite large if  
8 you consider the total dollar amount of XRP tokens.  
9 And if you consider the total dollar -- if you  
10 consider the total amount of XRP tokens and the  
11 supply of XRP tokens, then the dollar amount was  
12 quite large. The absolute value is quite large.

13 Q. Are you saying that three-tenths of a  
14 penny is a large amount?

15 A. Yeah. If you trade --

16 MS. GUERRIER: Objection; form.

17 A. -- if you trade a million dollars at  
18 three-cents (sic) of a penny, that's quite a bit.  
19 Three-tenths of a penny -- three-tenths of a penny,  
20 if you trade enough, that's a lot of -- if you're  
21 talking about the value of the tokens, that is quite  
22 large.

23 Q. Well, how much -- if you take a million  
24 dollars, three-tenths of a penny, how much is that?

25 A. Well, if you took 30 percent, that would

1 [REDACTED] - 2/15/2022

2 be 300,000. If you took one penny, that would be  
3 30,000. So it would be \$3,000.

4 Q. So -- thank you. \$3,000. Okay.

5 A. If there was a million dollars. I --  
6 yeah.

7 Q. Okay.

8 A. In this graph, though, you can see the  
9 volume -- the net buying was actually many more  
10 times that on the -- that's not the total volume  
11 even. What I was talking about, absolute value,  
12 what matters is the total value behind things.

13 So anyway I reject the premise that  
14 three-tenths of a penny is -- three-tenths of a  
15 penny is irrelevant. One could talk to Citadel or I  
16 had a friend that worked at D.E. Shaw, and that was  
17 their whole business, was fractions of a penny, and  
18 the firm's worth billions.

19 Q. Yeah. I wasn't claiming it was  
20 irrelevant, to be clear. I was claiming it was a  
21 tiny number. And that's --

22 A. A tiny number. Yeah, I reject that  
23 economically it's necessarily a tiny number because  
24 it matters how much the volume is, how much is being  
25 traded.



1 [REDACTED] - 2/15/2022

2 Q. Let me direct your attention to Page 12  
3 of your report, Paragraph 18.

4 And you wrote there in that paragraph:  
5 By analyzing transactions publicly available on the  
6 XRP ledger, I can confirm that GSR did, in fact,  
7 follow Ripple's directives to purchase XRP and that  
8 the activity appears successful as the price  
9 increased dramatically.

10 Do you see that?

11 MS. GUERRIER: Take your time to read  
12 that.

13 A. Yeah. Which paragraph? I'm sorry.

14 Q. Paragraph 18. And I want to focus on the  
15 language "the activity appears successful."

16 Do you see that?

17 A. (Pause.)

18 Yes.

19 Q. And just to be clear, you are not opining  
20 here that GSR's activity, in fact, caused the  
21 increase in price of XRP. Correct?

22 A. As I said in my report, it appears -- the  
23 activity appears successful as the price increased  
24 dramatically.

25 Q. Okay.

1 [REDACTED] - 2/15/2022

2 A. I'm not opining on causality. That's  
3 beyond the scope of my report.

4 Q. And you didn't look at the activity of  
5 other market participants in the market at that  
6 time. Correct?

7 MS. GUERRIER: Objection.

8 A. Well, I do look at the activity of other  
9 market participants in the sense that for every net  
10 buyer there is a net seller.

11 Q. Okay. But other than these  
12 transactions --

13 MS. GUERRIER: I'm sorry. I don't  
14 think he was done with his answer.

15 Go ahead and finish.

16 A. So for every net buyer there is a net  
17 seller. So on net, that means the rest of the  
18 market -- the rest of the market was a net seller.  
19 The rest -- if GSR is a net buyer on this period,  
20 the rest of the market on the ledger was a net  
21 seller.

22 Q. There were other market participants on  
23 the ledger other than that are not transacting with  
24 GSR. Correct?

25 MS. GUERRIER: Objection.

1 [REDACTED] - 2/15/2022

2 A. Sure. There are other participants --  
3 there may be other participants that are not  
4 transacting with GSR, but, for instance, if Apple --  
5 if a hedge fund goes out and purchases a million  
6 shares of Apple securities, for instance, then --  
7 and that hedge fund is a net buyer over a -- over a  
8 window, over a one-hour window, let's say, and they  
9 buy a million shares of Apple, the rest of the  
10 market is a net seller of Apple securities.

11 Q. Let me just understand what you're  
12 saying. You're saying that you can tell what the  
13 rest of the market is doing by simply the  
14 transaction that Apple is doing in that circumstance  
15 you just described?

16 MS. GUERRIER: Objection;  
17 mischaracterizes his testimony.

18 But go ahead.

19 A. I feel like I'm teaching a Finance 101  
20 course. I'm sorry. But when you buy -- for every  
21 buyer there is a seller of a security. So for every  
22 buyer there is a seller.

23 Q. Yeah.

24 A. So when a hedge fund goes to the New York  
25 Stock Exchange and they purchase a million shares of

1 [REDACTED] - 2/15/2022

2 Apple securities, someone has to sell them those  
3 shares.

4 So if that hedge fund is a net buyer of  
5 Apple securities, the rest of the market, on net, is  
6 a net seller of Apple securities.

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 So on net, the rest of the market was a  
14 net seller of XRP during this window that they  
15 bought.

16 Q. Here is the problem I'm having with your  
17 statement. If -- let's just take an example of GSR  
18 going into the market and selling a million dollars'  
19 worth of XRP.

20 On the other side of the transaction  
21 there is going to be other parties buying that  
22 million dollars. That's your point. Right?

23 MS. GUERRIER: Objection.

24 A. The other parties are always on the --  
25 there's parties on the other side of a transaction.

1 [REDACTED] - 2/15/2022

2 Q. Okay. Now, isn't it possible in that  
3 scenario that there is going to be 100 other parties  
4 engaging in buys and sells in the market during that  
5 same period?

6 MS. GUERRIER: Objection.

7 A. The question that was asked -- the  
8 question that was asked to me is you can't -- you  
9 said I can't tell anything about the rest of the  
10 market. And the truth is, yes, I can tell. I'm  
11 answering the question you originally asked. And  
12 the question was I can't tell anything about the  
13 rest of the market. And I think that is incorrect.  
14 I can tell that the rest of the market was on  
15 average net sellers.

16 Q. You're saying that the -- you're -- let  
17 me phrase the question this way.

18 Other than the counterparties to GSR in  
19 these transactions, can you tell anything or did you  
20 analyze -- let me strike that.

21 Other than the counterparties to these  
22 transactions that you analyzed with regard to GSR,  
23 did you analyze any other market participants at the  
24 time of these particular transactions?

25 MS. GUERRIER: Objection to form.

1 [REDACTED] - 2/15/2022

2 A. The -- the rest of the market -- the rest  
3 of the market is on the other side of -- of the  
4 trade. So this analysis is by the rest -- is  
5 analyzing what -- this graph -- if GSR is a net  
6 buyer the rest of the market, by construction, is a  
7 net seller. It has to be the case. It has to be  
8 the case. This is a -- unlike Apple securities,  
9 where somebody could potentially borrow the stock  
10 and not have a share, this is a ledger activity. So  
11 for every buyer, there has to be a seller --

12 Q. I agree.

13 A. -- to be controlled -- to be -- for  
14 the -- for the transaction to be recorded on the  
15 ledger, it has to be verified on the -- on the  
16 blockchain that they actually bought -- they own the  
17 security and they sold it to them.

18 Q. I completely agree with that.

19 My question is, other than the net --  
20 the person who is buying from GSR -- I'm sorry?

21 If GSR is buying, the person who was  
22 selling to GSR during that period, other than those  
23 people, there could be other transactions in the  
24 market that are not between GSR and those  
25 purchasers?

1 [REDACTED] - 2/15/2022

2 A. Sure. I never said that --

3 MS. GUERRIER: Hold on. Hold on.

4 Objection to form and also asked and  
5 answered.

6 Go ahead.

7 A. Okay. I never said that the -- there  
8 were -- there could -- there could be other  
9 counterparties in the market that were trading at  
10 that time. In fact, the -- yeah, there could be and  
11 some other -- there could be other counterparties  
12 that were trading. In fact, we know that there must  
13 be other counterparties that were at least taking  
14 the other side of GSR's trades.

15 Q. At least taking the other side. But  
16 there could be counterparties that were not taking  
17 the other side and that were trading in XRP separate  
18 and apart from these transactions. Correct?

19 MS. GUERRIER: Objection to form.

20 A. I've already explained this. Obviously,  
21 yes, there's other parties that are trading GSR  
22 data.

23 Q. And you didn't analyze the trading of  
24 those other parties that are trading in GSR other  
25 than the GSR transactions themselves?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 A. I analyzed the net trading of GSR and the  
4 rest of the market is -- by construction, is the  
5 converse of that. So I -- the rest of the market is  
6 a net seller over the period where GSR is buying and  
7 vice versa.

8 So I would not characterize it as -- I  
9 can't say anything about the other counterparties.  
10 This -- so I'll just leave it at that.

11 Q. But you just analyzed the on-ledger  
12 trading by GSR. Correct?

13 A. That's correct.

14 Q. So there could have been off-ledger  
15 trading by GSR during that period. Correct?

16 MS. GUERRIER: Objection to form;  
17 asked and answered.

18 Go ahead.

19 A. There could have been.

20 Q. And you didn't analyze that as part of  
21 your analysis?

22 MS. GUERRIER: Objection.

23 A. I didn't have the data to analyze it.

24 Q. Okay. Now, I want to show you -- let's  
25 mark as [REDACTED]-3 the Ferrell rebuttal report.



1 [REDACTED] - 2/15/2022

2 (Exhibit [REDACTED]-3 was marked.)

3 Q. There you go.

4 A. Thanks.

5 Q. And I'll just ask you, did you review  
6 that report prior to your testimony today?

7 A. Yes, I reviewed this report at some  
8 point.

9 Q. Okay. And I want to ask you to turn to  
10 Paragraph 18, which is on Page 11. And in this  
11 paragraph, Professor Ferrell employed what he calls  
12 a square root price impact model. Do you see that?

13 A. Which paragraph?

14 Q. 18 on Page 11, bottom of Page 11. Why  
15 don't you just read that paragraph to yourself,  
16 please.

17 A. (Pause.)

18 Q. Okay?

19 A. Yes.

20 Q. Okay. And Professor Ferrell includes  
21 from this analysis that the potential XRP price  
22 impact from GSR trading using that square root model  
23 is approximately 1.6 percent compared to the  
24 41 percent XRP price return over this period. Do  
25 you see that?

1 [REDACTED] - 2/15/2022

2 A. Yes, I see that sentence.

3 Q. Now, are you familiar with the square  
4 root price impact model?

5 A. I looked at the model because he cited  
6 it, but the model he uses is not an acceptable model  
7 in the field. It's not one that's widely used.  
8 It's just some ad hoc model that was published in a  
9 no-name journal. So it's not a widely model -- used  
10 model in the field. I don't know why he picked some  
11 obscure model that no one uses.

12 Q. So you're basically saying that this  
13 model is not useful to analyze the impact of -- on  
14 price of GSR's trading?

15 A. I --

16 MS. GUERRIER: Objection.

17 Go ahead.

18 A. I would need to more fully analyze the --  
19 the model before I give a complete opinion on it.  
20 But at least as a way as implemented by Professor  
21 Ferrell where these models are typically done over  
22 short periods of time, there's several ways that he  
23 implemented the model that are incorrect. For  
24 instance, he only considered the -- he only  
25 considered the -- he considered total volume --

1 [REDACTED] - 2/15/2022

2 well, I can go over why -- why he -- why his  
3 implementation of the model is incorrect. One --  
4 there is -- there is many reasons, but I don't know  
5 if you want me to go into that.

6 Q. Why don't you give us those reasons. I'm  
7 happy to hear them.

8 A. Okay. Well, first of all, he took a Y  
9 parameter, which was from another paper. And that  
10 parameter was calibrated -- that parameter was --  
11 was calibrated using the price of bitcoin. It  
12 wasn't calibrated using the price of XRP. If I look  
13 at his model and look at the implementation, his  
14 model was also over -- let me look at his equation.

15 So he also used a total volume rather  
16 than the on-ledger volume that he examined. The  
17 problem with using total volume is that volume on  
18 many exchanges is -- is been known -- has been shown  
19 in the academic literature to be dominated by wash  
20 trading. And so using a volume from the total space  
21 and only putting XRP's behavior on ledger but  
22 dividing it by a large number mechanically deflates  
23 the price impact number so that puts a mechanical  
24 bias in his -- in his estimate.

25 So those are -- I think there is --

1 [REDACTED] - 2/15/2022

2 there's more reasons -- there is more reasons, but I  
3 think even -- even if you do look at his number,  
4 1.6 percent compared to 41 percent, so his model by  
5 his own estimates does say that there is price  
6 impact.

7 Now, I'm not -- I'm not opining on it,  
8 but apparently Professor Ferrell is and he is  
9 showing that there is some price impact. Now, given  
10 the fact that he has these biases in his model,  
11 those biases -- in that those biases, both the  
12 parameter as well as the number that he used as --  
13 was the volume number, those biases make that  
14 1.6 percent -- it would be larger than that if you  
15 control -- it would be -- my understanding, that  
16 number would be larger than that if you control for  
17 those biases.

18 But -- so I think his -- I think his  
19 analysis is really a very poor way to do price  
20 impact. There is literature on price impact, but he  
21 chose to cite some obscure paper in an obscure  
22 journal to perform such analysis. So I do -- there  
23 is other reasons, but I don't -- I don't think his  
24 analysis is reliable.

25 Q. Is there -- just to be clear, when you

1 [REDACTED] - 2/15/2022

2 say that the percentage of trading off ledger was  
3 potentially inflated, you didn't consider any  
4 off-ledger trading in your analysis. Correct?

5 MS. GUERRIER: Objection.

6 A. I considered on-ledger trading because I  
7 have data for that and I could determine who the  
8 market players are and I'm saying that it could  
9 potentially induce bias for dividing by and  
10 on-ledger volume if one doesn't know the extent to  
11 which that trading -- who the participants are, if  
12 that was even a legitimate volume.

13 Q. Do you have any sense at this point in  
14 the period of time that's analyzed in Figure 1, what  
15 percentage of trading of XRP was on ledger versus  
16 off ledger?

17 A. I do -- I do have a general sense, but  
18 I'm not -- I think in this figure, it was  
19 approximately 15 percent, but I could be off.

20 Q. So 15 percent of the trading was on  
21 ledger?

22 A. I think so.

23 Q. So 85 percent of the trading was off  
24 ledger?

25 A. When you use the term "trading," you have

1 [REDACTED] - 2/15/2022

2 to be careful what you mean by that because as shown  
3 in many academic papers and industry reports,  
4 exchange volume is often driven by wash trading  
5 so -- and exchanges have a strong incentive to  
6 inflate their volume. So 85 percent may not  
7 actually be 85 percent. It could be zero. It could  
8 be -- could be 80 percent.

9 Q. Okay. But you didn't consider it at all.  
10 Fair?

11 MS. GUERRIER: Objection.

12 A. I didn't have -- as I explained earlier,  
13 I didn't have the data. As -- as far as I  
14 understand, Ripple did not provide or I was not  
15 provided the data for these on-ledger exchanges -- I  
16 mean, these -- these off-ledger exchanges.

17 Q. Okay. You don't know what Ripple  
18 provided. Right? You weren't intending to comment  
19 on Ripple's production?

20 A. Yeah, I shouldn't have commented on  
21 Ripple's production. I guess I should just say I  
22 didn't have it.

23 Q. Okay. Is it also fair to say, though,  
24 that off-ledger trading would have a potential  
25 impact on the price of XRP?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection.

3 A. It could have a price -- it could have an  
4 impact on the price of XRP.

5 Q. Okay. Now, one of the premises of  
6 Figure 1 was -- just to look back at your report, if  
7 you look at Figure 1 again. Figure 1, if you see at  
8 1:10 p.m., you see there is a reference to a UTC --  
9 1:00 p.m. UTC, a partnership announcement. Do you  
10 see that?

11 A. Yes.

12 Q. And this is a reference to an  
13 announcement that Ripple made of a partnership that  
14 it had -- it had entered into. Correct?

15 MS. GUERRIER: Objection.

16 A. I can read the precise text, but there is  
17 some sort of partner -- there's some sort of  
18 announcement, Ripple partnership, yes.

19 Q. And you made the suggestion -- one of the  
20 suggestions you're making in your report, tell me if  
21 this is right, is that the timing of the trading by  
22 GSR was related to that announcement. Correct?

23 MS. GUERRIER: Objection.

24 A. Well, I'm looking at Paragraph 17, and I  
25 looked at email correspondence, which is cited here.

1 [REDACTED] - 2/15/2022

2 There is directions from Patrick Griffin, EVP of  
3 business development. [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 And then [REDACTED], VP of finance.

8 They gave -- there is email correspondence and they  
9 said GSR was instructed by Griffin to make purchases  
10 up to 300,000 and to consider placing offers on the  
11 ask side of the book to tighten spreads and attract  
12 more buying volume from the market.

13 So as I say in my report, his decision --  
14 Griffin's direction to make purchases and place  
15 offers to tighten the spread and attract more  
16 volume, buying volume, suggests that Griffin wanted  
17 GSR to purchase XRP and induce others into doing --  
18 buying the same.

19 If you have an important announcement,  
20 one trades on that announcement, one moves the  
21 announcement, that's one way to signal to the market  
22 that there is positive information.

23 So it does seem that the timing of those  
24 emails and coordination beforehand doesn't seem like  
25 it's an accident. They definitely had -- my review



1 [REDACTED] - 2/15/2022

2 of the correspondences is they have a purpose for  
3 trading. I generally -- if someone is spending  
4 \$300,000, they have a purpose for it.

5 Q. Did you do any analysis of the time of  
6 day that GSR typically traded -- I'm sorry.

7 Did you do any analysis at the time of  
8 day that GSR traded on the -- traded XRP versus the  
9 rest of the market trading XRP during that period?

10 MS. GUERRIER: Objection to form.

11 A. I'm focused on this particular period.  
12 The -- I imagine it is the case that the markets  
13 trade more at certain times of day, but I'm not  
14 looking at -- and that's a criticism Professor  
15 Ferrell makes of my report. I'm not looking at  
16 total volume. I'm looking at net -- net buying  
17 volume. I'm looking at net activity.

18 Q. And so -- but you see from Figure 1, just  
19 to be clear, that there is no trading by GSR in the  
20 period prior to -- prior to 1:00 UTC on  
21 September 15th. Correct?

22 MS. GUERRIER: Objection.

23 A. There is no trading by GSR prior to the  
24 announcement.

25 Q. And you saw that -- if you look at -- why

1 [REDACTED] - 2/15/2022

2 don't you look at Professor Ferrell's rebuttal  
3 report, Page 35.

4 (Discussion off the written record.)

5 A. Page 35 of his report?

6 Q. 35. Yes, exactly. Do you see there that  
7 Professor Ferrell analyzed intraday trading volume  
8 on September 15th, 2016? Do you see that?

9 MS. GUERRIER: Objection.

10 Also, I think you're referring to  
11 Figure 1 (unintelligible) analyze (unintelligible)  
12 trading volume.

13 A. You're referring to Exhibit 1 here?

14 Q. Yeah, that's what I was referring to.

15 A. Okay. Yes, some summaries exist on  
16 Exhibit 1.

17 Q. Yes. And according to Professor  
18 Ferrell's analysis, for the period of 13:00 UTC to  
19 19:00 UTC, GSR traded 30 percent of its volume that  
20 day versus the rest of the market trading 55 percent  
21 of its volume that day. Right?

22 MS. GUERRIER: Objection.

23 Q. Is that correct? During that period of  
24 time.

25 A. Can you restate the question?

1 [REDACTED] - 2/15/2022

2 Q. Yeah. Let me back up.

3 A. Yeah.

4 Q. During the period 7:00 to 13:00 UTC, GSR  
5 traded zero volume. Correct?

6 A. That's correct.

7 Q. And during that same period, 1 percent of  
8 the volume for trading that day was traded by the  
9 rest of the market -- the exchanges that day.  
10 Correct?

11 MS. GUERRIER: Objection.

12 A. That's correct.

13 Q. But then between 13:00 to 19:00 UTC, GSR  
14 traded 30 percent of its volume that day and the  
15 rest of the market traded 55 percent of its volume  
16 that day. Correct?

17 MS. GUERRIER: Objection.

18 A. According to Professor Ferrell's  
19 analysis. I didn't independently check these  
20 numbers.

21 Q. Okay. So you have no basis to disagree  
22 with Professor Ferrell's analysis. Correct?

23 MS. GUERRIER: Objection.

24 A. I would hope that he could -- this is a  
25 pretty simple calculation. I would hope that his

1 [REDACTED] - 2/15/2022

2 staff could do this. But based on some of the other  
3 analyses, I'm not sure.

4 Q. Do you have any basis to disagree with  
5 Professor Ferrell's analysis?

6 MS. GUERRIER: Objection.

7 Q. Instead of your, you know, just  
8 commentary on Professor Ferrell's expertise?

9 MS. GUERRIER: Objection.

10 A. Well, it's not commentary. You asked me  
11 about a price impact model that was applied in a  
12 major report that was not in any major journal.  
13 So -- so, you know, I'm just saying that I would --  
14 I would hope that there is some details to  
15 calculating this. I'm not sure how -- who had a  
16 system, what they know about blockchain, and so  
17 forth. I would think that these -- I would think  
18 these are very simple calculations. So I would hope  
19 they would be right.

20 Q. All right. But you didn't do anything to  
21 determine whether they're right or not, did you?

22 MS. GUERRIER: Objection.

23 (Simultaneous speaking.)

24 A. I don't think these numbers have any  
25 bearing on my report.

1 [REDACTED] - 2/15/2022

2 Q. Okay. I'm not asking you whether they  
3 had bearing or not. I'm asking you did you do  
4 anything to determine whether these numbers were  
5 accurate or not?

6 MS. GUERRIER: Asked and answered.

7 A. No.

8 Q. Okay. And so sitting here today, you  
9 have no basis to disagree with this analysis.

10 Correct?

11 MS. GUERRIER: Objection.

12 A. I've already answered that question.

13 Q. What's your answer?

14 MS. GUERRIER: Asked and answered.

15 Q. You can answer.

16 A. I don't rely on other people's analyses,  
17 whether it's -- I'm not going to opine whether other  
18 people's analyses is right or wrong without having  
19 checked it myself. I would hope you would do the  
20 same.

21 Q. Right. And I'm asking you, have you  
22 checked it yourself?

23 A. No.

24 Q. Okay. You didn't take the time to do  
25 that?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Asked and answered.

3 A. Again, I don't think this analysis has  
4 any bearing on my report. If you would like to ask  
5 me why this analysis has no bearing on my report, I  
6 can answer that question, but I guess you don't want  
7 to answer -- ask me that.

8 Q. I think we've gone through that.

9 MR. CERESNEY: All right. Let's take  
10 a lunch break.

11 THE VIDEOGRAPHER: Off the record,  
12 12:56.

13 (Break.)

14 THE VIDEOGRAPHER: This is Segment  
15 No. 4. We're back on the record, 1:51.

16 Q. [REDACTED], I'm going to ask you a  
17 few additional questions before we move to Figure 2.

18 The first question I have is in your  
19 report you cite a number of emails between GSR and  
20 Ripple personnel, and some just among Ripple  
21 personnel. Correct?

22 A. Yes.

23 Q. In your report, all of the emails that  
24 you cite are emails that are between either GSR and  
25 Ripple and not external to GSR and Ripple. Correct?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 A. It's hard for me to -- it's hard for me  
4 to answer a question about all emails, but at least  
5 in terms of Figure 1, these emails were regarding  
6 communications. These emails were regarding  
7 communication between GSR and Ripple and internal  
8 Ripple communications.

9 Q. Okay. So then let's look at the  
10 communications relating to Figure 2. I think that  
11 starts in Paragraph 19 and 20.

12 Is it true -- isn't it the case that you  
13 cite there internal emails -- let me see -- isn't it  
14 the fact that you cite there emails between Ripple  
15 and GSR?

16 MS. GUERRIER: Objection to form.

17 A. They're emails between Ripple and GSR and  
18 other people at Ripple are copied on it too.

19 Q. Okay. So Ripple and GSR?

20 A. That's what I'm focused on here, yes.  
21 There -- I mean -- related to your question, there  
22 may be internal -- I'm not sure if there was an  
23 internal email between Ripple execs as part of the  
24 chain, if that's what you were asking.

25 Q. All I'm trying to get at is these emails

1 [REDACTED] - 2/15/2022

2 were not available to anyone external to either  
3 Ripple or GSR?

4 MS. GUERRIER: Objection to form.

5 A. Not to my knowledge.

6 Q. Okay. And then let's look at the emails  
7 relating to Figure 3. That's Paragraphs 22 and 23.

8 Fair to say those emails, again, are  
9 emails that are either -- that are internal to  
10 Ripple and GSR?

11 A. That's my understanding.

12 Q. Okay. And let's look at the emails  
13 relevant to Figure 4, which I think are in  
14 Paragraph 24. Again, those are internal emails  
15 between Ripple personnel. Correct?

16 MS. GUERRIER: Objection.

17 And take your time to look at  
18 Paragraph 24.

19 A. I'm sorry. Can you repeat the question?

20 Q. In Paragraph 24, the emails you cite  
21 there are either internal emails -- Ripple internal  
22 emails amongst Ripple personnel or emails between  
23 Ripple and GSR?

24 MS. GUERRIER: Objection.

25 A. I believe that's correct.



1 [REDACTED] - 2/15/2022

2 Q. Okay. And then looking to the emails  
3 that are relevant to Figure 5, which I believe is  
4 from Paragraph 26 to 28, again, those emails are  
5 either internal emails involving Ripple personnel or  
6 emails between Ripple and GSR. Correct?

7 MS. GUERRIER: Objection.

8 A. I'm sorry. Can you restate the question?

9 Q. Yes. Paragraphs 26 to 28, the emails  
10 that are relevant to Figure 5, those are either  
11 internal emails with Ripple personnel or emails  
12 between Ripple and GSR. Correct?

13 A. Let me just review my paragraph.

14 MS. GUERRIER: And I'll renew my  
15 objection.

16 A. (Pause.)

17 That's correct, although I did notice in  
18 reviewing the communications that either Larsen or  
19 Garlinghouse did use, like, a personal email. I  
20 don't know if that was their work email that they  
21 always used or just a personal email that they  
22 preferred to use in all their work communications,  
23 but...

24 Q. Okay. But was it still a communication  
25 between --

1 [REDACTED] - 2/15/2022

2 A. Yes.

3 Q. -- Garlinghouse and Larsen?

4 A. Yes. That's correct.

5 Q. Okay. And then let's look at the emails  
6 that relate to Figure 6, which are in Paragraph 29  
7 to Paragraph 32. And, again, I want to just ask you  
8 if those emails that you cite are either internal  
9 Ripple emails, so Ripple emails -- emails amongst  
10 Ripple personnel, or emails between Ripple and GSR?

11 A. The -- Figure 6 also quotes from -- from  
12 the liquidity extraction report, I believe. Or one  
13 of these figures does.

14 Q. And the liquidity extraction report is a  
15 report that's maintained by GSR?

16 MS. GUERRIER: Objection.

17 A. That's -- it's an internal report  
18 maintained by GSR in conjunction with Ripple.

19 Q. Okay.

20 A. I'm not sure who is ultimately  
21 responsible.

22 Q. Okay. So then just restating my initial  
23 question on this whole section. Is it fair to say  
24 that the emails that you cite in support of your  
25 analysis of GSR's trading on behalf of Ripple or

1 [REDACTED] - 2/15/2022

2 GSR's trading on behalf of Larsen and Garlinghouse,  
3 are all either emails that are internal to Ripple  
4 personnel or emails between Ripple and GSR?

5 MS. GUERRIER: Objection.

6 A. I believe that's correct.

7 Q. And is it also the case that these emails  
8 would not have been available external to Ripple and  
9 GSR during that time period?

10 MS. GUERRIER: Objection.

11 A. I believe that is correct, but I'm  
12 speculating in terms of I don't know who they would  
13 have shared it -- might have -- might have shared it  
14 with or might have discussed this with.

15 Q. Fair enough.

16 But you have no basis to believe, sitting  
17 here today, that these emails were shared beyond  
18 Ripple and GSR?

19 MS. GUERRIER: Objection.

20 A. I believe that these -- the emails that  
21 I've reviewed are internal email correspondence.

22 Q. And so you don't have any basis, sitting  
23 here today, to believe that anyone -- any holder of  
24 XRP would have been aware of these emails?

25 MS. GUERRIER: Objection.

1 [REDACTED] - 2/15/2022

2 A. Do you want me to answer each of these  
3 questions or do you want me to answer the question  
4 where -- where you're leading with this?

5 Q. I want you to answer the question I ask.

6 A. Okay.

7 Q. That's what this is about.

8 A. All right. So --

9 Q. You answer the question I ask. So...

10 A. Okay. So can you repeat the question,  
11 sir?

12 Q. I'll repeat the question.

13 So you don't have any basis, sitting here  
14 today, to believe that anyone -- sorry -- that any  
15 holder of XRP would have been aware of these emails  
16 at the time?

17 MS. GUERRIER: I renew my objection.

18 Go ahead.

19 A. I would be speculating to say who was  
20 aware or not aware of emails. What I do think is  
21 relevant is that every holder of XRP can see price  
22 movements, can see price patterns in the data. So I  
23 don't -- I doubt that the holders of XRP are reading  
24 internal emails. I'm not -- I'm not opining on  
25 that.

1 [REDACTED] - 2/15/2022

2 Q. So holders of XRP see the price of XRP.  
3 That's your point?

4 A. Yes.

5 Q. Okay. Fair enough.

6 A. And the volume.

7 Q. And the volume.

8 Although, as you said on the volume, it's  
9 not 100 percent clear what the volume of XRP  
10 actually is, given what you said earlier about  
11 exchange trading. Correct?

12 MS. GUERRIER: Objection.

13 A. Yeah. They can see ledger volume. They  
14 could -- they could also see ledger volume, the type  
15 of analysis that I did in the report where one  
16 figures out the identity of the trades on the  
17 ledger. That is -- that is a possibility that  
18 someone could be doing that in realtime in the same  
19 way that [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED] And there -- there are firms and  
25 people that analyze this type of trading.

1 [REDACTED] - 2/15/2022

2 Q. Are you aware of anybody who did that  
3 analysis at the time?

4 A. I am not.

5 Q. Okay. Now, one other thing you said  
6 earlier, is it fair to say that the volume of  
7 trading in XRP, the true volume of trading in XRP,  
8 not -- I'm going to set aside wash trading. But the  
9 true volume of X- -- of trading an XRP increased  
10 from 2016 to 2020. Is that a fair statement?

11 A. That's my understanding.

12 Q. And as the volume of XRP increases, is it  
13 also fair to say that the ability of one trader, to  
14 influence that price, lessens?

15 MS. GUERRIER: Objection to form.

16 A. I think it depends on a number of  
17 circumstances. If the trader trades more capital,  
18 for instance, or more volume, they could potentially  
19 move the price.

20 So -- and it also depends on the  
21 intentions of the other traders, what their  
22 incentives are. So if they have an incentive to  
23 keep the price high as well, that could -- they --  
24 people could have similar -- similar motives.

25 Q. Fair to say that it's much more

1 [REDACTED] - 2/15/2022

2 complicated to influence the price of a -- of a  
3 digital asset as the volume increases?

4 MS. GUERRIER: Objection to form.

5 A. I think the conventional wisdom would be  
6 that it is very difficult to influence the asset  
7 prices in general, in general, asset prices. What  
8 our academic paper showed is that one trader was  
9 able to move the price of bitcoin, which is a very  
10 large -- which is the most liquid token in the  
11 crypto space. We also showed they were responsible  
12 for even larger movements on other crypto assets.

13 So if it can be done on bitcoin through  
14 one trader, I definitely -- it's definitely possible  
15 and [REDACTED] other digital assets  
16 were -- were moved and manipulated.

17 So my report is not about manipulation,  
18 but if you're asking about whether things are  
19 possible, the volume of bitcoin is many times larger  
20 than XRP volume. So if you're asking me my opinion  
21 about whether it's possible, that's beyond the scope  
22 of my report, but I do -- I will answer you, yes,  
23 it's definitely possible that one trader can move  
24 the market because [REDACTED] in  
25 one -- [REDACTED] -- [REDACTED]

1 [REDACTED] - 2/15/2022

2 [REDACTED].

3 Q. [REDACTED]

4 [REDACTED] Do you know who that  
5 trader was?

6 A. No.

7 Q. Okay. And do you -- does the fact that  
8 one trader can influence the price of bitcoin, as  
9 you suggested, would that mean that there could be a  
10 central actor impacting the price of bitcoin?

11 MS. GUERRIER: Objection.

12 A. I want to -- I want to go back to the  
13 question of -- your previous question. You asked me  
14 if I know who that trader is. I'm going to say --  
15 I'm going to say that I'm not positive who that  
16 trader is. I'm not positive who that trader is.  
17 The previous question you asked me.

18 Q. Yeah.

19 A. So I'm going to say that -- I'm not --  
20 I'm not sure who that trader is.

21 Q. Do you have speculation as to who that  
22 trader is?

23 MS. GUERRIER: We don't want you to  
24 speculate.

25 A. I -- I'd rather not speculate.



1 [REDACTED] - 2/15/2022

2 Q. Okay. But there is a central actor who  
3 you believe influenced the price of bitcoin during  
4 that period. Correct?

5 A. It's -- yeah, it's not just what I  
6 believe. [REDACTED] that was  
7 through all of the analysis.

8 Q. Okay. And one of the things you also  
9 said earlier was that -- when I asked you about your  
10 investment in -- whether you had purchased digital  
11 assets, you said that digital assets are more  
12 speculation than an investment. Do you remember  
13 that?

14 A. Yes.

15 MS. GUERRIER: Objection to the  
16 extent you're mischaracterizing his testimony.

17 MR. CERESNEY: Okay. I believe he  
18 just said that is what he said.

19 Q. So having said that, what do you  
20 understand to be the difference between speculation  
21 and an investment?

22 A. That's a good question. That's  
23 actually -- that's actually the subject of many  
24 discussions between a colleague of mine and he asked  
25 finance professors this question.

1 [REDACTED] - 2/15/2022

2           So I think -- I think the difference  
3 between speculation and investment is -- ultimately  
4 probably comes down to the -- the -- the fact that  
5 one -- one answer to the question that is at least  
6 my colleague's answer. I'm not sure -- it's not a  
7 complete one. But one answer to the question is  
8 that it comes down to an expected return that is  
9 positive, that the respective return, for instance,  
10 if one goes to Las Vegas, the expected return on  
11 average -- now, you may get lucky and make money  
12 going to Vegas, but on average, the expected return  
13 is negative. And the expectation -- the expected  
14 return should be positive to be an investment.

15           Now, I think there is also an aspect of  
16 that, too, which depends on whether speculation  
17 versus investment, whether the -- whether -- if it's  
18 an investment, is it tied to -- is it tied to  
19 future -- future cash flows or a hope from profit  
20 from -- from future activities related to that.

21           So -- so -- yeah -- so it's a complex --  
22 a complex question. I guess I'll give you -- I'll  
23 give you the short answer. I can go into it more if  
24 you'd like, but I know you don't -- not big on long  
25 answers, so...

1 [REDACTED] - 2/15/2022

2 The short answer is -- is probably the --  
3 whether the expected return, not the -- the expected  
4 return is positive or negative. And -- but there is  
5 an aspect of the variance also mattering. If  
6 something has an extreme variance, it's extremely  
7 risky, then at what point does that variance  
8 become -- make it more speculation than an  
9 investment.

10 Q. Okay. I want you to look at Figure 2 of  
11 your report, which I believe is at Page 15 of your  
12 report. And I want to ask you a few questions about  
13 Figure 2.

14 Is it fair to say that the structure of  
15 Figure 2 is very similar to Figure 1 in terms of the  
16 pink lines being net buys, there is no blue lines  
17 here, but -- and then the volume being on the -- the  
18 volume of XRP being on the Y axis on the right? Is  
19 that fair?

20 A. That's correct.

21 Q. And across the bottom, the X axis is the  
22 time period. Correct?

23 A. That's correct.

24 Q. And is it also fair to say that this  
25 Figure 2 is more zoomed than Figure 1?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection.

3 Q. Let me explain what I mean by that.

4 Figure 1, the price of XRP range from six-tenths of  
5 a cent to nine-tenths of a cent, and here the range  
6 is much narrower. It's 79-hundredths of a cent to  
7 84-hundredths of a cent. Is that fair?

8 A. That is correct.

9 Q. Okay. And the GSR volume ranges in  
10 Figure 1 were from 1 million to 7 million, and here  
11 it goes from no activity to 400,000 XRP purchased.  
12 Correct?

13 A. That appears to be the case.

14 Q. And the purchases and sales that are  
15 reported here by GSR are during a two-and-a-half to  
16 three-hour period. Is that fair?

17 A. That's correct.

18 Q. Okay. So will you agree with me that my  
19 characterization that Figure 2 is a much -- is a  
20 more zoomed analysis than Figure 1?

21 MS. GUERRIER: Objection.

22 Q. You can answer.

23 A. It is focused on this particular short --  
24 shorter window.

25 Q. Okay. And fair to say, again, as we

1 [REDACTED] - 2/15/2022

2 talked about on Figure 1, that Figure 2 also only  
3 focuses on on-ledger XRP trading by GSR?

4 A. That's correct.

5 Q. And is it also the case, as we talked  
6 about on Figure 1, that this Figure 2 is not  
7 intended to show any causation between the GSR  
8 trading and the price of XRP?

9 A. Well, I'm not -- I'm not saying there  
10 is -- I'm not doing a formal causal analysis here,  
11 but I do make the observation, or one can obviously  
12 see that the price stops exactly at 8 cents, which  
13 is exactly the point, that the GSR is -- exactly the  
14 point of GSR purchasing that -- that price.

15 So if one wanted to ask the question of  
16 what's the odds of this happening by chance, one  
17 could -- one could obviously see that that  
18 probability is -- is very extreme.

19 Q. And in Paragraph 20, I believe you write  
20 in the second-to-the-last sentence in Paragraph 20:  
21 The trading seems to have succeeded in protecting  
22 XRP from dipping below .008 USD, as the price did  
23 not go below this level.

24 A. That's correct.

25 Q. So that reflects what you just said in

1 [REDACTED] - 2/15/2022

2 words?

3 MS. GUERRIER: Objection.

4 A. Yes. The two thoughts are related.

5 Q. Okay. And you used the word "seems"  
6 because you didn't test causation. Is that fair?

7 MS. GUERRIER: Objection.

8 A. The -- as I stated previously, I was not  
9 asked -- as part of my assignment, I was not asked  
10 to opine on -- I was -- I'll read my assignment  
11 again.

12 Q. Okay.

13 A. And that's what I was examining here, did  
14 they take steps to influence the price of X -- they  
15 took steps to influence XRP prices. I'm not -- I'm  
16 not opining on the aggregate success of moving XRP  
17 prices.

18 I do note, as I say here in the figure --  
19 as I say here, that trading seems to have succeeded  
20 because the price hits 8 cents and then goes back.

21 Q. Okay. And --

22 A. But, again, my analysis is limited to  
23 this window here.

24 Q. Right. And that's what I was going to  
25 ask you. Your analysis of the price staying above

1 [REDACTED] - 2/15/2022

2 8 -- .008 is just limited to this window?

3 A. That's correct.

4 Q. And this window is a two-and-a-half-hour  
5 stretch, basically?

6 A. That's correct.

7 Q. Did you analyze at all whether this price  
8 flow remained in effect beyond this  
9 two-and-a-half-hour window?

10 A. The -- Professor Ferrell criticized my  
11 report, that the price does -- went below, and  
12 claims that the price did go below 8 cents over a  
13 longer window. I think that -- that -- I think  
14 it -- I went back and reviewed the correspondence  
15 that I cited here and regarding that, and it seems  
16 that there is -- there was two things in the  
17 correspondence that, one, this trading was not just  
18 on -- related to an earlier comment.

19 This -- the email was directive that they  
20 were to trade on Poloniex as well. So I don't have  
21 data on Poloniex, but the email directs this type of  
22 trading on Poloniex. But it seems like, possibly,  
23 because they were trading on both exchanges, they  
24 ran out of capital, and they decided that there was  
25 no more trading at that point.

1 [REDACTED] - 2/15/2022

2 Q. Well, let me sort of break that down.

3 You refer to Professor Ferrell -- Professor  
4 Ferrell's analysis, which showed that in the period  
5 after Figure 2, the price of XRP went below .008 --

6 A. Yeah, can I see that?

7 Q. -- for a period of time --

8 Let me just finish my question.

9 -- for a period of time. Right?

10 A. Sorry.

11 Q. I'm going to -- is -- am I correct that  
12 that's what you were referring to?

13 A. Yes. I would like to look at Professor  
14 Ferrell's --

15 Q. Okay. So why don't we look at Professor  
16 Ferrell's report. That's -- I believe what you're  
17 referring to is Exhibit 2, which is on Page 36 of  
18 his rebuttal report, which is [REDACTED]-3.

19 MS. GUERRIER: Is that the exhibit  
20 that you're referring to, [REDACTED]?

21 THE WITNESS: Which -- yeah, this is  
22 related to this exhibit.

23 Q. And what do you understand this exhibit  
24 to show?

25 MS. GUERRIER: And just to be clear,



1 [REDACTED] - 2/15/2022

2 we're talking about Exhibit 2?

3 MR. CERESNEY: Yeah.

4 MS. GUERRIER: Ordinary course.

5 A. Yeah, well, first of all, the analysis  
6 should have said percent of time that XRP prices  
7 were lower than 8 cents, but it says percent of  
8 days, so I infer that this analysis is talking about  
9 any day which -- in which the price of XRP is below  
10 eight-tenths of 1 percent. And I have no reason to  
11 believe that that -- I have no reason to believe  
12 that that's incorrect.

13 Q. Okay. By the way, you keep referring to  
14 8 cents. This is eight-tenths of a penny. Right?

15 A. Eight -- eight-tenths of a penny is --  
16 (Simultaneous speaking.)

17 Q. Okay.

18 A. Yeah, sorry.

19 Q. Yeah, eight-tenths of a penny. That's  
20 what you meant?

21 A. Yeah.

22 Q. Eight-tenths of a penny. Okay. I just  
23 want to make sure we're precise.

24 A. Yeah, sorry. Eight-tenths of a penny.

25 Q. I didn't mean to suggest you were

1 [REDACTED] - 2/15/2022

2 intentionally --

3 A. Sure, yeah.

4 Q. Okay. And is it fair to say that this  
5 analysis shows that for the period following the  
6 period included in Figure 2, the price of XRP for  
7 most of that period was below .008 -- point  
8 eight-tenths of a cent?

9 A. Well, that's not what the analysis looked  
10 at exactly, his analysis, percent of days, not  
11 percent of time that the price is below 8 cents.

12 So in my understanding of what his  
13 analysis is, is that any time, if there was -- let's  
14 say we had a trading day, and the average price was  
15 8.5 cents, but it dipped at one point below the 8  
16 cents, he would call that day -- he would call that  
17 a day with a price below 8 cents.

18 So that's -- that's -- the statement you  
19 gave was a statement on what the average price was.  
20 That's not what Professor -- that -- that's the way  
21 probably the analysis -- I would have done the  
22 analysis.

23 But I think it's the -- I think this  
24 analysis is irrelevant to what I'm showing, because  
25 what I'm showing is they held the price forward

1 [REDACTED] - 2/15/2022

2 during the time they traded. The fact that they did  
3 not trade after that, or they stopped using the  
4 trading strategy, the price -- well, that's exactly  
5 what one would expect. If they stopped -- if they  
6 employed the trading bot for a window and they  
7 traded in that window, you would maintain the floor.  
8 And if they took -- they decided not to trade  
9 without that -- after that window, you would expect  
10 the price to fall below the floor.

11 (Exhibit [REDACTED]-5 was marked.)

12 Q. Okay. I wanted to show you what we  
13 marked previously as [REDACTED]-5, which is a CoinMarketCap  
14 price chart of XRP U.S. dollars for the time period  
15 October 1st, 2016 through December 31st, 2016.

16 Because you referred a number of times to  
17 Professor Ferrell's analysis and his saying that it  
18 was one day -- it was a day, and you referred to the  
19 fact that it could have been that the price of XRP  
20 was above .008 within that day.

21 And I just want to show you this price  
22 chart. And I want to ask you, if you look at this  
23 chart, the time period that's referenced in  
24 Figure 2, to remind ourselves -- first of all, I  
25 guess, let me just ask you, do you recognize this

1 [REDACTED] - 2/15/2022

2 chart?

3 A. No, I haven't seen -- I don't know if  
4 I've seen -- I doubt I've seen this precise chart.

5 THE WITNESS: Is this something I  
6 should have seen? I'm not sure.

7 MS. GUERRIER: Yeah. I'm going to  
8 object to this as well.

9 But go ahead.

10 A. I'm not -- I --

11 Q. Well, do you have any reason to believe  
12 that this is not an accurate price chart of XRP  
13 during this period?

14 A. I am -- if you pulled it from -- if  
15 somebody pulled it from CoinMarketCap, I would  
16 assume it's accurate.

17 Q. Okay. That's all I'm asking you --

18 A. Yeah.

19 Q. -- to assume for these purposes. And you  
20 see --

21 A. Can I -- I can't understand the -- the  
22 axis is kind of cut off. Is that October -- what --  
23 I can't see the dates on the bottom axis.

24 Q. So if you look at the dates, it starts  
25 with October 1st, 2016 --

1 [REDACTED] - 2/15/2022

2 A. Okay.

3 Q. -- and then it continues through  
4 December 31st, 2016.

5 A. Okay.

6 Q. Okay. And you see -- I think Figure 2  
7 was November 1st. Right?

8 MS. GUERRIER: I'm sorry. Which  
9 Figure 2 are you referring to?

10 THE WITNESS: In my report.

11 MS. GUERRIER: I just want to make  
12 sure we clearly identify it.

13 A. My report, Figure 2 is on November 1st.  
14 Yeah, this is correct.

15 Q. And this indicates that following  
16 November 1st, the price of XRP was well below .0008.  
17 Correct?

18 MS. GUERRIER: Objection. What  
19 indicates?

20 A. Well, the price -- the price was -- went  
21 above -- it looks to me like -- let me read the  
22 graph. Let me read the graph to make sure I'm  
23 reading it correctly.

24 (Pause.)

25 Well, I don't see November 1st marked on

1 [REDACTED] - 2/15/2022

2 this graph.

3 Q. Okay.

4 A. So I can't really infer from the graph  
5 when the price hit the 8 cents exactly, because I  
6 don't see the November 1st marked --

7 Q. Okay.

8 A. -- on the graph. Do you know where it  
9 is?

10 Q. Let's put it aside. It's not -- it's not  
11 a critical point. Why don't we put it aside.

12 Let's go to Figure 3. I wanted you to  
13 show -- I wanted to have you look at your report,  
14 Figure 3, which is on Page 17 of your report.

15 A. Okay.

16 Q. I wanted to focus on Figure 3. And first  
17 thing is, the structure of Figure 3 is structured  
18 the same way as Figures 1 and 2?

19 MS. GUERRIER: Objection.

20 A. Generally. Generally so.

21 Q. So, in other words, the X axis has the  
22 time period, the Y axis has the volume of -- the  
23 right-side X axis has the volume of XRP and then the  
24 volumes are in pink and blue. Pink is net buys,  
25 blue is net sales by GSR, and then the left-hand Y

1 [REDACTED] - 2/15/2022

2 axis is the price of XRP. Is that all correct?

3 A. That's all correct.

4 Q. And it's true that this is only on-ledger  
5 trading by GSR during this time period of  
6 September 25th and 26th. Correct?

7 A. Yes. This is only on-ledger trading, as  
8 I said, related to -- the email on the previous  
9 figure, it indicates that they -- that GSR is  
10 trading on Plo -- Plononiex or they called it Plo --  
11 Polo in the email. Meaning, they indicated they  
12 were doing a similar matter on Plonono (sic) on  
13 November 1st. I don't -- I don't know what they're  
14 doing on Plonono -- Plononiex on September 25th and  
15 26.

16 Q. Right. You didn't analyze Plononiex  
17 Trading?

18 A. Well, I don't have trading volume.

19 Q. Okay.

20 A. I don't -- I don't have the detailed  
21 trading data of Plononiex over this period, is my  
22 understanding.

23 Q. Okay. You refer in your -- in this  
24 figure to uneconomic trades. Actually, you refer to  
25 that in Paragraph 21 prior to this. You refer there

1 [REDACTED] - 2/15/2022

2 to "uneconomic trades." Do you see that?

3 A. Yes.

4 Q. And I want to focus on that concept of  
5 uneconomic trades.

6 Before we do that, though, I want to just  
7 ask, you have this reference in Figure 3 to the  
8 second sentence -- I'm sorry -- the third sentence.  
9 So if you look at Figure 3 there's a paragraph  
10 before the charts. Do you see that?

11 A. Underneath the figure heading?

12 Q. Yeah. Underneath the header --

13 A. Yes.

14 Q. -- Figure 3 there's a paragraph?

15 A. Yes. I see that.

16 Q. And the third sentence of that paragraph  
17 says: The XRP price was calculated using the volume  
18 weighted average price at one-minute intervals  
19 across all trades on the XRP Ledger involving the  
20 XRP-US -- USD trading pair.

21 Do you see that?

22 A. That's correct.

23 Q. What does that mean that there -- it's a  
24 volume weighted average price used to calculate the  
25 price?



1 [REDACTED] - 2/15/2022

2 A. So it basically, if you're going to  
3 compute an average -- suppose you have three trades  
4 that trade within a given one-minute interval. An  
5 equal weighted average would just take the -- take  
6 the average of the three. So suppose you have \$10,  
7 10.50 and \$11, the trade's going off. You could  
8 take the valuated average -- the equal weighted  
9 average price would be 10.5, but the volume weighted  
10 average price would be different in the similar way  
11 that we use value weighted returns in finance or  
12 volume weighted things.

13 But volume weighted average price which  
14 is a very standardized concept used in industry  
15 takes the average weighted by how much -- how many  
16 trades go off at that price. So in my example where  
17 you have 10 -- a trade that goes off at 10, 10.50,  
18 and \$11, if you have -- let's say you have -- let's  
19 say you have 50 -- let's say you have 90 percent of  
20 the volume going off at -- at \$11, then the volume  
21 weighted average price is going to be somewhere  
22 closer to -- somewhere closer to 10 -- 10.90 rather  
23 than taking the equally weighted average of 10.50  
24 because you're putting more weight on the  
25 observations that trade at a larger price.

1 [REDACTED] - 2/15/2022

2 Q. When you're constructing that volume  
3 weighted average price, though, there are prices  
4 above that average price and below that average  
5 price often. Correct?

6 A. Sometimes there are and sometimes there  
7 aren't because you might be in a one-minute interval  
8 where there's only one trading going or maybe  
9 there's multiple trades and they all trade at the  
10 same price.

11 But volume weighted average price --  
12 volume weighted average price is a very standardized  
13 measure used in many academic papers as well as  
14 industry uses it to summarize things.

15 Q. Yes.

16 But the actual average price doesn't  
17 signal that every trade occurred at that price.  
18 Correct?

19 MS. GUERRIER: Objection.

20 A. The -- it shows that on average the  
21 volume on a volume weighted basis it's comparing it  
22 relative to a volume weighted basis.

23 Q. Right.

24 But there could be trades above that  
25 price and trades below that price. Correct?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection.

3 A. There could be trades above and below the  
4 price.

5 Q. Okay. And then your statement in  
6 Paragraph 23 is that: GSR on average purchased XRP  
7 at a 1.5 percent premium compared to the last trade  
8 price.

9 Do you see that?

10 A. Paragraph?

11 Q. 23.

12 A. Yes.

13 Q. Second-to-last sentence, you say: The  
14 GSR on average purchased XRP at a 1.5 percent  
15 premium compared to the last trade.

16 Do you see that?

17 A. Yes.

18 Q. And so what you're suggesting here is  
19 that GSR in their transactions on this -- in this  
20 time period, purchased XRP at a premium to what the  
21 average price was. Correct?

22 MS. GUERRIER: Objection to form.

23 A. That's not what I write in the report.

24 Q. Okay. What do you write? Tell us?

25 A. I write they purchased XRP at a 1.5

1 [REDACTED] - 2/15/2022

2 premium compared to the last price. And that's  
3 exactly what I do. And Professor Ferrell  
4 mischaracterizations my report by saying I computed  
5 relative to the volume weighted average price. I  
6 did not compute it relative to the volume weighted  
7 average price. I computed the price relative to  
8 what it says, exactly what here is said: At a  
9 1.5 percent premium compared to the last trade.

10 So it's a trade-by-trade analysis and  
11 compares the trade relative to the last trade and  
12 shows that they're overpaying by 1.5 percent on  
13 average.

14 Now, the graph would show, if you do it  
15 on volume weighted average price, you're also going  
16 to get the result. Professor Ferrell is wrong in  
17 his report to criticize me from -- for comparing it  
18 to the volume weighted average price. If he  
19 would've looked -- taken -- if his team would've  
20 taken the time to look at the code we provided, I  
21 believe they could've seen that or they could've  
22 just read our report because we described what we  
23 did here, and that's not what we did. We didn't  
24 take it relative to volume weighted average price.  
25 But if one took it relative to the volume weighted

1 [REDACTED] - 2/15/2022

2 average price, you're also going to get a premium.

3 So the result is very robust.

4 Q. And to be clear, when we talk about a  
5 premium of 1.5 percent, are we talking here about a  
6 difference in bids of two-thousandths of a penny?

7 A. We're talking about -- we're -- we're  
8 talking -- I'm not going to do math on the fly, but  
9 we're talking about 1.5 percent of the -- the quoted  
10 price.

11 Q. Which is 2 point --

12 A. It depends on what price is at the time.

13 Yes.

14 Q. Can you take a look and tell us what the  
15 price was at the time?

16 A. Well, the price moved over the figure.  
17 So the price went between 7.4 cents and it looks  
18 like \$0.09 -- I'm sorry -- seven -- seven-tenths of  
19 one penny to nine-tenths of one penny,  
20 approximately, over that period. And that is a --  
21 when I say 1.5 percent, that would be like  
22 1.5 percent overpaying. You can see that those --  
23 like those red dots on the top, you can see that on  
24 average it's 1.5 percent, but if you wanted to -- to  
25 get a sense of the economic -- the economics of what

1 [REDACTED] - 2/15/2022

2 we're talking about here, you would look at 8 --  
3 .8-tenths of 1 percent that's about where the other  
4 trades are and they're paying like 9.2. So in that  
5 sense it's -- those trades there are about four --  
6 four-tenths of a penny, but on average it's one --  
7 on average it's 1.5 percent premium.

8 Q. 1.5 percent above what?

9 A. Above the price at the time.

10 Q. And the price --

11 A. Compared to the last trade price.

12 Q. Okay. So --

13 A. Compared to the last trade price.

14 Q. So I just want to make sure what -- what  
15 the 1.5 percent is a percentage of. Is it the  
16 percentage of the difference between the last  
17 trading price and the next trading price -- and the  
18 next trading price -- what is the 1.5 percent a  
19 percentage of?

20 A. So you would take -- so you would take --  
21 it says, 1.5 percent compared to a 1.5 percent  
22 premium. So you would take the difference, let's  
23 say 9 -- 9.2 divided by nine -- nine-tenths of  
24 1 percent minus eight-tenths of 1 percent that's  
25 like a four-tenths of 1 percent and then you would

1 [REDACTED] - 2/15/2022

2 divide it by the previous trade price so if the  
3 previous price was eight-tenths of 1 percent you  
4 divide it by that.

5 Q. So how much is the difference?

6 A. On average it's 1.5 percent.

7 Q. I understand.

8 But how much is that in terms of how much  
9 of a penny does that represent? Am I right that  
10 it's two-thousandths of a penny?

11 MS. GUERRIER: Objection.

12 A. The -- it's two-thousandths of a penny.  
13 No, it's -- it's four-tenths of a penny. It's -- in  
14 my example that we just talked about, it was  
15 four-tenths of a penny.

16 Q. Okay. All right. Let's go to Figure 4  
17 which is on Page 18 of your report. And this  
18 Figure 4 relates to trading -- GSR trading  
19 April 10th and 11th of 2016. Correct?

20 A. Would you -- I'm sorry. Can you repeat  
21 the dates?

22 Q. April 10th and 11th, 2016?

23 A. That's correct.

24 Q. And it's fair to say that Figure 4,  
25 again, is structured the same way as the prior

1 [REDACTED] - 2/15/2022

2 figures. Correct?

3 MS. GUERRIER: Objection to  
4 "structured" term.

5 A. That's generally the case.

6 Q. By the way, Figure 4 also is only  
7 on-ledger trading by GSR during that period.  
8 Correct?

9 MS. GUERRIER: Objection.

10 A. This is -- Figure 4 is on-ledger trading.

11 Q. Okay. Now, I want to look at  
12 Paragraph 24 which proceeds the figure.

13 Paragraph 24 you say: GSR reversed -- and this is  
14 in the second-to-last line of Paragraph 24.

15 You say: As seen in Figure 4 at the  
16 direction of Ripple, GSR reversed it's programmatic  
17 sales after the price of XRP continues to decline.  
18 Instead of net selling, XRP began net buying around  
19 9:00 a.m. UTC.

20 Do you see that?

21 A. Are you in Paragraph 24?

22 Q. 24, the last sentence of paragraph -- the  
23 second-to-last sentence of Paragraph 24.

24 MS. GUERRIER: You can read the whole  
25 paragraph.



1 [REDACTED] - 2/15/2022

2 THE WITNESS: Okay.

3 A. (Pause.)

4 Okay.

5 Q. Okay. And by the way, I think there is  
6 a -- there is a typo there in the last sentence.

7 Do you see where it says: Instead of net  
8 selling, XRP began net buying around 9:00 a.m. UTC.

9 I assume that should have been GSR.

10 Correct? The reference to XRP should be GSR.

11 Correct?

12 A. That's correct.

13 Q. Now, you say that Figure 4 shows that GSR  
14 reversed its program out of sales after the price of  
15 XRP continued to decline. Do you see that?

16 MS. GUERRIER: Objection.

17 Q. That's what you say.

18 A. That's what I say.

19 Q. Okay. And in looking at Figure 4, it  
20 looks like at the 6 o'clock hour, so if you look at  
21 6:00 on April 11th. So if you look at April 11th at  
22 6:00, there is a small red bar meaning GSR was in a  
23 net buy position. Correct?

24 MS. GUERRIER: Objection.

25 A. Which red bar are you referring to? I'm

1 [REDACTED] - 2/15/2022

2 sorry.

3 Q. At 411 at 6:00. There is a net buy in  
4 the hour after that. Correct?

5 MS. GUERRIER: Objection.

6 A. Small net buy, yes.

7 Q. A small net buy. Correct?

8 A. That's correct.

9 Q. And in the next hour what appears to be  
10 7:00 there's a blue bar. Right?

11 A. That's correct.

12 Q. And that indicates that at the 7 o'clock  
13 hour GSR was in a net sale position. Correct?

14 MS. GUERRIER: Objection.

15 A. That's correct.

16 Q. But at that time in the 7 o'clock hour  
17 when GSR was in a net sale position, the black line  
18 for the price of XRP appears to spike. Correct?

19 MS. GUERRIER: Objection.

20 A. Are we talking about the 7 o'clock hour?

21 Q. Yeah, the 7 o'clock hour. At the time  
22 they're in a net sale the price appears to be  
23 spiking. Correct?

24 A. Well, there's --

25 MS. GUERRIER: Objection.

1 [REDACTED] - 2/15/2022

2 But go ahead.

3 A. There's a small -- it's a small -- it's a  
4 small net sale. And as you can see, there's red  
5 dots as well, so they're buying and selling. So  
6 it's possible that they're buying and the price --  
7 at the time that the price went up and they're  
8 selling when the price went down.

9 Because you see even within that hour  
10 there's some movement. It goes up during that hour  
11 and then it starts to fall. So I would have to  
12 really get micro with the data to know for certain  
13 what's happening within that hour, but it is the  
14 case that it's a small net seller in that hour, in  
15 the price, but those red dots are indicating they're  
16 doing substantial buying in as well.

17 Q. But there is a large net sale in the next  
18 hour from 7 to 8. Correct?

19 A. That is correct. And the price falls  
20 during that period.

21 Q. Falls, but then goes up?

22 MS. GUERRIER: Objection.

23 A. Well, we'd have to get -- zoom in on that  
24 period to know for certain what's exactly happening,  
25 but the price does fall somewhere between 7 and -- 7

1 [REDACTED] - 2/15/2022

2 and 8 o'clock hour the price falls during that  
3 window.

4 Q. Okay. But the price of XRP begins to  
5 increase at a time when GSR is in a net sale  
6 position. Am I right about that?

7 MS. GUERRIER: Objection.

8 A. I wouldn't -- the graph is meant to show  
9 general patterns of them switching the bot activity.  
10 If one wants to try to make inference about the  
11 precise timing of this, one would have to get more  
12 micro with the data and when exactly the price moved  
13 within the period.

14 The point of my report, though, is to  
15 show -- the point of the graph -- the main point of  
16 the graph is to show that they reversed their bots.  
17 And you can see that the blue line is showing that  
18 they're net selling over the period.

19 There was some communication. Usually  
20 there is a lag. Oftentimes there is a lag, like,  
21 hey, do you want to -- there's -- if people are  
22 communicating, they don't just like trade instantly  
23 oftentimes. If they're -- say, hey, the price is  
24 falling, what do you want me to do, maybe it takes  
25 the person a while to respond to the email. Then

1 [REDACTED] - 2/15/2022

2 there is net buying activity over that period.

3 But I'm not -- I'm not -- I mean, I  
4 wouldn't try to make any inference over a one-hour  
5 window where they're buying and selling -- they're  
6 both buying and selling over that -- over that  
7 window.

8 Q. But you say in your report: GSR reversed  
9 its programmatic sales after the price of XRP  
10 continues to decline.

11 Right? And then you say: The net buying  
12 began around 9 a.m. UTC.

13 That's what you said in your report.  
14 That's not accurate, is it?

15 MS. GUERRIER: Objection.

16 A. I believe it is accurate because when  
17 they reversed their activity based on the email  
18 they're discussing -- if I go back and look at the  
19 email.

20 Q. Well, you -- I'm not asking you about the  
21 email.

22 A. Given the sell-off --

23 Q. I'm asking you about the chart.

24 (Simultaneous speaking.)

25 MS. GUERRIER: Actually, let him

1 [REDACTED] - 2/15/2022

2 answer, please. He's not done answering.

3 A. And you're asking me about what happened  
4 here, and I'm saying given the sell-off over the  
5 weekend -- so this is not talking about events  
6 happening on the micro level, what happened in the  
7 last five minutes.

8 It's obviously over -- he wrote: Given  
9 the sell-off over the weekend --

10 That's a multiple-day period.

11 -- I think we should halt the sales  
12 entirely tomorrow and Tuesday and instead purchase  
13 20K each day. Let's try it.

14 So Ripple execs passed on the directives,  
15 confirmed in an email the next day that it:  
16 Followed Ripple's direction and they say they  
17 reversed the 2t bot to net buying of 5 percent  
18 previous 24 hours' trading volume.

19 As seen in Figure 4, the direction of  
20 Ripple GSR reversed its programmatic sales around  
21 the price of XRP. Sales after the price of XRP  
22 continues to decline. Instead of selling, XRP  
23 became net buying around 9:00 UTC. I believe that's  
24 the description of what has happened here.

25 Q. Isn't it true that the price of XRP began

1 [REDACTED] - 2/15/2022

2 to rise before there was any net buying?

3 MS. GUERRIER: Objection.

4 A. If we want to get real technical about  
5 the 7:00 a.m. window, we would have to look  
6 intra-window. We would have to look -- we could  
7 chop that window up into little intervals and  
8 perhaps look at that. Maybe they were net buying in  
9 the interval that the price moved up. So it's a  
10 very small -- it's a very small net buying activity.

11 My point is that there is a large amount  
12 of net buying activities starting around -- around  
13 9 a.m. It does appear that they were doing some net  
14 buying before that.

15 Q. Okay. But you didn't do the granular  
16 analysis that you just described --

17 A. I did not.

18 Q. -- that you just described that you could  
19 have done. Is that fair?

20 (Simultaneous speaking.)

21 MS. GUERRIER: Objection.

22 A. I did not -- I did not think that was  
23 relevant to do a granular analysis.

24 Q. Okay. Fair enough.

25 A. I followed the same form in all of my

1 [REDACTED] - 2/15/2022

2 figures.

3 Q. Okay.

4 THE STENOGRAPHER: I just wanted to  
5 state for the record I can't get two people at the  
6 same time. And I won't interrupt again. I know I  
7 said the last time was the last time. Just looking  
8 at the record, I'm just concerned. Thanks.

9 MR. CERESNEY: Okay.

10 MS. GUERRIER: Thank you.

11 Q. Okay. I want to focus on Figure 5 for a  
12 few minutes.

13 Figure 5 represents the personal trading  
14 of Defendant Larsen. Isn't that right?

15 MS. GUERRIER: I'm going to object  
16 to the form.

17 MR. CERESNEY: Sorry?

18 MS. GUERRIER: I'm objecting to the  
19 form. That mischaracterizes the chart or figure.

20 MR. CERESNEY: Hold on a second. You  
21 can object to the form and that's it.

22 MS. GUERRIER: I know that.

23 MR. CERESNEY: Thank you.

24 Q. Is it fair to say Figure 5 relates to  
25 Mr. Larsen's personal trading?



1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection.

3 A. Figure 5 relates to Mr. Larsen's trading  
4 conducted by GSR over this -- over this period. I'm  
5 not going to opine on whether it's personal or -- or  
6 not.

7 Q. Okay. That's fine.

8 Now, looking at the chart, the X axis of  
9 this chart is the time frame. Correct?

10 A. That's correct.

11 Q. And the Y axis on the right-hand side is  
12 the trading volume by GSR. Correct?

13 A. That's correct. It's the net -- it's the  
14 net trading volume.

15 Q. Net trading volume. Correct.

16 And then on the left-hand side is -- of  
17 the Y axis is the XRP US -- I'm sorry -- XRP bitcoin  
18 price. Correct?

19 A. That's correct.

20 Q. Now, why did you use XRP bitcoin here  
21 versus the other figures where you used XRP U.S.  
22 dollars?

23 A. Yeah, because it seems that that was the  
24 major currency that was used to trade on Poloniex.

25 Q. Okay. And so -- just so I understand

1 [REDACTED] - 2/15/2022

2 what you're analyzing here, this is a 12-day period  
3 from June 3rd to June 14, 2017. Correct?

4 MS. GUERRIER: Objection.

5 A. It is a 12-day -- roughly -- roughly --  
6 roughly 12 or 13 days, depending on how you count  
7 it.

8 Q. Okay. And those are limited to --

9 (Simultaneous speaking.)

10 A. (Unintelligible).

11 Q. -- transactions conducted on the  
12 cryptocurrency exchange Poloniex?

13 A. That's correct.

14 Q. Do you know whether Mr. Larsen engaged in  
15 other transactions during that time period in XRP?

16 A. I don't think -- I don't -- I'm not sure  
17 if -- what his other activity was --

18 (Simultaneous speaking.)

19 A. -- besides XRP.

20 Q. So you don't know one way or the other?

21 A. I don't -- I'm trying to think if I  
22 recall from any communications. At least I know  
23 that I only had data to analyze this.

24 Q. Did you analyze transactions from  
25 Mr. Larsen -- XRP trading transactions from

1 [REDACTED] - 2/15/2022

2 Mr. Larsen on any other dates?

3 A. I don't believe so.

4 Q. Okay. Now, is it -- is it also the case,  
5 as you testified earlier with regard to your other  
6 analyses, that you were not opining here on whether  
7 Mr. Larsen's trading in XRP caused any impact on the  
8 XRP's price. Correct?

9 A. I want to just -- just to be super  
10 accurate here in terms of what I'm opining, that I'm  
11 opining that he -- he personally bought 800,000K of  
12 XRP by the end of the weekend through GSR, based on  
13 his communications, and that Garlinghouse, in email,  
14 does speculate that Larsen's purchases might be the  
15 reason for the XRP price stability.

16 So I am not analyzing whether he is  
17 precise -- precisely the reason, like I said, that  
18 form of analysis is extremely difficult, but his  
19 colleague -- his colleague thinks that he could  
20 be -- might be the reason. So obviously there's  
21 some people that think he was the reason for it.

22 Q. Okay. But you didn't analyze whether he  
23 was or he wasn't?

24 A. I did not.

25 Q. Okay. In looking at the -- the amount of

1 [REDACTED] - 2/15/2022

2 XRP that was sold each day, did you -- scratch that.

3 Did you consider in your analysis here  
4 the average daily trading activity of other XRP  
5 sellers on Poloniex during this period?

6 A. Well, back to our earlier discussion, the  
7 average XRP behavior of everyone else on Poloniex  
8 would be the exact opposite of what -- of what he  
9 did. So on average, if he was a net buyer during  
10 this window, everyone else on Poloniex would have to  
11 be net sellers.

12 Q. And that's the same discussion we had  
13 earlier?

14 A. Yes.

15 Q. Okay. And so did you at all look at the  
16 volume of trading on Poloniex during this period of  
17 time?

18 MS. GUERRIER: Objection.

19 A. Well, I would say yes, in the sense that  
20 it is standardized. That's -- this is the total --  
21 total units of volume so it does have volume as part  
22 of the -- the calculation so I'm not plotting the  
23 total volume, though. I'm plotting the net -- the  
24 net trading volume.

25 Q. That's the net trading volume for

1 [REDACTED] - 2/15/2022

2 Mr. Larsen. Correct?

3 A. That's correct.

4 Q. That's not the net trading volume for all  
5 traders on Poloniex during that period of time.

6 Correct?

7 A. That's right. This is only for

8 Mr. Larsen.

9 Q. Okay. Now, Mr. Ferrell -- Professor  
10 Ferrell in his rebuttal report did an analysis of  
11 trading on Poloniex during this time period. Am I  
12 correct?

13 A. I believe so.

14 Q. If we look at the rebuttal report which  
15 is [REDACTED]-3 and if we look at Paragraph 29, I want you  
16 to just read that paragraph to yourself,  
17 Paragraph 29, where Professor Ferrell provides data  
18 on total volume of trading and Mr. Larsen's trading  
19 volume on days between April 15th, 2017, and  
20 March 18th, 2018, and then between June 2nd and  
21 June 15th, 2017. Do you see that?

22 A. That's Paragraph 29?

23 Q. Yeah.

24 A. Yes. You'd like me to read that?

25 Q. Why don't you read it to yourself.

1 [REDACTED] - 2/15/2022

2 A. (Pause.)

3 Q. Let me know when you're done.

4 A. (Pause.)

5 Okay. I'm done.

6 Q. Okay. Do you see that Professor  
7 Ferrell's analysis showed that on 90 percent of the  
8 days between April 15th, 2017, and March 18th, 2018,  
9 Mr. Larsen's trading volume for total purchases and  
10 sales for XRP bitcoin was less than .5 percent of  
11 the total trading volume on Poloniex and less than  
12 .1 percent of the XRP bitcoin trading on all  
13 exchanges? Do you see that?

14 MS. GUERRIER: Objection.

15 A. The information in -- in 29?

16 Q. Yes.

17 A. Yes, I see that.

18 Q. Do you have any reason to believe that  
19 that analysis is not accurate?

20 A. Well, there is no analysis here. It's  
21 just some summary statistics.

22 Q. Okay. Do you have any reason to believe  
23 those summary statistics are not accurate?

24 A. They should be -- should be accurate.

25 Q. Okay. And then he also says that in the

1 [REDACTED] - 2/15/2022

2 period between June 2nd and 15th, 2017, Mr. Larsen's  
3 volume was at most 1 percent and often less than  
4 .5 percent of the total Poloniex XRP bitcoin value  
5 and at most .2 percent of overall cryptocurrency  
6 exchange volumes.

7 Do you have any reason to -- to believe  
8 that those figures are inaccurate?

9 A. I would guess that's probably correct.

10 Q. Okay. And the -- I guess the final  
11 question on this, would you agree that the volume of  
12 trading in the bitcoin XRP currency pair and the  
13 percentage of that trading that Mr. Larsen's trading  
14 constituted would be relevant to whether  
15 Mr. Larsen's trading could impact the price of XRP?

16 MS. GUERRIER: Objection.

17 A. Well, my report did not analyze price  
18 impact, but Professor Larsen does make claims along  
19 those lines. I think it's important to note that  
20 this trading on Poloniex can -- likely contains wash  
21 trading because Poloniex is one of the exchanges  
22 that's been shown to have substantial wash trading  
23 on the exchange. So some studies put the wash  
24 trading amount at 70 or even 85 percent, 90 percent,  
25 even 95 or 100 percent. So if you took wash trading

1 [REDACTED] - 2/15/2022

2 out, let's say it was only -- let's say wash trading  
3 was -- let's say wash trading was 90 percent, which  
4 was the range of some estimates at certain times,  
5 then that would put Professor Larsen's activity at  
6 10 percent of the total volume. Also --

7 MS. GUERRIER: One second, just to  
8 correct. Do you want to say Professor Ferrell or  
9 not Professor Ferrell?

10 THE WITNESS: I'm sorry, not  
11 Professor. I meant Mr. Larsen's -- Mr. Larsen. I  
12 don't know if Mr. Larsen is a professor or not so...

13 Q. He's not.

14 A. So that -- that -- that could -- his own  
15 trading could be -- could be as much as -- in  
16 that -- in that scenario, his trading could be  
17 10 percent.

18 Also, we know from other communications  
19 that Garlinghouse traded as well on his own personal  
20 account. Other Ripple execs traded. We have Ripple  
21 Foundation. We have Ripple itself directing GSR to  
22 trade. So we know -- so -- so the combined -- we  
23 don't know the combined amount of his trading -- the  
24 combined amount of trading that was done on behalf  
25 of Ripple.



1 [REDACTED] - 2/15/2022

2 So it's interesting and I'll go -- just  
3 go back to what Ripple's own executives say.  
4 Garlinghouse said you could be the reason for the  
5 priceability. So Garlinghouse definitely believes,  
6 and it is \$800,000 worth of XRP. It's not a trivial  
7 amount.

8 So definitely it's -- it's within -- if  
9 you're asking me if it's in the realm of possibility  
10 or is it obvious -- is it an obvious conclusion, I  
11 don't know if -- if the question is, is this an  
12 obvious conclusion that -- that Larsen's trading  
13 activity couldn't have affected price, I'd say  
14 that's not obvious at all. So, particularly,  
15 Garlinghouse seems to think that he's the reason.

16 Q. Okay. First of all, that wasn't the  
17 question.

18 The question was simply whether the  
19 market volume could impact the ability to impact  
20 price.

21 MS. GUERRIER: Objection.

22 Q. That was the question. Do you have an  
23 answer to that question?

24 A. I don't think that's the question you  
25 asked me. I would like to hear the original

1 [REDACTED] - 2/15/2022

2 question you asked me.

3 Q. I'll -- I'll tell you what the original  
4 question was. The original question -- I guess the  
5 final question on this would be would you agree that  
6 the volume of trading in the bitcoin XRP currency  
7 pair and the percentage of that trading that  
8 Mr. Larsen's trading constituted would be relevant  
9 to whether Mr. Larsen's trading could impact the  
10 price of XRP.

11 That was the question. Do you have an  
12 answer to that question?

13 MS. GUERRIER: And before you answer,  
14 I'll renew my objection.

15 Q. Go ahead.

16 A. I believe I've answered the question. I  
17 believe it -- it -- if -- it could be relevant if  
18 there were corrections made for all the biases that  
19 I mentioned and all the potential problems that I  
20 mentioned such as wash trading. So if one could  
21 control for the amount of wash trading, take that  
22 out and one could also control for the amount of --  
23 an amount of other trading on behalf of Ripple  
24 executives or Ripple itself, those are very  
25 important facts one would want to know. So I think

1 [REDACTED] - 2/15/2022

2 that all that information could be relevant, but  
3 just to characterize and assume implicit assumption  
4 which, you know, seems to be the implicit assumption  
5 that I'm being asked that all the rest of the  
6 activity must be due to willing market participants  
7 or some -- one would have to know the nature of  
8 those other market participants and one would have  
9 to extract wash trading.

10 Q. Okay. To be clear, there was no implicit  
11 assumption in my question. I think my question was  
12 clear.

13 But going back to everything that you  
14 referenced, the wash trading, Mr. Garlinghouse's  
15 trading, trading by the foundation, all of those  
16 other things that you referenced that could be  
17 relevant, do you, sitting here today, have any idea  
18 about any of those things and what was going on with  
19 those things during the time this trading occurred?

20 MS. GUERRIER: Objection to form.

21 A. I do have an idea that there was other  
22 trading on behalf of -- of -- of -- for instance, of  
23 Ripple executives on Poloniex. There was an email I  
24 mentioned earlier regarding one of the early  
25 figures. So I do have an idea that Ripple was

1 [REDACTED] - 2/15/2022

2 trading on Poloniex and they were an active trader  
3 on Poloniex. They turned their bots on and off.  
4 So, yeah, I -- I think that I do have an idea that  
5 there was wash trading on these exchanges because  
6 it's an academic -- that many papers have analyzed  
7 this. Academic papers have shown there's wash  
8 trading.

9 So, yes, I think that I do have an idea  
10 that there's other things going. Do I know the  
11 precise amount of it, no.

12 Q. I want to move now to the regression  
13 analysis that you performed in connection with your  
14 report.

15 MS. GUERRIER: Can I stop you there?  
16 Do you think we could take a break before we get  
17 into the regression analysis?

18 MR. CERESNEY: Sure. Let's take a  
19 break.

20 MS. GUERRIER: How long do you need?

21 THE VIDEOGRAPHER: We're off at 2:57.

22 (Break.)

23 THE VIDEOGRAPHER: This is Segment  
24 No. 5. We're back on the record at 3:14.

25 Q. So, [REDACTED], as part of your

1 [REDACTED] - 2/15/2022

2 report, you performed a regression analysis.

3 Correct?

4 A. That's correct.

5 Q. Generally explain to us what a regression  
6 analysis is.

7 A. Sure.

8 A regression analysis looks to understand  
9 the relationship between two variables. And you  
10 generally have, like, a left-hand-side variable.  
11 Often, people refer to that as Y. And then you  
12 often have a right-hand-side variable referred to as  
13 X.

14 Sometimes -- oftentimes, it's assumed  
15 that the X variable goes first, in which case, in  
16 terms of timing, you may want to lag X variable. So  
17 you're looking at the relationship between X and Y  
18 to determine whether two variables are related and  
19 whether one -- and possibly whether one precedes the  
20 other.

21 Q. Are those sometimes called dependent  
22 variables and independent variables?

23 A. Yes.

24 Q. Which is the dependent variable, X or Y?

25 A. Y.

1 [REDACTED] - 2/15/2022

2 Q. And the independent variable is X?

3 A. That's correct.

4 Q. Okay. And what is the function of a  
5 regression analysis, generally?

6 A. To -- to understand relationship between  
7 things more fully, possibly control for other  
8 confounding factors.

9 There's many purposes in a regression  
10 analysis. It's one of the -- obviously, regression  
11 analysis are used in many ways in finance. [REDACTED]

12 [REDACTED]

13 [REDACTED] This particular regression here is a  
14 time-series regression, but there is also  
15 cross-sectional regressions.

16 Q. And this is a time-series regression, and  
17 so tell us what a time-series regression is.

18 A. Well, generally, the relationship varies.  
19 You're looking -- wanting to look at a relationship  
20 that maybe varies through time. And the timing of  
21 matters could be important in the sense that you  
22 might want to examine whether a right-hand-side  
23 variable X precedes a left-hand-side variable Y.

24 And so you may want to have multiple lags  
25 of the Y variable -- of the X variable, and you may

1 [REDACTED] - 2/15/2022

2 want a control for other things that could affect --  
3 could affect the Y variable.

4 Q. In these kinds of analyses, do you want  
5 to look at various different time periods, a day,  
6 two days, three days? Is that typically the way  
7 it's done?

8 A. Just depends on the nature of the data  
9 and the problems and the questions that are being  
10 asked and what data one has. So sometimes you  
11 can -- so I'll just -- I guess I'll stop there. It  
12 depends on the nature of the question asked and what  
13 type of data is available.

14 Q. Let's look at Page 26 of your report.  
15 And there you have Table 1. Does this Table 1 show  
16 the results of your regression analysis in this  
17 case?

18 A. Yes, it does.

19 Q. Okay. And can you explain the variables  
20 in the regression analysis in your report?

21 A. Sure.

22 The imbalance is the left-hand-side  
23 variable in this case, or we're going to refer to it  
24 as a Y variable here, time T. The imbalance is  
25 defined as the number of XRB -- XRP purchases, minus

1 [REDACTED] - 2/15/2022

2 the number of XRP purchases sold on a given day by  
3 GSR and CryptoCompare systems on behalf of Ripple.  
4 This is based on data that -- that -- a daily  
5 summary tab that had this information. And the --  
6 that's the numerator in the balance.

7 And the denominator in the balance  
8 normalizes by dividing by the average daily  
9 circulating supply of XRP over the previous 30  
10 calendar days. So the purpose of the normalization  
11 is to give some context for the magnitude -- the  
12 magnitude of -- of -- of an imbalance.

13 So, for instance, if you -- if I told you  
14 somebody bought 100,000 shares, you might say,  
15 "Well, that -- is that big or -- big or small?" It  
16 depends on, well, if it's 100,000 shares out of a  
17 million shares, it would be really big. If it was  
18 100,000 shares out of a quadrillion shares, it might  
19 be more -- a small -- smaller number.

20 So you want to normalize it by the number  
21 of shares that is either outstanding, or in this  
22 case, a lot of the shares are locked up, so that's  
23 why imbalances normalize by the number of shares in  
24 circulating supply.

25 And then the other variables, you have an



1 [REDACTED] - 2/15/2022

2 intercept in the regression notice. This  
3 intercept -- this is also an alpha term, but it is  
4 not the same as the alpha term that you were  
5 referring to earlier in terms of asset pricing and  
6 so forth. This is an intercept term.

7 I have a -- I have an error in the  
8 equation. The R -- the RETR, there is a typo. That  
9 should not be ETR. The R should be scratched. It's  
10 just a time T. There is only one imbalance that's  
11 considered here, not multiple imbalances.

12 So the -- in this case, the -- there is 1  
13 through 5, the summation sign, 1 through 5, BI times  
14 the return. Returns are lagged at time periods, so  
15 it's asking whether the previous imbalance follows  
16 the return, or whether there is a relationship  
17 between imbalance and past return.

18 The regression also contains five other  
19 terms, which is related to past imbalances. And the  
20 reason the past imbalances are -- are included is  
21 because often there is autocorrelation in balances.  
22 Maybe there is -- somebody trades one day, they're  
23 more likely to trade the next day and so forth, so  
24 you want to control for that type of normalized  
25 trading imbalance.

1 [REDACTED] - 2/15/2022

2 This regression is the -- is nearly  
3 identical to -- is basically the same regression  
4 that [REDACTED].

5 Q. It's basically the same regression that  
6 [REDACTED]?

7 A. Yes.

8 Q. Okay.

9 A. And it was [REDACTED]

10 [REDACTED]

11 Q. Okay. That's the [REDACTED] that you  
12 talked about earlier?

13 A. That's right. And I also [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED] That  
17 was using the same methodology, but it was using  
18 aggregate returns.

19 Q. Okay. So both of those [REDACTED]  
20 essentially used the same methodology that you're  
21 using here, basically. Fair?

22 A. That's correct.

23 Q. Okay. So just so I understand what this  
24 is intended to show, is this basically intended to  
25 show that the imbalance in the trading that GSR does

1 [REDACTED] - 2/15/2022

2 on behalf of Ripple is impacted by the XRP returns  
3 in the days prior to that imbalance?

4 MS. GUERRIER: Objection to form.

5 Go ahead.

6 A. What the regression shows is it examines  
7 whether there is a relationship between [REDACTED]  
8 trading -- [REDACTED] and [REDACTED] trading over the  
9 period, the period in this case being the period  
10 with available data, January 15th through  
11 September 12th, 2019, because these are daily --  
12 this is daily data here in this case.

13 And so the imbalance is looking at -- the  
14 imbalance is looking at the relationship between  
15 trading and past returns or asking the question  
16 whether the previous day's return influences or the  
17 previous -- whether the trading behavior is related  
18 to the previous day's returns, after controlling for  
19 the fact that trading is -- is autocorrelated, which  
20 is the -- the term is on the right.

21 And you could see that the trading does  
22 seem to be autocorrelated in the sense that the  
23 lagged 1 is also significant. So in terms of -- in  
24 terms of the coefficient here, the buy/sell  
25 imbalance is positive, meaning if they bought more

1 [REDACTED] - 2/15/2022

2 yesterday, they're more likely to buy today, the  
3 lagged 1 for the imbalance. But also, the B1  
4 coefficient is negative and significant, indicating  
5 that if they -- the return went up yesterday --  
6 indicating that there is an inverse relationship  
7 between imbalances and returns or that, on average,  
8 if the return went up yesterday, there is more  
9 selling or vice versa.

10 Q. Okay. So I just want to make sure I  
11 understand. So looking at your chart, you have  
12 there a beta 1. Do you see that in your chart?

13 A. Yes.

14 Q. And beta 1 tells you that if the return  
15 the day before was positive, then the subsequent  
16 day, GSR is going to have a net sell, basically. Is  
17 that a fair statement?

18 MS. GUERRIER: Objection to form.

19 A. It's going to be a net -- net sell on --  
20 or that it will have more -- technically speaking,  
21 the regression is so that there is more net selling  
22 than there would be on a day without a positive  
23 return, without a large --

24 Q. Uh-huh.

25 A. So if there was, like, a really large

1 [REDACTED] - 2/15/2022

2 positive return, there is going to be more net  
3 selling after days with really large positive  
4 returns, and the converse being that if return is  
5 very negative, there will be more net buying than  
6 there would be otherwise.

7 Q. So, basically, what that beta 1 column is  
8 telling you is the likely impact on the imbalance in  
9 GSR's trading, dependent upon the returns on the  
10 previous day?

11 MS. GUERRIER: Objection.

12 Q. The XRP returns on the previous day?

13 A. That's a decent layman's understanding.  
14 I think it's reasonably correct.

15 Q. Okay. And it's a one-day lag. Right?  
16 So, in other words, it's showing you the imbalance  
17 the day after the returns. Correct?

18 A. That's correct.

19 Q. And the asterisks in this column, this  
20 beta 1 column there, do those indicate statistically  
21 significant findings?

22 A. The P -- the T statistic there is in  
23 parenthesis, and that's a T statistic of negative  
24 2.98. And the P value there with two stars  
25 indicates that it's statistically significant at

1 [REDACTED] - 2/15/2022

2 less than .01 percent chance, or in other words,  
3 there is less than a one in a hundred percent chance  
4 that this relationship is spurious.

5 Q. Just looking at Paragraph 34 of your --  
6 of your report. I just want to read the sentence  
7 that I think sums up what we just talked about which  
8 is right in the middle of that paragraph starting  
9 with the words: Based on this analysis of [REDACTED] and  
10 [REDACTED] net trading of XRP, I conclude that  
11 these sellers on behalf of Ripple sold more XRP when  
12 the price of XRP was increasing and relatively less  
13 when the price was decreasing on the previous day.

14 Do you see that?

15 A. Yes, I see that.

16 Q. And does that accurately summarize the  
17 conclusions that flow from your regression analysis?

18 A. It does.

19 Q. Okay. So does this regression analysis  
20 show anything regarding whether or not the sales of  
21 Ripple's programmatic sellers caused changes in the  
22 price of XRP?

23 MS. GUERRIER: Objection.

24 A. This regression is not based on -- does  
25 not examine what caused XRP price movements. It's

1 [REDACTED] - 2/15/2022

2 taking the XRP price movements as the return on the  
3 left-hand side and asking what's driving the --  
4 what's driving the trading activity.

5 Q. So fair to say that this analysis doesn't  
6 tell you whether, in fact, the trading activity  
7 caused any impact on the price of XRP?

8 MS. GUERRIER: Objection.

9 A. As I stated previously, I'm not opining  
10 on price impact here.

11 Q. Okay. Fair enough.

12 A. I might discuss price impact in the  
13 context of Professor Ferrell's criticisms in his  
14 price impact model, but that's not what this  
15 regression analysis does.

16 Q. Okay. Fair.

17 I want to direct your attention to  
18 Paragraph 34, Page 25, the same paragraph that we  
19 just looked at. You say in this paragraph: The  
20 previous --

21 The second sentence there: The previous  
22 day return coefficient, beta 1, is highly  
23 statistically significant and negative - consistent  
24 with net selling following a day of positive  
25 returns.

1 [REDACTED] - 2/15/2022

2 Do you see that?

3 A. That's correct.

4 Q. When you use the term here "previous day  
5 coefficient," does that refer to the fact that what  
6 you're looking at are the previous day's XRP returns  
7 and the impact that that previous day has on the  
8 imbalance on the following day?

9 A. That's correct.

10 Q. Did your report analyze the same day  
11 coefficient?

12 A. No, it did not.

13 Q. So you did not look at whether the XRP  
14 returns on a particular day might have impacted the  
15 imbalance in GSR's trading on that day?

16 MS. GUERRIER: Objection; form.

17 A. Can you restate the question again? I  
18 want to make sure I answer.

19 Q. So you did not look at whether the XRP  
20 returns on a particular day might have impacted the  
21 imbalance in GSR's trading on that day?

22 MS. GUERRIER: Same objection.

23 A. I believe that -- I believe that you  
24 can't perform such a regression because of concerns  
25 about reverse causality, which came first. And as I



1 [REDACTED] - 2/15/2022

2 discussed in my report, as I believe I discussed  
3 issues related to Professor Ferrell, one of the  
4 points in the -- one of the points in the literature  
5 is that there is a lot going on within the day.  
6 Okay. So if you add a contemporaneous coefficient  
7 here, you may or may not get a statistically  
8 significant relationship but that doesn't -- that  
9 could obscure a lot of things going on.

10 For instance, if you -- if -- as [REDACTED]  
11 showed and other papers have shown, if traders are  
12 trend chasing within the day or following price --  
13 past price movements, they're -- in other words,  
14 within the day, let's say that prices go up within  
15 the day and then people buy, you find -- signed a  
16 certain group of people that are buying following  
17 past prices, whereas other people may be selling  
18 following past prices, you might attribute -- you  
19 might say that those people that are following past  
20 price movements within the day are causing the price  
21 to increase or they're moving the price. That would  
22 be an improper assumption because, in fact, they're  
23 trend chasing intraday.

24 The same could be said for somebody that  
25 was -- if you find the opposite relationship, they

1 [REDACTED] - 2/15/2022

2 could be contrarians within the day. So there's  
3 momentum chasers, contrarians within the day. There  
4 was kind of a debate in the academic literature  
5 about whether investors are trend chasers,  
6 followers. I weighed in on that debate. You could  
7 look at -- yeah, I'll just stop with that, with the  
8 daily relationship there if you add a  
9 contemporaneous term in the regression, it's not  
10 clear -- it's not clear what that's measuring.

11 Q. Did you even do that analysis, though, as  
12 part of your regression analysis here?

13 MS. GUERRIER: Objection.

14 A. I -- I'm not -- I don't believe I did  
15 that as part of my regression analysis because I  
16 thought this was the correct specification. But I  
17 believe Professor Ferrell does such an analysis.

18 Q. Right.

19 Is that something you would ordinarily  
20 test in this sort of analysis? When I say "is that  
21 something," let me rephrase that.

22 Is the contemporaneous -- the  
23 relationship between the contemporaneous returns and  
24 the imbalance on the same day, is that something  
25 that you typically would test in this sort of

1 [REDACTED] - 2/15/2022

2 analysis?

3 A. You could put the contemporaneous  
4 relationship there, it's just not clear what it  
5 means.

6 Q. Okay.

7 A. So one could put -- one could put the  
8 relationship there and -- and see whether it's  
9 positive or negative, but I'm not sure what -- what  
10 it's telling you because you have a contemporaneous  
11 relationship.

12 Q. Did you even do that analysis in this  
13 case?

14 A. As I -- as I --

15 MS. GUERRIER: Objection.

16 Go ahead.

17 A. As I said -- yeah, I'll just read back --  
18 I've already answered that question. It's my  
19 recollection that -- that this analysis, the one I  
20 performed was the one relevant and the one I did.

21 So Professor Ferrell, as I mentioned,  
22 does do such analysis, he criticizes the  
23 relationship, but I don't think it's the correct way  
24 to do it.

25 Q. I didn't ask you about Professor Ferrell

1 [REDACTED] - 2/15/2022

2 yet, I will.

3 I just -- I want to understand, when you  
4 did your report, did you do that analysis?

5 MS. GUERRIER: Asked and answered.

6 Q. You can answer.

7 A. Again, I think I this is the correct way  
8 to do it. This is what I did. When I looked at  
9 Professor Ferrell's analysis I see that he did that.  
10 He says, I don't -- I -- I -- this is the  
11 specification that -- that I did, the one I think  
12 makes sense.

13 Q. So let me just ask you this --

14 A. I did not --

15 Q. -- did you --

16 A. I did not run a regression with a  
17 contemporaneous return in there.

18 Q. Okay. That's all I'm asking.

19 You did not run a regression with the  
20 contemporaneous return at the time you did your  
21 report. Correct?

22 MS. GUERRIER: Asked and answered.

23 A. That's correct. Now, I can't opine in  
24 terms of if a member of my staff ran -- ran such a  
25 regression or not, I don't know. But this is the

1 [REDACTED] - 2/15/2022

2 one that I thought made sense and this is the one I  
3 directed to be done.

4 Q. Did you know at the time that you  
5 prepared your report that the contemporaneous  
6 returns were not statistically significant?

7 MS. GUERRIER: Objection; form.

8 A. I know -- I knew that this relationship  
9 was the one that mattered, I didn't care about the  
10 contemporaneous relationship.

11 Q. Okay. But my question is, whether at the  
12 time you prepared your report you knew that the  
13 contemporaneous return was not statistically  
14 significant?

15 MS. GUERRIER: Asked and answered.

16 A. I -- I don't think I -- I'm not sure the  
17 answer to that question.

18 Q. Okay. Would you ordinarily test in  
19 contemporaneous returns? Is that a test you  
20 typically would do in this sort of analysis?

21 MS. GUERRIER: Objection --

22 A. It depends on the nature --

23 MS. GUERRIER: -- form.

24 Go ahead.

25 A. Depends -- as I said earlier, it depends

1 [REDACTED] - 2/15/2022

2 on the nature of questions answered. If one wanted  
3 to look at price impact, then one could start  
4 getting into issues like that, although that's not a  
5 reliable -- that's not a complete price impact  
6 methodology and you couldn't do that on a daily  
7 relationship. So just doing such a -- it's not  
8 clear what -- what a regression like that would --  
9 would show.

10 Q. So are you saying if you're just looking  
11 at imbalances, you wouldn't look at contemporaneous  
12 returns?

13 MS. GUERRIER: Objection.

14 A. The -- I did not -- I did not say that.  
15 I said it depends on the -- I said -- I said it  
16 depends on the nature of the timing of the returns  
17 and the relationship.

18 You could run such a relationship. I  
19 have run such relationships in my academic work only  
20 to show that there's a strong relationship and that  
21 one doesn't understand -- it's not possible to  
22 interpret without looking at finer time intervals.

23 So as I explained earlier, the point of  
24 that academic literature is that the contemporaneous  
25 return including contemporaneous returns in a

1 [REDACTED] - 2/15/2022

2 regression is not a reliable way to do things. So I  
3 don't think it makes sense to have it in there as a  
4 contemporaneous relationship. I understand that  
5 that's a criticism of Professor Ferrell. But it's  
6 not a criticism that concerns me because of the  
7 relationships of -- in terms of reverse causality  
8 that I mentioned.

9           You would expect -- whether you find a  
10 positive or negative relationship is depending on  
11 whether -- you don't know whether X drove Y or Y  
12 drove X. That's -- I have a whole section in a  
13 paper that talks about that and there's also Sias,  
14 Starks, and Titman, they also talked about the  
15 problems with inferring things from like monthly  
16 data, for instance, where you have a contemporaneous  
17 relationship.

18           So there's a large literature that talks  
19 about the problems with putting a -- with  
20 contemporaneous relationships and the fact that you  
21 don't know what that means.

22       Q.     In the 2003 paper that you cited earlier  
23 that you used as the model for this regression  
24 analysis, did you analyze contemporaneous returns in  
25 that paper?

1 [REDACTED] - 2/15/2022

2 A. I did.

3 Q. Okay. And that was the model for this  
4 analysis you did in this case. Correct?

5 A. No, I have different --

6 (Simultaneous speaking.)

7 MS. GUERRIER: Objection to form.

8 Go ahead.

9 A. It's not the exact -- I have different  
10 specifications that I run in the paper, if we want  
11 to turn to the paper and look at it, in terms of  
12 which specification I ran and why, we can walk  
13 through that. I would be happy to explain why I did  
14 things in that paper.

15 But in terms of looking at the  
16 relationship between past returns and -- imbalances  
17 and past returns, I believe this is the correct way  
18 to do it.

19 Q. Why would you have run the --

20 MS. GUERRIER: I'm sorry. I just  
21 want to instruct. Just wait for me to object --

22 THE WITNESS: Sorry.

23 MS. GUERRIER: -- before you answer.

24 That's okay.

25 Q. Why would you have analyzed the



1 [REDACTED] - 2/15/2022

2 [REDACTED]  
3 [REDACTED] in this  
4 case and not in this case?

5 MS. GUERRIER: Objection to form.

6 Go ahead.

7 A. That's an incorrect characterization of  
8 what I did. [REDACTED]

9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]

16 So I'm happy to -- I don't know which  
17 specification you're talking about, but I did follow  
18 the methodology in that paper, so I would like to  
19 see if you're going to criticize me on the  
20 methodology in that paper. I'd like to see it and  
21 precisely what you're criticizing me for.

22 (Exhibit [REDACTED]-13 was marked.)

23 Q. Okay. Let's look at [REDACTED]-13. I'm going to  
24 hand you [REDACTED]-13, which is an article entitled "[REDACTED]  
25 [REDACTED], "

1 [REDACTED] - 2/15/2022

2 authored [REDACTED]

3 [REDACTED] It's marked [REDACTED]-13. It's dated

4 December 2003. It's from the [REDACTED]

5 And so I'm showing you that document.

6 And I want to ask you -- before I ask you about this

7 document, I want to look at your report. And I want

8 to look at Paragraph 33 of your report, which is on

9 Page 25 of your report. And I want to look at

10 Footnote 41 of this report, your report.

11 And Footnote 41 is a footnote to a

12 sentence that reads: A regression analysis of [REDACTED]

13 and [REDACTED] trading activity shows that when

14 the prior day returns of XRP increase, the amount of

15 XRP that [REDACTED] and [REDACTED] sell also increases.

16 Footnote 41 then reads: This regression

17 follows the same buy-sell imbalance regression

18 methodology as [REDACTED]

19 [REDACTED]

20 A. That's correct.

21 Q. So is this article which I just handed

22 you, the same article that you cited in your report

23 in this case as the regression analysis following

24 the same buy-sell imbalance regression methodology

25 that was used in this [REDACTED] as also being used

1 [REDACTED] - 2/15/2022

2 in the 2021 report you filed in this case?

3 MS. GUERRIER: Objection to the form.

4 And take your time to read that

5 paper.

6 A. Yes.

7 Q. So let's look at [REDACTED] that you have  
8 here. And I want to look at [REDACTED] (sic) of this  
9 [REDACTED] [REDACTED]. And in this paragraph I want to  
10 look at the page right before it, the paragraph  
11 right before it. And in that paragraph right before  
12 it, [REDACTED] [REDACTED] --

13 MS. GUERRIER: I'm sorry. Can you  
14 direct us to where you're reading?

15 MR. CERESNEY: Yeah, yeah. Hold on a  
16 second.

17 Q. In the actual paragraph before the table  
18 there is a -- there is a sentence that reads -- it's  
19 about five lines from the bottom of that paragraph,

20 Panel B: [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 Do you see that sentence?

24 A. That's correct.

25 Q. And then when you look down [REDACTED]

1 [REDACTED] - 2/15/2022

2 the line for [REDACTED] looks like it  
3 has figures for [REDACTED]

4 Do you see that?

5 A. That's correct.

6 Q. And the [REDACTED] isn't that  
7 the contemporaneous price return in the imbalance  
8 regression?

9 MS. GUERRIER: Objection to form.

10 And also take your time to look at --

11 THE WITNESS: Sure.

12 A. You're talking about [REDACTED]?

13 Q. Yeah.

14 A. If you talk about -- if you look at  
15 [REDACTED], which usually in [REDACTED] you put  
16 the most important [REDACTED] first, and the way they  
17 believe the correct way to do it is in [REDACTED]  
18 you'll notice there is no contemporaneous  
19 relationship there in [REDACTED]

20 So, first of all, this is not an  
21 identical regression to what is being done in the  
22 imbalance equation there because it is a -- it's a  
23 structure VaR, it's a VaR system. There is many  
24 differences to that, but it's a whole VaR -- it's a  
25 whole VaR apparatus. And if you put the

1 [REDACTED] - 2/15/2022

2 contemporaneous return in, there is certain  
3 assumptions you have to make about the causality.

4 Okay.

5 And you're basically -- when you put the  
6 contemporaneous relationship there, you're basically  
7 making the assumption, implicit assumption that the  
8 contemporaneous relationship, R, in the imbalance, R  
9 is driving the imbalance is often the structural  
10 assumption if one is doing a structure VaR.

11 And that's why I say right there, in  
12 terms of discussing it, I [REDACTED] [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 Q. Just to be clear, you're reading from  
18 [REDACTED]?

19 A. [REDACTED], in the same paragraph you quoted.

20 So I say --

21 Q. Well, just to be clear, I didn't quote  
22 that paragraph.

23 (Simultaneous speaking.)

24 A. You turned me to --

25 MS. GUERRIER: Okay. Can you let him

1 [REDACTED] - 2/15/2022

2 finish?

3 Go ahead and finish your answer.

4 Q. I just want the record to be clear what  
5 he's reading from. [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 Correct?

9 A. You pointed me to -- I thought you  
10 pointed me to a paragraph titled: [REDACTED]

11 [REDACTED]

12 Did you not point me to that --

13 Q. I didn't.

14 (Simultaneous speaking.)

15 A. -- paragraph?

16 Q. I pointed you to a paragraph  
17 before the -- before the chart on the previous page.

18 MS. GUERRIER: Was that part of your  
19 answer, [REDACTED] what you were reading?  
20 Because if it is, you should keep reading your  
21 answer.

22 THE WITNESS: Yeah.

23 A. You were talking about [REDACTED] So you  
24 mentioned [REDACTED] This is the paragraph -- I don't  
25 know if it's worth our time to go back and look at

1 [REDACTED] - 2/15/2022

2 the record, but you did ask me about [REDACTED] And

3 so I'm reading from the paragraph that discusses

4 [REDACTED]

5 Q. Okay.

6 A. It's on [REDACTED]. And you'll see --

7 you'll see discussion there.

8 At the end of the paragraph it says:

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 And so that's what the next section then

16 says.

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 Okay. So the point of including that  
22 contemporaneous relationship is to show that there  
23 is a strong daily relationship and that one cannot  
24 make inferences about that strong daily relationship  
25 without looking at the intraday relationship.

1 [REDACTED] - 2/15/2022

2 So the point of that relationship is not  
3 to say that the contemporaneous return, RT, is  
4 causing imbalances. I believe that would be an  
5 improper interpretation, which is why [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 So it's indeterminate. And the whole  
10 point of me including that specification was to  
11 point out that you cannot learn anything from that  
12 contemporaneous relationship. And that's why I have  
13 the [REDACTED]

14 [REDACTED]

15 So you can't -- that's why I don't think  
16 it makes sense to put a contemporaneous relationship  
17 there. [REDACTED] there is a  
18 relationship, but it could be due to X, it could be  
19 due to three different reasons. And so that's what  
20 the next section is.

21 Q. And in the [REDACTED], and the  
22 report you did for this case, you didn't analyze  
23 whether the contemporaneous returns would have been  
24 impacted by the other things that you analyzed in  
25 connection with this [REDACTED] Correct?



1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 A. The question that I'm answering -- the

4 question that I'm asking is [REDACTED]

5 [REDACTED]

6 [REDACTED] I believe that is the correct way to go

7 about it.

8 [REDACTED] at issues of trend

9 chasing, price following, price impact, or

10 predicting returns, I could have -- I could do that

11 with a contemporaneous relationship. But as I opine

12 in this -- [REDACTED], whether you

13 have a contemporaneous relationship or not does not

14 imply -- it could be due to one of those three

15 explanations, which is why one has to go to more

16 detailed data, which I personally -- I don't have

17 over this period. I don't have the same level of

18 granularity of data that [REDACTED] or I

19 could have done an intraday analysis and shown that

20 that's necessary.

21 Q. In your report in this case you indicate

22 that you used the regression analysis in this

23 article as the model for your regression analysis as

24 part of your expert report here. Correct?

25 A. That's correct.

1 [REDACTED] - 2/15/2022

2 Q. And then when you performed that  
3 analysis, you didn't actually do the whole analysis  
4 that [REDACTED]; you excluded the  
5 contemporaneous return. Correct?

6 MS. GUERRIER: Objection to form.

7 A. As I explained, [REDACTED] is the correct  
8 way to do the relationship because you're looking at  
9 the relationship between imbalances and past  
10 returns. That's the question I'm answering.

11 If I wanted to be answering the question  
12 of is there a contemporaneous relationship that --  
13 that could be due to one of three factors and the  
14 whole literature is flawed, which is the concept of  
15 what's going on here, is that there is a whole  
16 academic literature that does these type of  
17 relationships and I'm showing that there is problems  
18 with that regression.

19 So I'm -- [REDACTED]  
20 [REDACTED] to show that that was not sufficient, not to  
21 say that that's the right methodology, but that  
22 regression was [REDACTED] to show that the intraday  
23 analysis, you cannot conclude anything from that  
24 regression.

25 So if you're asking me did I not include

1 [REDACTED] - 2/15/2022

2 a regression and did I not include a regression that  
3 [REDACTED] showed was inconclusive, the answer to  
4 that question is, yes, [REDACTED] --  
5 include -- it wouldn't make sense to include a  
6 relationship that would, by definition, be  
7 inconclusive.

8 The way I did the analysis is the exact  
9 correct way to do it because the question I'm asking  
10 and the one I'm opining on is not -- not the precise  
11 one in -- in doing an intraday analysis, but I'm  
12 looking at this question of whether the -- whether  
13 they're trading in a manner consistent with past  
14 prices.

15 Q. I guess my question is, your analysis,  
16 when looking at past prices, would not take into  
17 account whether -- would not take into account a  
18 situation where a trader trades on a particular day  
19 based upon returns on that particular day. Correct?

20 MS. GUERRIER: Objection.

21 Q. In other words, your analysis would just  
22 have a lag of a day. Right?

23 MS. GUERRIER: Same objection.

24 A. The analysis, it has a lag of a day.  
25 That's a problem with daily regressions so you have

1 [REDACTED] - 2/15/2022

2 lag of a day.

3 Q. Right. But your analysis wouldn't tell  
4 you whether, in fact, there was an imbalance that  
5 was influenced by returns on a particular day. Is  
6 that fair?

7 MS. GUERRIER: Objection to form.

8 A. Well, I don't know if I would -- if there  
9 was an imbalance -- if you include the  
10 contemporaneous relationship, it has a number -- it  
11 has a host of problems because, as I explained in  
12 [REDACTED] -- and that's one of the major points of  
13 [REDACTED]  
14 [REDACTED] So it can be, you know,  
15 buy and sell imbalances around extreme events --  
16 well, these are the [REDACTED].  
17 But, basically, there is -- there is three things  
18 that it could be due to. It could be due to price  
19 pressure, which is what you automatically assume  
20 when you put a contemporaneous relationship in  
21 there, but it could also be due to trend chasing.  
22 For instance, if the price went up intraday and  
23 somebody traded beyond the price or it could be  
24 consistent with somebody having intraday ability  
25 to -- to time the price.

1 [REDACTED] - 2/15/2022

2 So because of those reasons, I don't  
3 think it makes sense to include a contemporaneous  
4 return as Professor Ferrell did and criticize me for  
5 it.

6 Q. Okay. You didn't explain any of this  
7 analysis of contemporaneous returns in your report  
8 in this case, did you?

9 MS. GUERRIER: Objection to form.

10 A. [REDACTED]  
11 [REDACTED] I -- obviously, I think  
12 that is beyond the scope of -- of this report.

13 Q. Okay. But when you cited in this report  
14 that you were using this paper as the model for your  
15 regression methodology in this case, you didn't  
16 indicate that you were not analyzing contemporaneous  
17 returns, did you?

18 MS. GUERRIER: Hold on. Objection to  
19 form. Objection; mischaracterizes the citation --

20 MR. CERESNEY: I read --

21 MS. GUERRIER: -- to the regression.

22 MR. CERESNEY: I read the -- the  
23 footnote in my question. It says: This  
24 regression --

25 MS. GUERRIER: Follows.

1 [REDACTED] - 2/15/2022

2 MR. CERESNEY: -- follows the same  
3 buy, sell and balance regression methodology as the  
4 paper I just cited.

5 A. I think --

6 MS. GUERRIER: Right. So my  
7 objection is your interpretation of follows as it  
8 relates to this report and trying to make it seem  
9 like -- okay. I'm not going to make a speaking  
10 objection.

11 Objection to the form. Objection  
12 that your question mischaracterizes the report.

13 But go ahead and answer.

14 A. I think -- I think my -- my footnote is  
15 completely accurate. Panel A, typically, it's very  
16 common in academic papers one could look at it that  
17 the main specification, the one that they consider  
18 most important, is put as Panel A.

19 Q. Yeah.

20 A. And [REDACTED] that specification in Panel A.  
21 That's -- I'm following -- I'm following that  
22 methodology from a general sense.

23 Yes, there are some minor -- minor  
24 differences in the sense I'm not running a bar, but  
25 I'm looking at that bottom equation.

1 [REDACTED] - 2/15/2022

2 Q. Okay. Let me just direct you to  
3 [REDACTED]. Take a look at that table on [REDACTED].

4 A. Yeah.

5 Q. Take a look at Panel A on that table on  
6 [REDACTED], which I think you just said is the main  
7 analysis in these analyses. Panel A in -- on [REDACTED]  
8 in the same regression-type analysis analyzes  
9 contemporaneous returns, doesn't it?

10 MS. GUERRIER: Objection to form.

11 A. Let me remind myself what I'm doing here.  
12 (Pause.)

13 Table 7 is examining -- I can -- I can  
14 read more and get into it, but Table 7 is -- is  
15 following up on a different -- different  
16 specifications and different questions in terms of  
17 afternoon trading and morning trading.

18 So it's showing a certain group of  
19 traders that they have a less strong contemporaneous  
20 relationship than the relationship document that  
21 previously -- in the previous table, Table 4, so  
22 it's showing that the coefficient, for instance, in  
23 that table is .52, but it's comparing coming back to  
24 saying, okay, this -- this other group of traders  
25 moves with prices less than that. And then it's

1 [REDACTED] - 2/15/2022

2 looking at Panels B and C is looking at whether

3 [REDACTED].

4 So, you know, again, I follow up in terms  
5 of this. This is -- we can dig into it more if  
6 you'd like, but this is a specification near the end  
7 of the [REDACTED] following up on issues related to the  
8 main -- following up on some [REDACTED] issues  
9 with the -- with the [REDACTED] and it's not focused on  
10 the aggregate relationship. It's focused on a  
11 particular group of papers, and you'll see that in  
12 the end, I'm doing like [REDACTED]  
13 [REDACTED] I can -- I can sit here and look at it  
14 more if you'd like.

15 Q. Okay. All I really asked you was -- and  
16 you were making a distinction between [REDACTED]  
17 [REDACTED], and all I was asking was  
18 in Panel A of this analysis, did you do a  
19 contemporaneous return analysis?

20 A. I'm just saying that this is for a -- I'm  
21 doing this for a completely different reason than [REDACTED]  
22 [REDACTED] in the other -- than the other table -- in  
23 the other table, not to understand the past  
24 relationship, but to look at this contemporaneous  
25 relationship for a different group of traders and



1 [REDACTED] - 2/15/2022

2 then to understand the intraday, evening, night  
3 relationship.

4 Q. Okay. You've referenced a few times  
5 Professor Ferrell and the analysis he did of  
6 contemporaneous returns. Right?

7 A. Yes.

8 Q. And I think Professor Ferrell found that  
9 when you look at the -- the contemporaneous -- the  
10 relationship between contemporaneous returns and the  
11 imbalance in trading by [REDACTED] and [REDACTED], that  
12 there was no statistically significant relationship  
13 between those two things on -- on the same day. In  
14 other words, looking at it as beta zero that day.  
15 Is that correct?

16 MS. GUERRIER: Objection to form.

17 A. I believe that's what he found.

18 Q. And just to be clear, you don't contest  
19 that finding. In other words, you don't contest  
20 that there is no statistically significant  
21 relationship between contemporaneous returns and  
22 imbalances. Is that fair?

23 MS. GUERRIER: Objection to form.

24 A. I don't think the way performing that  
25 analysis in that manner can get at the -- can get at

1 [REDACTED] - 2/15/2022

2 the question in terms of whether there is a  
3 contemporaneous relationship because that's the  
4 whole point of this paper is to show because there  
5 is other traders that have a negative relationship.  
6 So some traders have a positive relationship to the  
7 previous -- to the contemporaneous return, other --  
8 for every buyer, there is a seller. So other --  
9 other traders have a negative relationship with the  
10 return.

11 So the -- the point of this paper is to  
12 show if one wants to answer questions of price  
13 impact or contemporaneous relationship, which one  
14 needs to get more micro, more detailed in the data.

15 Q. Okay. All I'm asking is you don't  
16 contest Professor Ferrell's calculations; you  
17 contest the significance of -- of that finding. Is  
18 that fair?

19 MS. GUERRIER: Objection to form.

20 A. I'm not sure whether I've critiqued  
21 his -- his specification. I could look at his --  
22 can I -- can I look at his report --

23 Q. Sure. Let's look at --

24 A. -- and exactly which -- which one we're  
25 talking about, which panel.

1 [REDACTED] - 2/15/2022

2 Q. Yes, of course. Let's look at Ferrell's  
3 rebuttal report. That's [REDACTED]-3. And if you want to  
4 look at Exhibit 7 I believe is the relevant exhibit  
5 which is on Page 41 -- hold on. No, not 41. Sorry.  
6 42. Page 42. And maybe we can just -- if you can  
7 look at the analysis side-by-side with your analysis  
8 which is in Table 1 which is on Page 26 of [REDACTED]-1. If  
9 we can just look at that together.

10 Okay. And so if we look at this analysis  
11 and we look at -- we compare your finding of beta 1  
12 of 14.96 and if we look at his analysis and find  
13 14.96 in his analysis, do you see -- you see where  
14 he has return T minus 1, 14.96? Do you see that?

15 A. Yes.

16 Q. On the left-hand side of the column?

17 A. Yes.

18 Q. Okay. And so that's the same number as  
19 you have in yours for T minus, T1. Right?

20 And then if you look at T2, you had 6.89,  
21 and he's got 6.89. Do you see that?

22 A. Are we looking at Column 2?

23 Q. We're looking at Column -- the column  
24 with number one at the top of it.

25 A. Column No. 1, yes. Okay.

1 [REDACTED] - 2/15/2022

2 Q. And then you see -- so that's the same  
3 numbers. He has the same numbers for T1, T2, T3 as  
4 you. Right?

5 A. Yes.

6 Q. Then he --

7 A. I don't know if it is exactly the same  
8 ones. We can look at it, yes.

9 Q. But then --

10 A. Are you able to -- can -- which --

11 Q. That's why I want you to take them  
12 side-by-side.

13 A. Yeah, sorry, sorry. Yeah, I appreciate  
14 that. Thank you.

15 Q. Okay. So I just wanted to show you that  
16 his number for T1 is the same as your number. His  
17 number for T2 is the same as your number for T2, so  
18 Day 2. Day 3 is the same, .02. And Day 4 is 2.59,  
19 just the same as yours.

20 A. Okay. Good enough.

21 MS. GUERRIER: Is that a question, or  
22 are you asking him to confirm that --

23 THE WITNESS: No. Our numbers line  
24 up. I think I'm --

25 (Reporter admonishment.)

1 [REDACTED] - 2/15/2022

2 (Discussion off the written record.)

3 Q. And then --

4 A. I believe his T statistics -- oh maybe  
5 he's plotting standard errors. Our numbers are the  
6 same, but it looks like -- is he -- it looks like  
7 our -- it looks like the number in parenthesis is  
8 different. Maybe he's plotting standard errors, but  
9 okay.

10 Q. Yeah, yeah. If you look at -- it's  
11 Footnote 1, he says: Standard errors are robust.  
12 There is some word there that's --

13 A. (Unintelligible.)

14 Q. Yeah, there's a difficult word that  
15 I won't --

16 A. Yeah, heteroskedasticity. Thanks.

17 Q. Well, you just said it. Let me spell it  
18 for the court reporter. It's

19 H-E-T-E-R-O-S-K-E-D-A-S-T-I-C-I-T-Y. Okay. I have  
20 no idea what that means, but the point being that he  
21 essentially reaches the same numbers, at least for  
22 the -- for the -- well, why don't you tell me.

23 When he says -14.96 and you have -14.96,  
24 do those numbers line up?

25 A. Yes, those numbers line up.

1 [REDACTED] - 2/15/2022

2 Q. Okay. But then for the contemporaneous  
3 return, he has a number -4.94. Do you see that?

4 A. Yes.

5 Q. And that is not a statistically  
6 significant return?

7 A. That's correct.

8 MS. GUERRIER: Objection to form.

9 Go ahead.

10 A. That's correct. But I want to point out  
11 that Ferrell's analysis shows that my analysis is  
12 robust. I appreciate you pointing this out to me.

13 If you look in Column 2, all I'm opining  
14 on is RT -1, and it's statistically significant with  
15 three stars. -14.96, he includes the contemporaneous  
16 relationship, which I think is problematic to do so.  
17 Nevertheless, even after including it, it's still  
18 showing that my lag return is highly significant.  
19 And the coefficient is nearly identical to the other  
20 one.

21 Q. Yeah.

22 A. So he's showing that my relationship  
23 is -- is robust to including the imbalance, so I  
24 don't understand what the point of all this -- my --  
25 whether I use Panel A or Panel B, it doesn't matter.

1 [REDACTED] - 2/15/2022

2 The result is the same. I mean, I -- I guess --

3 Q. Here's the significance.

4 A. -- I'm just kind of perplexed at this.

5 My relationship is the same. It's statistically  
6 significant. The lag 1 is what I'm opining on. And  
7 I'm saying that they are still trading in such a  
8 manner related to the previous day's past return.

9 Q. Okay.

10 A. And so it's definitely showing the  
11 robustness of the relationship to including the  
12 contemporaneous relationship. So whether you do  
13 Panel A, or Panel B, Panel C, whatever, the  
14 relationship is robust.

15 Q. Okay. But in Panel A and Panel B of the  
16 other article, [REDACTED] contemporaneous returns,  
17 and in this analysis you didn't. Is that fair?  
18 That's all I'm asking.

19 MS. GUERRIER: Objection to form.

20 A. As I've said many -- several times, I --  
21 I'm going to answer the question and not be  
22 characterized.

23 As I've said several times, the reason [REDACTED]  
24 [REDACTED] the contemporaneous relationship in there is to  
25 show that you would need to do an intraday

1 [REDACTED] - 2/15/2022

2 relationship to understand that relationship more  
3 fully. And that's what the point of the paper is.  
4 And the paper spends substantial time doing the  
5 intraday relationship.

6 As [REDACTED] note in the paper, one cannot  
7 interpret that positive coefficient -- whether it's  
8 positive, significant, or insignificant, one cannot  
9 interpret it because of the issues within the day.  
10 You don't know, are they trading in response to past  
11 returns within the day? Are they impacting returns?  
12 Maybe they're trying to minimize their impact on  
13 returns.

14 And, in fact, GSR has communication, a  
15 lot of communication, which I've reviewed in my  
16 report, indicating that they're very sensitive to  
17 not wanting to -- not -- not wanting to -- they're  
18 very sensitive in the way they trade, and so they --  
19 they're very careful in the way they trade, and  
20 they're very strategic in the way they trade. So I  
21 don't know to what extent one can draw any  
22 conclusions from including the contemporaneous  
23 relationship.

24 But I want to know that -- that's not  
25 what I'm opining on. That's maybe what Professor



1 [REDACTED] - 2/15/2022

2 Ferrell is opining on, the contemporaneous  
3 relationship. That's not what I'm opining on. I'm  
4 opining on the lagged relationship. And that lagged  
5 relationship is completely robust to Ferrell's  
6 robustness check.

7 I didn't include that robustness check  
8 because I didn't think it was the right way to do  
9 it, but I appreciate him including the robustness  
10 check for me.

11 Q. Okay. Let me just ask you one final  
12 thing about Ferrell's analysis, and I want to just  
13 get why you disagree with Professor Ferrell on this.

14 If you look at Paragraph 45 of Ferrell's  
15 report, which is [REDACTED]-3. He says in the two sentences  
16 at the end of that Paragraph 45: [REDACTED] also  
17 has no basis for his claim that these sellers on  
18 behalf of Ripple sold more XRP when the price of XRP  
19 was increasing and relatively less when the price  
20 was decreasing on the previous day, and thus were  
21 able to use rising XRP returns and increased demand  
22 to mitigate any potential negative effect of its XRP  
23 sales, and thus keep XRP prices high.

24 In order for this claim to be true, the  
25 regression coefficient on prior returns must be

1 [REDACTED] - 2/15/2022

2 statistically significant, and my return regression  
3 specification demonstrates that this is not the  
4 case.

5 Then he goes on to say [REDACTED]  
6 regression does not support his claim, that [REDACTED] and  
7 [REDACTED] on behalf of Ripple were able to use  
8 rising XRP returns, and these increased demand to  
9 mitigate any potential effect of its XRP sales, and  
10 thus keep XRP prices high.

11 Do you disagree with Ferrell's statements  
12 in that paragraph?

13 MS. GUERRIER: Why don't you read  
14 Paragraph 45 and 46 as well.

15 THE WITNESS: Okay.

16 A. (Pause.)

17 I think Professor Ferrell should amend  
18 his report.

19 Q. Why should he amend his report?

20 A. Because his relationship here in his  
21 table does not line up with -- what he wrote in  
22 Paragraph 45 does not line up with his table.

23 Q. And why do you say that? Let's look at  
24 his table.

25 A. Yeah.

1 [REDACTED] - 2/15/2022

2 Q. Which is Page 42.

3 A. Okay. As one can see in Column 2,  
4 Column 1 and Column 2 imbalances are related to past  
5 returns. That is exactly what my report opines on.

6 Professor Ferrell states: [REDACTED]  
7 has no basis for his claim that sellers on behalf of  
8 Ripple sold more XRP when the price was increasing  
9 and relatively less when the price was decreasing on  
10 the previous day, and thus were able to use rising  
11 XRP, blah, blah, blah.

12 Here, this is the key sentence in --  
13 after Footnote 69: In order for this claim to be  
14 true, the regression coefficient on the prior return  
15 must be statistically significant.

16 And my return specification demonstrates  
17 that this is not the case. In fact, his  
18 specifications in 1 and 2 shows that it's  
19 statistically significant.

20 Q. Actually, isn't he talking here about a  
21 different part of his regression analysis, not the  
22 imbalance as the dependent variable, but the returns  
23 as the dependent variable?

24 MS. GUERRIER: Objection to form.

25 A. No, he's not, I don't think.

1 [REDACTED] - 2/15/2022

2 Q. Take a look at his report. And I'll  
3 direct your attention to Paragraphs 44, 45, and 46  
4 again. Read that again, [REDACTED].

5 A. It says: In order for his claim to be  
6 true, the regression coefficient on the prior  
7 returns must be statistically significant.

8 And he's -- his regression coefficient on  
9 the prior returns must be -- okay. His -- he does  
10 say, "My prior return regression indicates that this  
11 is not the case," but his balance regression  
12 indicates that it is the case.

13 Q. So he's talking here about his prior  
14 returns? Regression is --

15 (Simultaneous speaking.)

16 A. The criticism for me, I said: Sellers on  
17 behalf of Ripple sold more XRP when the price is  
18 high.

19 So he misunderstands what I have done.  
20 Because I'm looking at imbalances. None of my  
21 regressions are in relationship to returns.

22 Q. Okay. That's true, but Professor Ferrell  
23 did an analysis on the basis of returns and  
24 concluded that there was no statistically  
25 significant relationship between the imbalances that

1 [REDACTED] - 2/15/2022

2 [REDACTED] and [REDACTED] had and the returns on XRP,  
3 meaning that those imbalances had no impact on the  
4 price of XRP. Is that fair?

5 A. Well --

6 MS. GUERRIER: Objection to form.

7 A. -- with due respect to Professor Ferrell,  
8 [REDACTED],  
9 and this paper -- and the regression, if you want to  
10 look at the relationship -- this may be four. There  
11 is another [REDACTED] that's related, but -- another  
12 couple of [REDACTED] that are related, but these are the  
13 main ones.

14 But this relationship here, if you want  
15 to look at the relationship and ask the question, if  
16 we turn to Exhibit 7, and we wanted to look at his  
17 Specification 3 and 4, for instance. Okay?

18 Q. Uh-huh.

19 A. If we look at his Specifications 3 and 4  
20 with returns on the left-hand side, and we looked at  
21 past imbalances, okay, that is answering the  
22 question of whether XRP trading is able to predict  
23 where the return is, whether -- they have  
24 forecasting power for the return. There is a  
25 literature about that.

1 [REDACTED] - 2/15/2022

2 Q. Uh-huh.

3 A. And so all that relationship in  
4 Specification 3 and 4 is examining is whether --  
5 whether G -- whether trading on behalf of Ripple is  
6 able to predict the future.

7 I don't know if that's the -- if that is  
8 any opinion that's -- I'm not offering any opinion  
9 about whether Ripple is able to predict the future,  
10 and I didn't know that Professor Ferrell was  
11 offering any prediction about whether Ripple can  
12 predict the future.

13 But that is all that one can learn from  
14 Specification 3 or 4. That's the point of [REDACTED]  
15 in the [REDACTED]. It's also the point of  
16 the [REDACTED]. And  
17 [REDACTED] that also talks about  
18 whether certain people can predict the future.

19 But that's what those regressions are  
20 about, and there is no evidence that excerpt -- that  
21 whether the lagged imbalances predict returns.  
22 One's not showing evidence of that.

23 Q. When you talk about predicting returns,  
24 do you mean influence future returns?

25 A. No, I'm saying predicting future returns

1 [REDACTED] - 2/15/2022

2 we're not talking about contemporaneous  
3 relationships. When we're talking about purely  
4 lagged relationships, we're saying whether they can  
5 predict future returns. That's when you have a --  
6 when you -- if you say like, for instance, if we  
7 see -- it was done in international literature, for  
8 instance, that we saw in -- and this is like Feude  
9 (phonetic) O'Connell & Schultze had a paper. They  
10 showed that if you took like the State Street  
11 trading data, you could see that those international  
12 investors typically move into a market and then the  
13 price may move the next day. They had some ability  
14 to predict the future.

15 Okay. There was -- there's also a  
16 relationship about whether they're actually moving  
17 the price and their contemporaneous relationship is  
18 moving the price and to get micro with that, my  
19 point in this paper, [REDACTED], is just  
20 looking at -- documenting a correlation on a daily  
21 basis is not enough to answer that question.

22 Q. Okay.

23 A. And that one must have very micro data to  
24 look at the question and the intraday patterns. And  
25 one the things all the papers found is that intraday

1 [REDACTED] - 2/15/2022

2 patterns, the patterns are very different. There's  
3 certain groups of traders do move the prices and  
4 maybe and -- and maybe have some predictability on  
5 the very short-term of moving the price.

6 But to answer those questions one has to  
7 get with the intraday data, looking at the lagged  
8 relationship, this lag regression here. You  
9 can't -- only question that Specification 3 and 4  
10 that Professor Ferrell runs, the only question that  
11 can answer is whether people trading on behalf of --  
12 trading on behalf of Ripple can they predict what  
13 the price will be tomorrow. And it looks like from  
14 his specifications the answer to that is no, because  
15 they're insignificant.

16 But you cannot use that to -- there's  
17 nothing in there to criticize what I did. That's  
18 not a question that I answered at all.

19 Q. Right.

20 A. I didn't look at --

21 Q. You didn't look at that?

22 A. -- whether they predicted the future.

23 Q. You didn't look at whether they predicted  
24 the future or whether their prices -- sorry -- or  
25 whether their trading influenced XRP prices?



1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 A. I've stated my statements carefully  
4 around that, but my assignment was not to -- I've  
5 stated my things carefully around that so I -- that  
6 was not part of my assignment.

7 MR. CERESNEY: All right. Let's take  
8 a break.

9 THE VIDEOGRAPHER: Off the record,  
10 4:21.

11 (Break.)

12 THE VIDEOGRAPHER: This is Segment  
13 No. 6. Back on the record 4:41.

14 Q. [REDACTED], I wanted to ask you a  
15 few questions about [REDACTED] again. Does [REDACTED]  
16 have any policies and procedures relating to [REDACTED]  
17 employees in crypto?

18 A. Yes.

19 Q. Tell me what those policies are?

20 A. One it's not allowed to be trading in  
21 crypto on a matter that -- that [REDACTED] is working  
22 on.

23 Q. So what is that -- what does that mean "a  
24 matter that [REDACTED] is working on"?

25 A. So -- so, for instance, if one is -- if

1 [REDACTED] - 2/15/2022

2 [REDACTED] is working on a matter regarding a digital  
3 asset, one is not allowed to be trading on that  
4 digital asset based on information one may obtain.  
5 Sort of like, I guess, insider trading policy.

6 Q. Does [REDACTED] have a watch list or  
7 restricted list of digital assets that are -- that  
8 employees are prohibited in trading?

9 THE WITNESS: Seemed like the screen  
10 rebooted.

11 A. I -- I don't know exactly. I don't trade  
12 digital assets, so I don't -- I'm not aware of a  
13 watch list like that. I'm not sure if there's a  
14 watch list of other employees or it's just the  
15 general policy that you're not allowed to trade  
16 on -- on any matter in which you have information.

17 I don't have the specific policy. There  
18 is a policy, employees all sign the policy. And I  
19 don't trade digital assets, so it doesn't affect me.

20 Q. Are there [REDACTED] employees who do trade  
21 digital assets?

22 A. I'm not sure.

23 Q. Okay. Are they required to notify you if  
24 they do engage in -- in -- let me scratch that.

25 Do employees of [REDACTED] who engage in

1 [REDACTED] - 2/15/2022

2 trading of digital assets, are they required to  
3 notify anyone at [REDACTED] about that trading?

4 A. I think they're required to notify if  
5 they're trading -- if they make any trades regarding  
6 a digital asset in which any matter [REDACTED] is  
7 working on.

8 Q. And how do they know what matters [REDACTED]  
9 is working on?

10 A. To the extent that -- to the extent that  
11 they're knowledgeable about the matters we work on.

12 Q. Well, does every [REDACTED] employee know  
13 every [REDACTED] matter that you guys are working on?

14 MS. GUERRIER: Objection to form.

15 A. No, not every [REDACTED] employee knows  
16 every matter we're working on. Some matters we're  
17 working on require more secrecy than others.

18 Q. And those matters that require secrecy,  
19 would an [REDACTED] employee be precluded from trading  
20 in the digital assets involved in that matter if  
21 they're not involved in the matter?

22 A. Yes, they would be. They would be  
23 precluded in trading in that matter.

24 Q. And so is there some centralized location  
25 that they could go to to learn what digital assets

1 [REDACTED] - 2/15/2022

2 [REDACTED] is involved with?

3 A. Not to my knowledge. I'm not sure. I'm  
4 not sure how -- how that -- how the policy works. I  
5 think it's similar to an insider trading policy at  
6 any large firm, you're not allowed to trade on any  
7 kind of information you have that's inside  
8 information. It's purposely defined to be, you  
9 know, broad.

10 Q. Okay. But my understanding of large  
11 firms that have those policies is that those firms  
12 also have restricted lists that identify the  
13 securities or the digital assets that cannot be  
14 traded on. Do you know if [REDACTED] has such a  
15 restricted list?

16 MS. GUERRIER: Objection to form.

17 A. I'm not sure of the details as  
18 ours (phonetic).

19 Q. Okay. Do you know if any -- earlier you  
20 also talked about -- we talked about how crypto  
21 assets, major crypto assets are speculative. Right?  
22 We talked about that earlier. Right?

23 A. Yes.

24 Q. In your view?

25 And you talked about how those assets are

1 [REDACTED] - 2/15/2022

2 extremely risky?

3 MS. GUERRIER: Objection to form.

4 A. Yes.

5 Q. And that would include assets like  
6 bitcoin and Ether, for example?

7 MS. GUERRIER: Objection to form.

8 A. Yes, [REDACTED] examines the -- [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 Q. And that was true -- I think [REDACTED]  
12 covered the [REDACTED] period. Correct?

13 A. [REDACTED] -- it's a little broader than just  
14 [REDACTED] but, yes, earlier period.

15 Q. Is it [REDACTED], is that what time period --

16 A. I would need to look at the [REDACTED] for the  
17 precise window.

18 Q. Okay. But did you still believe that  
19 that was true in 2020, that bitcoin and Ether were  
20 still speculative at that time?

21 MS. GUERRIER: Objection to form.

22 A. I think the fundamental forces that are  
23 identified in that [REDACTED] are -- haven't gone away.

24 Q. Okay.

25 A. In fact, [REDACTED] has printed more -- there

1 [REDACTED] - 2/15/2022

2 is much more [REDACTED] that were printed post [REDACTED]  
3 than there was in the period that [REDACTED] in the  
4 [REDACTED].

5 Q. So you believe, even as of today,  
6 bitcoin, Ether and other major digital assets are  
7 subject to manipulation?

8 MS. GUERRIER: Objection --

9 A. I'm not --

10 MS. GUERRIER: -- to the form.

11 A. -- I'm not opining on -- I'm not opining  
12 on that. I -- if you want to say subject to the  
13 potential to manipulate the asset is there, I don't  
14 know whether they are manipulated or not.

15 Q. Okay.

16 A. The structural forces -- as I said, the  
17 structural forces that [REDACTED] have  
18 not -- have not all been eliminated and many of them  
19 are the same.

20 Q. And it's fair to say that your view that  
21 you expressed earlier which is that these type of  
22 digital assets, bitcoin, Ether and other major  
23 digital assets are more speculative than  
24 investments, that is your view as of today still,  
25 too?

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection to form.

3 A. I wouldn't make a statement that all  
4 digital assets. There could be exceptions. There  
5 could be exceptions. I don't have -- but I do --  
6 the assets I have examined were quite volatile and  
7 not only volatile -- I mean everybody knows about  
8 the volatility, but they were also -- [REDACTED]  
9 that they were manipulated over the period that [REDACTED]  
10 [REDACTED] it.

11 So I do believe that they are not only  
12 speculative, but if you're trading against someone  
13 that's a large player, the odds are often stacked  
14 against you.

15 Q. And that's true for bitcoin and Ether as  
16 well?

17 MS. GUERRIER: Objection to form.

18 A. The -- it's true for bitcoin and Ether.

19 (Exhibit [REDACTED]-2 was marked.)

20 Q. I want to mark -- let's mark your  
21 rebuttal report [REDACTED]-2, which is your rebuttal report.  
22 I just want to make sure we mark that.

23 A. It was actually the rebuttal report I  
24 didn't have, not the amended report. I actually  
25 have the amended report here.

1 [REDACTED] - 2/15/2022

2 Q. So okay. I hadn't yet given you the  
3 rebuttal report.

4 A. Sorry. Thank you. That's why I don't  
5 have it.

6 Q. I handed you [REDACTED]-2, which is the rebuttal  
7 report of [REDACTED] dated November 12th, 2021.

8 Is this a copy of the rebuttal report you  
9 prepared in connection with this case?

10 A. Yes, it appears to be so.

11 Q. If you look at Page 49, is that your  
12 signature on Page 49?

13 A. Yes, it is.

14 Q. Okay. And your rebuttal report rebuts  
15 certain opinions from two of the defendants'  
16 experts, Professor Osler and Professor Ferrell.

17 Is that correct?

18 A. That's correct.

19 Q. And it's fair to say that your rebuttal  
20 report concerns two topics, opinions of whether XRP  
21 is a currency and opinions on Ripple's impact on XRP  
22 price and liquidity. Correct?

23 MS. GUERRIER: I'm objecting to the  
24 form.

25 A. The currency -- yeah, those are



1 [REDACTED] - 2/15/2022

2 general -- in general those are the categories, the  
3 broad categories, yes.

4 (Discussion off the written record.)

5 Q. In your rebuttal report we talked a lot  
6 just before the break about the regression analysis  
7 you did in connection with your original report.

8 Correct?

9 A. That's correct.

10 Q. And in this rebuttal report you also  
11 commented on Professor Ferrell's regression analysis  
12 in his original report. Correct?

13 A. That's correct.

14 Q. And I want to direct your attention to  
15 Page 43 of your rebuttal report, and direct your  
16 attention there to whether this is the portion of  
17 your report where you comment on Professor Ferrell's  
18 regression analysis. Correct?

19 A. That's correct.

20 Q. And in your report you list five reasons  
21 why Professor Ferrell's regression analysis was  
22 flawed. Correct?

23 A. That's correct.

24 Q. I want to walk through those five reasons  
25 right now. The first reason you cite is that the

1 [REDACTED] - 2/15/2022

2 Ferrell report used a nonstandard 28-day event  
3 window. Right?

4 A. That's correct.

5 Q. From your perspective, as I understand  
6 it, you believe that it would have been more  
7 appropriate for Professor Ferrell to use a 30-day  
8 window. Is that what you opined?

9 MS. GUERRIER: Objection to form.

10 A. That's not what I opined.

11 Q. What did you opine?

12 A. Well, what I opine here is that he's  
13 looking at a large -- there is two points I'm  
14 making. The first point is that he's looking at a  
15 28-day window when the literature -- anyone that can  
16 look at the literature could see that the  
17 relationship should be conducted in a much tighter  
18 time window.

19 In fact, the point of [REDACTED] is to  
20 show -- and other papers they've examined these  
21 questions intraday. And now some people have also  
22 looked at daily relationships. Like, for instance,  
23 I cite here the relationship between asset returns  
24 and trading uses daily and intraday data, Chordia,  
25 Roll, Subrahmanyam, Chordia and Subrahmanyam.

1 [REDACTED] - 2/15/2022

2 Those [REDACTED] that I mention  
3 [REDACTED]. [REDACTED]  
4 [REDACTED], like we went over earlier, is that  
5 using a daily relationship is too -- one must go  
6 intraday if one wants to understand this  
7 relationship better. And longer windows will  
8 obscure the relationship between returns and trading  
9 behavior.

10 Now, [REDACTED]  
11 [REDACTED], Sias, Starks, and Titman, they showed how the  
12 quarterly relationship and a longer relationship can  
13 be obscured and how you get more precise when you  
14 use daily returns. And that these longer windows  
15 are inappropriate.

16 And as I cited here: Indeed a major  
17 point of Sias, Starks, and Titman is that longer  
18 windows make it impossible to discern whether  
19 examining trading activity in relationship with  
20 stock prices occurs before the price, with the  
21 price, or after the price movement.

22 So for him to run a relationship over a  
23 long period of time like this, over a monthly  
24 period, it is nonstandard that he gets 28 days. So  
25 I do think that's odd and probably shows a lack of

1 [REDACTED] - 2/15/2022

2 familiarity with the finance literature that almost  
3 everybody in the finance literature, if they're  
4 going to use monthly returns, they use monthly  
5 returns.

6           Nevertheless, I'm not saying that that's  
7 the major problem whether he did 28 days or 31 days.  
8 He probably would have gotten the same result  
9 whether he did 28 days or 31 days, but that  
10 relationship is the improper one to run if one  
11 really wants to get answers, questions of price  
12 impact that one needs to get intraday with the data.  
13 In examining a long relationship here, he also cites  
14 [REDACTED] saying he's following the [REDACTED]  
15 [REDACTED], but nowhere in [REDACTED] do I do  
16 monthly regressions or 28-day regressions.

17           So [REDACTED] mainly uses intraday data and  
18 analyses of that nature. So I think he cites [REDACTED]  
19 [REDACTED] incorrectly to say he's following [REDACTED]  
20 methodology.

21           And also he cites the Fama/French papers.  
22 Those are answering very different questions.  
23 They're looking at longer windows. They're running  
24 regressions to examine what are the common factors  
25 and returns -- return structure, not asking who's

1 [REDACTED] - 2/15/2022

2 driving prices.

3 So the papers he cites here for the  
4 longer window, [REDACTED]  
5 [REDACTED], the Fama and French papers at least,  
6 and I'm familiar with the other one he cites, but  
7 those were not appropriate to the type of questions  
8 that he's asking here.

9 Q. That last point you made about those  
10 papers not being appropriate to the types of  
11 questions he's asking here, is that what you are  
12 referencing when you have that parenthetical there:  
13 They do not deal with blows, distributions like the  
14 literature above.

15 Is that what that reference is to?

16 A. They don't deal with -- at least the Fama  
17 French paper is not primarily about flows, yes.

18 Q. But is that the reference you just made  
19 to those papers not being applicable here was that  
20 parenthetical?

21 A. The -- the point I was making here is  
22 what he's trying to say with these papers. Again,  
23 he -- what he's saying with these regressions, yeah,  
24 we can go back and -- we can look at his regression.  
25 Can I look at his regression?

1 [REDACTED] - 2/15/2022

2 Q. But I'm not asking you about his  
3 regression. I'm asking you about your criticism of  
4 his regression right here. And your criticism right  
5 here that I'm asking you about is his use of the  
6 nonstandard 28-day event window.

7 MS. GUERRIER: Were you done with  
8 your answer?

9 A. Well, I would like to go back and --  
10 you're asking me details about -- related to my  
11 criticism of his regression. I would like to look  
12 at his regression.

13 MS. GUERRIER: Well, he's not done  
14 with his answer. So can he finish his answer and  
15 then you can follow up?

16 Q. Are you done with your answer?

17 A. I would like to look at Professor  
18 Ferrell's actual regression, if we're going to talk  
19 about it, like I thought it was instructed, to  
20 actually walk through the specification, what he's  
21 showing, the table behind it at least.

22 Q. I'm happy for you to look at Professor  
23 Ferrell's regression analysis, but I'm not asking  
24 you a question at the moment that requires you to  
25 look at that. So if you want to look at it, go

1 [REDACTED] - 2/15/2022

2 ahead, feel free.

3 A. Well, I believe it does because it is a  
4 question about his regression. This is my criticism  
5 of his regression --

6 Q. Right.

7 A. -- in the 28-day window.

8 Q. Right. And I'm just asking you now about  
9 the 28-day window. I'll ask you about the other  
10 criticisms in a minute.

11 A. Okay.

12 Q. But I just want to focus on the 28-day  
13 window criticism. Okay?

14 MS. GUERRIER: I don't think  
15 [REDACTED] was done. I think that he wanted  
16 to explain his answer. So if he needs to look at  
17 Professor Ferrell's report to do that, then I think  
18 he should.

19 So can you look at Professor  
20 Ferrell's report?

21 A. Can I look at Professor Ferrell's report?

22 Q. Go ahead. Take as much time -- would you  
23 like to take a break so that you can look at it?

24 A. No, I don't need a break.

25 Q. Okay.

1 [REDACTED] - 2/15/2022

2 A. I don't need a break. I'll look at it  
3 quickly.

4 MS. GUERRIER: Take your time and  
5 make sure --

6 MR. CERESNEY: Well, if you'd like to  
7 study the report, I'm happy to take a break.

8 MS. GUERRIER: I don't think he's  
9 trying to study it. He's just using it as a point  
10 of reference.

11 MR. CERESNEY: Yeah, so let's take a  
12 look at it.

13 A. Because he ran a lot of regression, so  
14 I want to see exactly which regression in the  
15 earlier report. Is this the rebuttal report?

16 Q. Yes, I believe that's the rebuttal  
17 report.

18 A. I don't think I have his original report.

19 (Exhibit [REDACTED]-15 was marked.)

20 Q. All right. We'll give you his original  
21 report. We'll mark it as [REDACTED]-15.

22 A. (Pause.)

23 Okay.

24 He ran lots of regressions here, so I  
25 don't know exactly which one we're talking about at



1 [REDACTED] - 2/15/2022

2 this point.

3 Q. Okay. Well, I'm asking you about the  
4 28-day. Did you do any analysis of how Professor  
5 Ferrell's regression analysis would have come out  
6 under the windows that you're proposing were  
7 appropriate?

8 A. No.

9 Q. Okay.

10 A. Because --

11 Q. I'm not asking you why. I just asked  
12 you --

13 A. Well, I would like to answer the  
14 question.

15 Q. Well, your counsel will have plenty of  
16 time to ask you questions.

17 MS. GUERRIER: Well, no.

18 MR. CERESNEY: I asked him a question  
19 and he answered it.

20 MS. GUERRIER: That's his answer.  
21 You can't cut off his answer. He's not done. Let  
22 him finish his answer.

23 MR. CERESNEY: I can cut off his  
24 answer if he's not answering the question.

25 THE WITNESS: I do not --

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: No, you can't -- I  
3 mean, you can't -- how do you know what he's going  
4 to say? Let him finish his answer, please. Thank  
5 you.

6 Go ahead.

7 A. I did not -- the question was if I ran  
8 any analysis regarding the 28-day window and whether  
9 it would change under the proposed -- when you say  
10 proposed analysis I'm talking about, it depends on  
11 which analysis. I mentioned a lot of ways one could  
12 form analyses. Whether one does -- as I mentioned  
13 earlier, whether one does 28-day or 30-day analysis,  
14 I'm not sure -- I doubt that's going to change  
15 things much.

16 But I am talking about intraday analysis  
17 would potentially be the right way to look at  
18 things, but also what he's -- the type of regression  
19 he's looking at here is also -- there's other  
20 reasons why it's flawed. So I don't think that one  
21 can just say, "oh, I should have -- I should have  
22 critiqued it by changing X or Y." There is a litany  
23 of things. So we can go through all five, if you  
24 want.

25 Q. Yeah. I'm happy to.

1 [REDACTED] - 2/15/2022

2 A. Okay.

3 Q. That's what we're going to do.

4 A. Let's do that.

5 Q. I'm only asking you whether you performed  
6 any analysis in the intraday analysis that you claim  
7 would have been appropriate to do the regression  
8 analysis.

9 MS. GUERRIER: Objection to form.

10 A. I don't have the precise data, intraday  
11 data to do the type of analysis that I did in the  
12 [REDACTED].

13 Q. Okay. So you didn't do the analysis?

14 A. I did not.

15 Q. Okay. And by the way, are you familiar  
16 with the phrase "day of the week effect"?

17 A. Yes.

18 Q. And can you describe what you understand  
19 that to mean?

20 A. Day of the week effect is sometimes  
21 people have talked about the Friday effect or Monday  
22 effect, end-of-the-month effect. Sometimes there is  
23 a day-of-the-week effect where the return can, on  
24 average, be higher on a certain day than other days.  
25 [REDACTED], Laura Starks, has also written on the

1 [REDACTED] - 2/15/2022

2 end-of-the-month effect, I believe, also. Controls  
3 for day of the week.

4 Q. And would you agree that Professor  
5 Ferrell's use of the 28-day sampling period  
6 circumvents the concerns that trading on the  
7 weekend, for example, may have lower volume or a  
8 somewhat different nature than trading during the  
9 week?

10 MS. GUERRIER: Objection to form.

11 A. I don't know -- I don't think that the  
12 28-day window helps with that.

13 Q. You don't think the 28-day window  
14 addresses the day-of-the-week effect?

15 A. Well, there is the day-of-the-week  
16 effect. There is also day-of-the-month effect so  
17 if, like, Monday, it would have four Mondays, but  
18 there is very little -- I'm not aware of a huge --  
19 there's not -- the day-of-the-week effect was  
20 something that was discussed a lot in the '80s so  
21 it's not a huge problem with today's world that  
22 people want to address or people trying to solve  
23 still the day-of-the-week effect or -- yeah, sure,  
24 there is some papers, but it's not a major -- not a  
25 major issue and I don't see any reason why -- yeah,

1 [REDACTED] - 2/15/2022

2 I don't -- I don't see any reason why the analysis  
3 would be performed to avoid certain -- this -- this  
4 huge problem.

5 Q. Okay. Let's turn to your second  
6 criticism. Your second criticism of Professor  
7 Ferrell's report -- regression analysis is that XRP  
8 distributions are denominated in US dollars rather  
9 than XRP units. Is that correct?

10 A. Yes.

11 Q. Did you analyze how Professor Ferrell's  
12 regression analysis would have come out if  
13 distributions had been denominated in XRP units  
14 instead?

15 A. I am commenting about -- I did not -- let  
16 me see which analysis we're talking about.

17 (Pause.)

18 I'm -- I'm merely pointing out reasons  
19 why his analysis is unreliable. There is a  
20 multitude of reasons here.

21 Q. Okay.

22 A. As I stated in my first reason, one would  
23 need to do this intraday, so I don't believe that  
24 redoing this -- redoing Professor Ferrell's analysis  
25 in any form on a monthly basis or 28-day period like

1 [REDACTED] - 2/15/2022

2 he did would tell me anything. So I don't believe  
3 there is a reason to redo that analysis.

4 Q. Well --

5 A. I don't -- I don't think I learned  
6 anything from Professor Ferrell's analysis so I  
7 don't see any reason to redo that analysis.

8 I am pointing out that there is a big  
9 problem in the way that he constructed it in the  
10 sense that we all know, and as you pointed out over  
11 the period, XRP -- prices of XRP units are changing  
12 widely over time and he cites [REDACTED].

13 And when citing [REDACTED], he says he  
14 follows [REDACTED] and [REDACTED]  
15 denominated in digital asset units, not U.S. dollar  
16 units. So there is a whole international literature  
17 that talks about what units to do, but if one's  
18 going to look at the relationship between flows and  
19 returns, one should keep things in the -- in the  
20 same -- same units.

21 Q. Okay. But my question was whether you  
22 had done any -- whether you had done any analysis to  
23 determine whether, in fact, his regression analysis  
24 would have come out differently if he had  
25 denominated the distributions in XRP units?

1 [REDACTED] - 2/15/2022

2 A. I don't believe I have.

3 Q. Okay. Your third criticism of the  
4 Ferrell report is that the regression analysis fails  
5 to account for Ripple's active management of XRP  
6 distributions. Correct?

7 A. Yes.

8 Q. And are you able to reach any conclusion  
9 that Ripple's active management, to the extent it  
10 occurred, of XRP distributions actually had any  
11 impact on the price of XRP?

12 A. Well...

13 MS. GUERRIER: Let me object the form  
14 of that question.

15 But go ahead.

16 A. What I'm -- what I'm saying here is that  
17 the regression doesn't make -- what I'm saying in  
18 this point is that I'm -- the regression doesn't  
19 make sense to -- when you have an effect that's  
20 actively managed and they're managing it with  
21 response to prices, in particular, response as  
22 Professor Ferrell's own analysis has confirmed, that  
23 they're trading in response to past returns -- that  
24 GSR is trading in response to past returns as his  
25 own analysis has confirmed.

1 [REDACTED] - 2/15/2022

2 Do -- you're disagreeing with that?

3 Q. Answer the question.

4 A. Okay. Well, as his own analysis has  
5 confirmed, that GSR trades with respect to past  
6 returns and so given that GSR is not trading in a  
7 vacuum completely exogenously looking at -- and that  
8 they're trading in response to past returns, as I  
9 showed in my regression, as Professor Ferrell also  
10 showed in his regression, that type of relationship  
11 means that putting a contemporaneous relationship in  
12 there doesn't make much sense. And, in fact, if one  
13 is trading actively and to minimize price impact,  
14 one might find precisely no relationship. And that  
15 just means that you're trading strategically to  
16 avoid price impact or that there is some kind of  
17 intra- -- intraday relationship and you're just  
18 looking at the aggregate data.

19 So again, it comes back to this fact that  
20 he's running a monthly relationship, whereas all the  
21 academic literature would say that that is not the  
22 way that this should be done. So you can't just run  
23 a monthly or, in his case, 28 days, again,  
24 nonstandard, but my main point is there, you can't  
25 just run a long period of time when something needs



1 [REDACTED] - 2/15/2022

2 to be examined with precise data if -- if one wants  
3 to make a causal -- causal claim like he's -- or the  
4 lack of relationship to draw anything from that lack  
5 of relationship, which is what he's trying to do.

6 That's another point that I bring out in  
7 my report is that the fact that you don't have a  
8 relationship, the lack of a statistical relationship  
9 does not prove anything. You can't, you know -- as  
10 I've been told in an academic seminar, you can't  
11 prove something from a nonresult.

12 Q. Okay. Is it fair to say, though, that  
13 you didn't do any analysis to determine what impact  
14 Ripple's active management of XRP distributions  
15 would have had on the price of XRP?

16 MS. GUERRIER: Objection to form.

17 Q. I think we've established that pretty  
18 conclusively today.

19 MS. GUERRIER: Objection.

20 A. Again, as I mentioned earlier, one would  
21 need to have a precise intraday relationship to  
22 examine this more precisely.

23 Now, my -- the emails I have trading --  
24 the emails and the trading suggests that -- is the  
25 attention -- as I mentioned earlier, it seems to be

1 [REDACTED] - 2/15/2022

2 the attention of Ripple executives to trade on  
3 certain times to either establish a price pour or  
4 to -- to push the price, and Ripple executives,  
5 including I believe it was Garlinghouse, believed  
6 that their activity was successful.

7 But that's not -- that's beyond the scope  
8 of my assignment, but I am saying that Professor  
9 Ferrell's analysis is extremely inconclusive exactly  
10 as one would expect, given all -- given the type of  
11 analysis he performs.

12 Q. The emails you just referenced, those  
13 were all from 2016. Correct?

14 A. I believe so.

15 Q. Okay. From the fourth criticism in your  
16 report is that Professor Ferrell's report, the  
17 regression, is that timing of XRP transfers may be  
18 inconsistent with sales of XRP. Is that correct?  
19 Is that the fourth criticism?

20 A. Yes.

21 Q. Did you analyze how the regression  
22 analysis would have come out different if the timing  
23 of the transfers were recorded in a methodology you  
24 deemed proper?

25 MS. GUERRIER: Objection.

1 [REDACTED] - 2/15/2022

2 A. (Pause.)

3 So I -- my criticism of Professor Ferrell  
4 in this regard is that he -- he cited my paper and,  
5 again, did not apply the same methodology that [REDACTED]  
6 [REDACTED] does. [REDACTED] is very careful to document  
7 that it was not on -- for instance, [REDACTED] is

8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]

20 Looking at the analogy here to look at  
21 when something was released from custody is  
22 irrelevant. It's similar to what [REDACTED] showed in [REDACTED]  
23 paper, that that was irrelevant, to look at [REDACTED]  
24 printing, for instance. We knew -- we already know  
25 [REDACTED] printing doesn't matter.

1 [REDACTED] - 2/15/2022

2 So to say he applied my methodology  
3 without looking carefully at how [REDACTED] was  
4 constructed is incorrect. He did not apply my  
5 methodology. My methodology looked [REDACTED]

6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED] His

10 regression, his approach to -- to just look at the  
11 printing and over a monthly frequency is not at all  
12 what I did. I did a -- I did an intraday analysis  
13 and I looked at the times when the money went out  
14 from the wallet.

15 So the question being did I correct for  
16 this, if the question is correct for this, the  
17 answer is the same, that I don't have the data. I  
18 don't have the intraday data granular enough like [REDACTED]  
19 did in the [REDACTED] to examine that.

20 But what he did is not at all what [REDACTED] did  
21 in that paper and I would expect you would get  
22 completely inconclusive results if one is to perform  
23 such analysis. And, in fact, [REDACTED] -- [REDACTED] shows  
24 that we would get inconclusive results using the  
25 wrong timing. And so the fact that he uses the

1 [REDACTED] - 2/15/2022

2 wrong timing gets inconclusive results, I'm saying  
3 this is another example where that's exactly what  
4 you'd expect. If you do your analysis -- if you do  
5 sloppy analysis, you get sloppy results.

6 Q. Bottom line is, though, you did not do  
7 the analysis, you don't have the data to do the  
8 analysis is what you're saying?

9 A. That's what I said.

10 Q. Okay. And then let's look at the fifth  
11 criticism here. The fifth criticism is that: The  
12 regression analysis does not account for the  
13 long-run effect that XRP distributions have on  
14 increased liquidity, recognition, and demand.  
15 Right? That's your fifth criticism?

16 A. That's correct.

17 Q. Did you analyze or measure the long-run  
18 effects of XRP distributions on increased liquidity,  
19 recognition, and demand?

20 A. No.

21 Q. Okay.

22 A. I would like to say to that that  
23 Professor Ferrell, in his own report, in his own  
24 opinion offers an opinion that liquidity is  
25 important. And he has -- there is a large

1 [REDACTED] - 2/15/2022

2 literature about liquidity being important and  
3 liquidity driving prices, so being -- being a  
4 positive factor to increase prices.

5 And so Professor Ferrell kind of tries to  
6 sidestep the issue, but the fact that he's  
7 showing -- the fact that in his other part of the  
8 report where he argues that their goal is to  
9 increase liquidity, that is tautologically related  
10 to increasing the price.

11 And there is a whole literature about  
12 that, and Professor Ferrell in his own testimony in  
13 other cases notes that, and he conveniently leaves  
14 it out in his current report, that that is --  
15 increasing liquidity is a -- also causes prices to  
16 increase.

17 Q. Let me ask you about that. I'm glad you  
18 raised it.

19 A. Okay.

20 Q. You cite Professor Ferrell's -- another  
21 article that Professor Ferrell wrote in your  
22 rebuttal report on that issue. Correct? You just  
23 referred to it. Right?

24 A. Yeah. I'd like to see the exact quote,  
25 but yes.

1 [REDACTED] - 2/15/2022

2 Q. Okay.

3 A. I cite -- I think I -- prior --

4 Q. Why don't we turn to --

5 A. -- I don't know if it was prior testimony  
6 or an article.

7 Q. Why don't we turn. We'll look at [REDACTED]-3 --  
8 I'm sorry -- [REDACTED]-15 -- [REDACTED]-2, which is your rebuttal  
9 report. We'll look at Paragraph 67 of your rebuttal  
10 report. Page 42. You quote here from an article  
11 that Mr. -- that Professor Ferrell wrote in a  
12 different matter. And you quote the last sentence  
13 of that article.

14 It says: And a more liquid asset will be  
15 more valuable than a less liquid asset, all things  
16 being equal -- all else equal. Sorry.

17 Do you see that?

18 A. Which paragraph?

19 Q. Paragraph 67. You have a block quote  
20 there.

21 A. In my rebuttal report?

22 Q. In your rebuttal report, [REDACTED]-2.

23 A. (Pause.)

24 Yes.

25 Q. In which you focus on this -- this last

1 [REDACTED] - 2/15/2022

2 sentence: A more liquid asset will be more valuable  
3 than a less liquid asset, all else equal.

4 Do you see that?

5 A. Yes.

6 Q. And you focused on that. And just to be  
7 clear, Professor Ferrell is saying there: All else  
8 equal, a more liquid asset would be more valuable  
9 than a less liquid asset. Right? He's qualifying  
10 it with the term "all else equal." Correct?

11 MS. GUERRIER: Objection to form.

12 A. Yes.

13 Q. Now, I want to look earlier in your  
14 report. First, let's look at Page 34 of your  
15 report, Paragraph 56(a). And if you look at this  
16 paragraph, you say in this paragraph: A large body  
17 of academic literature finds that an increasing  
18 liquidity is generally associated with increasing  
19 asset price. All else equal, an asset is more  
20 valuable when it is more liquid. Stated another  
21 way, an investor will pay a higher price for an  
22 asset to the extent that the opportunity to sell the  
23 asset becomes easier and less costly.

24 And then you say: In fact, Professor  
25 Ferrell, in an earlier expert report for an



1 [REDACTED] - 2/15/2022

2 unrelated matter, conceded that a more liquid asset  
3 would be more valuable than a less liquid asset.

4 Do you see that, where you quote that?

5 A. Yes.

6 Q. And that quote is the same article that  
7 you cite in Paragraph 67 of your report. Correct?

8 MS. GUERRIER: Objection.

9 A. Yes.

10 Q. But you didn't include the last three  
11 words of his quote, did you?

12 MS. GUERRIER: Objection.

13 A. I -- as I note in my report here, I said:  
14 As Professor Ferrell acknowledged, increasing  
15 liquidity is generally associated with higher  
16 prices.

17 So I do qualify it with "generally."

18 Q. Where do you -- where do you say that in  
19 this paragraph, Paragraph 56(a)?

20 A. Paragraph 56(a), I say -- there is a  
21 sentence that says: Indeed, in both public and  
22 private communication to their potential investors,  
23 Ripple and their employees indicate they are aware  
24 of the positive relationship between liquidity and  
25 XRP value. Ripple's efforts to increase liquidity,

1 [REDACTED] - 2/15/2022

2 as Professor Ferrell acknowledged, and increasing  
3 liquidity is generally associated with higher --  
4 higher prices.

5 Professor Ferrell's conclusion that none  
6 of the returns is owing to the efforts of Ripple is  
7 directly contradictory to his extensive knowledge of  
8 Ripple's effort to increase liquidity and his  
9 knowledge of a more liquid asset will be more value  
10 than a less liquid asset.

11 Yes.

12 Q. So you then quote -- I was initially  
13 asking you about Paragraph 56(a), okay, the prior  
14 paragraph to what you just read. Right? And in  
15 Paragraph 56(a), you quote Professor Ferrell from  
16 his article, but you left out the "all things" --  
17 "all else equal" at the end of his article.

18 Correct?

19 MS. GUERRIER: Objection to form.

20 A. This is a summary report. In my report,  
21 I put the whole quote so everybody could see it. I  
22 am not trying to mischaracterize Professor Ferrell  
23 in any way. I put the whole paragraph of his quote  
24 so one could see the context of it.

25 Q. Okay. And is it fair to say, though,

1 [REDACTED] - 2/15/2022

2 that Professor Ferrell in his report was saying that  
3 all else is not equal? Is that a fair statement?

4 MS. GUERRIER: Objection to form.

5 A. He's certainly -- in this report, he made  
6 no mention of the fact that -- he made no mention of  
7 the fact that his prior testimony that a more liquid  
8 asset will be more value than a less liquid asset,  
9 all else equal. He made no mention of that in his  
10 report.

11 Instead, he opined that the -- the motive  
12 for doing that -- anyway, I'll leave his opinion --  
13 but he made no mention that he had this view that a  
14 more liquid asset will be more valuable than a less  
15 liquid asset, all else equal.

16 Q. Isn't it the case that he didn't mention  
17 that because all else was not equal?

18 MS. GUERRIER: Objection to form.

19 A. If he believed that was his view, he had  
20 the case to -- he could have spelled it out in his  
21 report why it wasn't the case that all else was not  
22 equal.

23 Q. And you're claiming that he didn't do  
24 that in his report?

25 A. I don't believe he did.

1 [REDACTED] - 2/15/2022

2 MS. GUERRIER: Objection.

3 Q. Okay. So let's look at his report, then,  
4 because I think it's clear from his report, so let's  
5 look at his report.

6 MS. GUERRIER: I'm going to object to  
7 that statement, too.

8 Q. So let's look at Professor Ferrell's  
9 report. And if we look at [REDACTED]-15.

10 Well, actually, let me just ask you  
11 before we look at his report. Professor Ferrell  
12 talked about -- when you're talking about increasing  
13 liquidity of XRP, what you're referring to is in his  
14 report his reference to some incentives that were  
15 provided to six exchanges to list XRP. Is that what  
16 you were referring to?

17 MS. GUERRIER: Objection to form.

18 A. I would like to answer a precise question  
19 based on his report. He talked about a lot of  
20 things in his report, so --

21 Q. Well --

22 A. It's a 100-page document, so if we're  
23 going to -- if you have a specific statement he made  
24 and we want to look at that, I can look at that.

25 Q. Okay. But you were the one just a few

1 [REDACTED] - 2/15/2022

2 minutes ago who said that Professor Ferrell in his  
3 report made a big deal about the efforts that Ripple  
4 took to increase liquidity of XRP, so what I'm  
5 asking you is, what were you referring to when you  
6 referred to that?

7 MS. GUERRIER: Objection.

8 A. So I would like to -- yeah, he spent  
9 numerous pages in his report discussing that.

10 Q. And what did he discuss, as far as you  
11 can recall?

12 A. I would like to look at his report. Is  
13 that fine?

14 Q. Yeah. Go ahead.

15 A. Okay.

16 (Pause.)

17 He says -- I mean, this isn't a complete  
18 discussion of him, because it's discussed in many  
19 places, but an example would be in Paragraph -- on  
20 Page 51.

21 Professor Ferrell states: The SEC,  
22 however, fails to recognize that Ripple's efforts to  
23 improve liquidity are not equivalent to efforts to  
24 increase prices. As I discuss below, Ripple efforts  
25 aimed at increasing improving -- aimed at improving

1 [REDACTED] - 2/15/2022

2 market liquidity for XRP to enhance the efficacy of  
3 Ripple's product suite, including ODL.

4 Furthermore, my empirical analysis states  
5 that Ripple's XRP distributions did not have a  
6 statistically significant effect on XRP's long-run  
7 price returns.

8 Well, we've already talked about why I  
9 believe the last part of that is incorrect, but  
10 the -- he says: Fails to recognize Ripple's efforts  
11 to improve liquidity are not equivalent to efforts  
12 to increase price. There were Ripple's efforts  
13 aimed at improving market liquidity for XRP to  
14 enhance the efficiency of Ripple's product suite,  
15 including ODL.

16 So, yes, that could have been a  
17 motivation for them to increase liquidity, but what  
18 I am pointing out is just that there is a very  
19 strong relationship between increasing liquidity and  
20 increasing prices, and Professor Ferrell is not  
21 addressing that.

22 And, in fact, there's a strong  
23 relationship one would expect in a whole host of  
24 academic literature that shows that increasing  
25 literature, increasing liquidity does increase

1 [REDACTED] - 2/15/2022

2 prices. Now, one might not find it or probably  
3 would not find it if you read, in fact, I would  
4 expect one not to find it running the kind of  
5 regression Ferrell runs, any kind of relationship.  
6 Because it's not -- the relationship is a  
7 positive -- the relationship is a positive  
8 relationship that as you increase liquidity, it  
9 increases returns.

10           However, in the short run if you increase  
11 liquidity by putting more shares out into the wild,  
12 it has a downward effect on prices in the short run,  
13 but in the long run it has an offsetting effect.

14           And in emails that I cited in the report,  
15 Ripple executives acknowledged that and understand  
16 that fact and I believe I cited those in my -- in  
17 one of my reports and we can go look at those if we  
18 want.

19       Q.     So --

20       A.     I think Ripple understands that  
21 relationship. I think Professor Ferrell understands  
22 that relationship too. Sorry.

23       Q.     So just, in your last answer, I heard you  
24 talk about efforts to increase liquidity of XRP but  
25 also downward pressure on the price of XRP from

1 [REDACTED] - 2/15/2022

2 distributions of XRP. You talked about both of  
3 those concepts in what you just discussed. Correct?

4 A. That's correct.

5 Q. And so, therefore, efforts to increase  
6 liquidity may be offset by the actual distributions  
7 of XRP which could have a negative impact on the  
8 price of XRP. Is that a fair statement?

9 MS. GUERRIER: Objection to form.

10 A. As I stated, there's a short-run impact  
11 and a long-run impact. In the short run, one would  
12 expect a distribution if one put a bunch of shares  
13 out there, it would have been a negative price  
14 impact. But even in the long run, it could be  
15 positive in the sense more people are selling the  
16 shares, maybe what -- like something that's been  
17 done in experiments or they give-- they give  
18 somebody like one share of stock. If you  
19 psychologically, if you give somebody one share of  
20 stock, they're much more likely to buy one share.

21 So by putting shares out there in various  
22 people's hands, it also increases the odds that they  
23 may buy the stock in the future. That's the  
24 reason -- that's the reason why you have  
25 cross-listing on exchanges to -- for instance, the



1 [REDACTED] - 2/15/2022

2 paper that I cite, the Forester & Corolly (phonetic)  
3 paper, that was the paper where [REDACTED]  
4 [REDACTED] And the idea was if you get more  
5 shares into people's hands, you increase the  
6 shareholder base, it can have a positive effect on  
7 price.

8 So coming back to what your question is,  
9 yes, there are offsetting effects. There's a  
10 short-run effect, there's long-run effect which is  
11 why it's difficult to empirically measure this and  
12 that's why there's a large academic literature on  
13 it. And that's also why Professor Ferrell running  
14 some regression, saying there's no relationship, is  
15 exactly what you'd expect given that you have  
16 offsetting forces and not being -- in that long-run  
17 effect being very difficult to measure in the data.

18 So I don't -- that's why I think it is,  
19 you know, important to point out that this, on  
20 average, you would expect this relationship and  
21 Ripple executives understand that the whole academic  
22 literature understands it, there's a positive  
23 relationship and Professor Ferrell understands it,  
24 but he doesn't --

25 Q. So --

1 [REDACTED] - 2/15/2022

2 A. -- but he doesn't mention it in his  
3 report.

4 Q. Can we agree that everything you just  
5 outlined shows that all else is not equal?

6 MS. GUERRIER: Objection to form.

7 A. Absolutely not.

8 Q. So you would contend that if the simple  
9 statement that a more liquid asset be more valuable  
10 than a less liquid asset governs the concepts that  
11 you just spent ten minutes explaining to me?

12 MS. GUERRIER: Objection to form.

13 Go ahead, Professor.

14 A. On average, generally, this is the case  
15 that a more liquid asset is more valuable than a  
16 less liquid asset. All else equal.

17 Now, the concept of all else equal here,  
18 in this case, one would have to say what else isn't  
19 equal about GSR? In other words, if you took GSR --  
20 I mean, I'm sorry -- I didn't mean to say GSR -- XRP  
21 and you have 1 million shares in the wild and, then,  
22 suddenly you have 2 million shares in the wild, and  
23 then, you could -- had all else equal, then it would  
24 be different.

25 So, yeah, I -- so I -- again, there's a

1 [REDACTED] - 2/15/2022

2 short-run impact and a long-run impact, but that's  
3 different from saying all else equal. We can talk  
4 about all else equal and what those assumptions  
5 were. But, again, that was not a subject that  
6 Professor Ferrell noted and I did think it was  
7 worthwhile to note not only does the academic  
8 literature show that there should be a relationship,  
9 Ripple executives think there should be a  
10 relationship, and even Professor Ferrell thinks  
11 there should be a relationship.

12           So I think it is important fact, yes, he  
13 did qualify his statement "all else equal," I cite  
14 that in the report. I'm not misciting Professor  
15 Ferrell.

16           (Discussion off the written record.)

17           MR. CERESNEY: Let's take a break.

18           THE VIDEOGRAPHER: Off the record at  
19 5:36 p.m.

20           (Break.)

21           THE VIDEOGRAPHER: Segment No. 7.

22 We're back on the record at 5:45.

23           Q.     I just have one more question before I  
24 hand it over to Ms. Bunting.

25           Earlier we -- I asked you a number of

1 [REDACTED] - 2/15/2022

2 questions about speculative investments and major  
3 cryptocurrencies and [REDACTED] and Ether and how you  
4 viewed those today, how you viewed those over the  
5 last few years. Do you remember those series of  
6 questions that I asked you?

7 A. Yes.

8 Q. And my only question is, would you  
9 consider XRP to be a major crypto asset much like  
10 bitcoin and Ether --

11 MS. GUERRIER: Objection.

12 Q. -- for the purposes of those questions?

13 MS. GUERRIER: Objection to form.

14 A. I don't know. I haven't -- I'm not  
15 seriously considering investing in the digital asset  
16 space so I haven't sat down and analyzed whether I  
17 would be comfortable buying XRP as a digital asset.  
18 I know I can't. It's a moot point because I can't  
19 do it because I'm not -- I'm now working on this,  
20 but even if I wasn't working on this matter, I'm not  
21 looking at that space so I haven't thought about it.  
22 I haven't analyzed it.

23 Q. At the time [REDACTED]  
24 [REDACTED], did you consider  
25 bitcoin to be a major cryptocurrency asset?

1 [REDACTED] - 2/15/2022

2 A. If one takes a list of major crypto  
3 digital assets in terms of market caps, there are  
4 certain periods of time where -- where XRP is a  
5 major -- is a major digital asset.

6 Q. And the things that you said about  
7 bitcoin and Ether being more speculative than an  
8 investment, risky, all those other things you said  
9 about bitcoin and Ether, would you say those same  
10 things about XRP?

11 MS. GUERRIER: Objection to form.

12 A. Again, I haven't -- I haven't sat down  
13 and thought about the nature of that question,  
14 whether I'd -- I'd be comfortable. It would depend.  
15 Whether I would invest in a digital asset or not  
16 would -- would depend on a lot of things. One of  
17 those things might be the extent to which I believe  
18 that that was legal to trade, whether that asset had  
19 a claim to -- how volatile the asset was, where the  
20 asset traded, the liquidity of the asset, the -- the  
21 nature -- for what I found -- from the results of [REDACTED]  
22 [REDACTED] for bitcoin and the other  
23 crypto assets, that they were [REDACTED]  
24 [REDACTED] issuances. Their -- their [REDACTED]  
25 [REDACTED] issues.

1 [REDACTED] - 2/15/2022

2 So the possibility -- as we talked  
3 earlier, the possibility that it could happen for  
4 other digital assets, I cannot rule that possibility  
5 out. I can't say today that's what's going on or  
6 two years -- but at least at the time of [REDACTED] it  
7 showed that there was a lot of [REDACTED] in the  
8 space. So that would make me uncomfortable from  
9 investing in digital assets in general.

10 And I don't know those -- whether that --  
11 I don't know that -- I don't know how that  
12 conclusion would differ with XRP or not.

13 Q. Okay.

14 MR. CERESNEY: Ms. Bunting has some  
15 questions.

16 EXAMINATION

17 BY MS. BUNTING:

18 Q. Good afternoon, [REDACTED].

19 A. Hi.

20 Q. My name's Kristina Bunting. I'm from  
21 Paul, Weiss, Rifkind, Wharton & Garrison. And I  
22 represent Mr. Larsen in this action.

23 So, [REDACTED], if you could  
24 please turn to Page 7 of your report. I just direct  
25 your attention to Paragraph 9. Let me know when

1 [REDACTED] - 2/15/2022

2 you're there?

3 A. Yes, I'm here.

4 Q. I believe you testified earlier that this  
5 sets out the summary of the opinions that you're  
6 offering in your report. Correct?

7 A. That's correct.

8 Q. If I could direct your attention to  
9 Paragraph 9(d), you state there: Larsen and  
10 Garlinghouse collectively transferred 4.4 billion  
11 units of XRP (valued at 1.3 billion at the time of  
12 transfer) from the XRP digital wallet addresses. A  
13 large portion of these transfers were made to GSR, a  
14 market maker who also sold XRP programmatically on  
15 Ripple's behalf to strategically sell their XRP  
16 holdings over time.

17 Do you see that?

18 A. Yes.

19 Q. Are you offering any opinion in your  
20 report or your rebuttal report on the amount of  
21 proceeds that Mr. Larsen received as a result of any  
22 transfers of his XRP from his wallet?

23 A. Can you read the question again?

24 Q. Sure. Are you offering any opinion on  
25 the amount of proceeds that Mr. Larsen received as a

1 [REDACTED] - 2/15/2022

2 result of any transfers of XRP from his wallets?

3 A. I am showing those transfers went to GSR  
4 and to other places, but I'm careful to note in my  
5 report that often those assets are sold on the  
6 exchange, but one would need to have detailed within  
7 exchange data to know precisely whether they were  
8 sold or exchanged into something else and so forth.

9 Q. So you're not offering an opinion on the  
10 amount of proceeds that Mr. Larsen received from any  
11 of his transfers of XRP. Correct?

12 MS. GUERRIER: Objection to form.

13 A. I'm offering opinion about the amount  
14 that he transferred out of his wallets. It's a  
15 factual analysis based on his analysis. Out of his  
16 wallets, digital wallets over this period, the  
17 amount of XRP that was transferred out of the  
18 wallets to GSR, as well as other sources, but not  
19 the precise -- yeah, not the precise amount sold.

20 Q. But you're also not opining on what he  
21 received from any sales of XRP. Correct?

22 MS. GUERRIER: Objection to form.

23 A. The -- I don't have a precise figure for  
24 what exactly he received from sales of XRP. If you  
25 want to -- the fact that these assets went out to



1 [REDACTED] - 2/15/2022

2 exchanges, there is generally the inclination that  
3 people are moving them to exchanges. There is a  
4 reason for it.

5 If you move to -- money to an exchange,  
6 it's subject to potential hacking, for instance, and  
7 I saw in the email correspondence that I cited in my  
8 report that there was also some discussion of that,  
9 whether Poloniex was a credible exchange or  
10 whether -- so there is typically a reason why people  
11 move these to an exchange.

12 So I -- I'd rather answer exactly what I  
13 am opining on. I'm moving that the assets moved out  
14 of his wallet to other wallets, but not -- you know,  
15 there is a strong inclination that most people do  
16 that when they're selling. So that's -- but -- I'm  
17 not trying to pinpoint the precise amount -- dollar  
18 amounts of proceeds raised.

19 Q. So are you again also not pinpointing the  
20 precise amounts of dollars raised from sales of XRP  
21 with respect to Mr. Garlinghouse?

22 MS. GUERRIER: Objection.

23 A. The -- not the precise amount, but I am  
24 showing -- I am showing what happened. I am showing  
25 the facts of what happened on the blockchain.

1 [REDACTED] - 2/15/2022

2 Q. Are you offering any opinion that  
3 particular transfers of XRP from Mr. Larsen's  
4 wallets actually affected the price of XRP?

5 MS. GUERRIER: Objection.

6 A. Mr. -- did you say Garlinghouse or --

7 Q. Larsen.

8 A. Okay. Are you here on behalf of  
9 Garlinghouse or Larsen or both?

10 Q. I'm asking questions that relate to both  
11 Mr. Larsen and Mr. Garlinghouse.

12 A. Okay. Sorry.

13 So am I offering opinion -- as I  
14 opined -- as I examined before in my Figure 5, it's  
15 examining Mr. Larsen's trading activity. So I am  
16 offering opinions about his trading activity in  
17 Figure 5.

18 Q. That's not what I asked -- that's not  
19 what I asked, [REDACTED]. What I'm asking is  
20 are you offering any opinion that any particular  
21 transfers of XRP from Mr. Larsen's wallets actually  
22 affected the price of XRP?

23 MS. GUERRIER: Objection to form.

24 A. What I show, his trading behavior on  
25 this, and I do note, as I mentioned earlier -- I do

1 [REDACTED] - 2/15/2022

2 notice that Mr. Garlinghouse speculates that  
3 Larsen's purchases might be the reason for the  
4 recent price stability. So I do note in this graph  
5 it's not a -- I do note in this graph that he buys  
6 like 800,000 XRP -- \$800,000 worth of XRP. The  
7 price increases afterwards.

8 And, you know, Garlinghouse thinks that  
9 he may be the reason why the price stabilized. As a  
10 reasonable person, I guess like Garlinghouse, one  
11 might think that if you're buying \$800,000 worth of  
12 something in a certain period.

13 But my analysis, the scope of my  
14 analysis, as I talked earlier, is to, again, whether  
15 they took steps to influence the XRP prices, not  
16 whether the prices were actually influenced.

17 Q. So just to be clear, you did not do any  
18 analysis to show a causal connection between any  
19 transfers of Mr. Larsen's XRP and the price of XRP.  
20 Correct?

21 MS. GUERRIER: Hold on. Asked and  
22 answered. And objection to form also, in addition  
23 to -- and including asked and answered, objection.

24 A. I show in Figure 5 that he engages in a  
25 large amount of buying activity, Larsen does, and

1 [REDACTED] - 2/15/2022

2 the price of XRP increases dramatically after that.

3 Mr. Garlinghouse thinks that he might be the reason

4 behind the price increase. It seems like a

5 reasonable inference. But that is not the point of

6 my analysis.

7 Q. So, [REDACTED]

8 [REDACTED] Correct?

9 A. That's correct.

10 Q. So did you analyze any data to show that

11 there was that causal connection between the

12 transfers and the price of XRP?

13 MS. GUERRIER: Objection to form, and  
14 asked and answered.

15 A. Again, when one wants to talk about  
16 causality, there's a variety of -- it's a loaded  
17 topic. Okay? One might want to have, for instance,  
18 a controlled experiment. That's one way people  
19 examine causality, like where money drops out of the  
20 helicopter and then people trade on it, does it  
21 affect prices, or something random happens for  
22 people to examine that.

23 So that is a -- yeah, that's a topic.  
24 It's a difficult one to examine. In particular, one  
25 would need to have -- yeah, so I think the -- if

1 [REDACTED] - 2/15/2022

2 you're asking me questions of causality, I'm not  
3 opining in this figure. I'm not saying this  
4 relationship was causal.

5 Q. Are you offering an opinion that  
6 Mr. Larsen continued to control any XRP after it was  
7 initially transferred out of his wallets?

8 MS. GUERRIER: Objection.

9 A. I'm not opining on that. I don't believe  
10 I'm offering an opinion about that one way or the  
11 other, but if I'm missing something maybe. Is there  
12 some part of my report you want to read to me, ask  
13 me whether -- what I'm opining on there?

14 Q. We'll get to that in a moment. But is  
15 your answer that you're not opining on that  
16 question?

17 A. I'm not sure what the question is  
18 exactly.

19 Q. Are you offering an opinion that  
20 Mr. Larsen continued to control any XRP after it was  
21 initially transferred out of his wallets?

22 MS. GUERRIER: Objection.

23 A. Well, when it went to GSR, it seems  
24 that -- that he's directing GSR from the email  
25 correspondence --

1 [REDACTED] - 2/15/2022

2 Q. When you say "transfer to GSR," do you  
3 mean a direct transfer to GSR or a transfer to GSR  
4 over multiple hops?

5 MS. GUERRIER: Objection.

6 A. In this particular case I'm talking about  
7 a direct transfer.

8 Q. Okay. So putting aside direct transfers  
9 by Mr. Larsen to GSR, are you opining for the other  
10 transfers that Mr. Larsen continued to control any  
11 XRP after it was transferred out of his wallet?

12 MS. GUERRIER: Objection; asked and  
13 answered.

14 MS. BUNTING: That's not been asked  
15 and answered.

16 A. I think --

17 MS. GUERRIER: Again, objection;  
18 asked and answered.

19 A. I think from the email the question that  
20 I thought I -- I thought I was being asked is, after  
21 it leaves his wallet, does Larsen have any control  
22 over the -- at least the original question -- and it  
23 says -- in the communication here it seems like he  
24 personally bought 800,000 of XRP by the end of the  
25 weekend through GSR.

1 [REDACTED] - 2/15/2022

2 So the fact he's buying through GSR might  
3 indicate -- seemingly indicates that Larsen is using  
4 GSR to implement his trades. So it has left his --  
5 it has left his control. It has left -- I mean,  
6 his -- well, I don't know if you would call it his  
7 control. His direct -- his maybe direct control  
8 it's left, but not his indirect control in the sense  
9 GSR and him have a relationship. So he's directing  
10 them to trade on his behalf. That's my  
11 understanding of the relationship.

12 Q. So putting aside any transfers to GSR for  
13 the moment from Mr. Larsen's wallets, are you  
14 opining that Mr. Larsen continued to have control  
15 over that XRP after it was initially transferred out  
16 of his wallets?

17 MS. GUERRIER: Objection; asked and  
18 answered.

19 A. Well, it depends on when you say "out of  
20 his wallets." It depends what that means exactly,  
21 in terms of out of his wallets. Because if one  
22 wants -- if we're talking about my tracing analysis  
23 and so forth, we can discuss that and --

24 Q. Yes, that's exactly what we're  
25 discussing, your tracing analysis.

1 [REDACTED] - 2/15/2022

2 A. Okay. Well, can I look at which figure  
3 we're talking about or which one would you like to  
4 ask me?

5 Q. Okay. So let's turn to Page 27. So  
6 Section 7(b) of your report addresses blockchain  
7 tracing of funds leaving Larsen's addresses.

8 Correct?

9 A. Yes.

10 Q. And Section 7(c) of your report addresses  
11 blockchain tracing of funds leaving Garlinghouse's  
12 addresses. Correct?

13 A. That's correct.

14 Q. Okay. And then turning to Appendix E of  
15 your report, at Pages 64 to 70, it's entitled  
16 "Methodology of -- methodology for blockchain  
17 analysis and flow of XRP from Larsen and  
18 Garlinghouse addresses."

19 Correct?

20 A. That's correct.

21 Q. If you look at Paragraph 65 on Page 64,  
22 you note that XRP from the addresses of Larsen and  
23 Garlinghouse is traced until certain scenarios are  
24 reached. Correct?

25 A. That's correct.



1 [REDACTED] - 2/15/2022

2 Q. What do you mean when you say: XRP is  
3 traced into one of the following scenarios?

4 A. Sure. So "traced" refers to the  
5 currency, the -- "traced" refers to -- if one is  
6 talking about, like, bitcoin, bitcoin tracing, there  
7 is services that provide bitcoin tracing. It's a  
8 matter of something that [REDACTED] works on.

9 But when I say "traced," I mean the  
10 accounts are followed from hop to hop. So there is  
11 different -- you -- you follow the funds on the  
12 blockchain from one account to another account. So  
13 you follow it from one account to another account.  
14 If you -- and these addresses were identified as  
15 Larsen and Garlinghouse's addresses.

16 So taking that assumption basis for the  
17 analysis, looking at the first transfer, the direct  
18 transfers and that's the -- I note the direct  
19 transfer is different from -- and then we focus on  
20 multiple hops, and so a hop is like you -- if  
21 something goes from Account A, it goes to Account B,  
22 then one looks at that movement from Account B to  
23 Account C.

24 So one common thing, for instance,  
25 with -- with [REDACTED]

1 [REDACTED] - 2/15/2022

2 [REDACTED]  
3 [REDACTED] in that analysis was that oftentimes people  
4 use the same account and transfer things over  
5 multiple hops.

6           So one reason people do that is they  
7 don't want everybody to know what they're doing  
8 necessarily or they have multiple accounts and they  
9 want to try to make it less easy for people to  
10 trace. If you just move funds between A and B,  
11 then, you know, Joe Smith can go on the internet and  
12 say, ah-ha, the money went from here to here; this  
13 is what happened. But if you move the funds from A  
14 to B to C to D, then it becomes more difficult. So  
15 that's what I mean by traced. We follow the funds  
16 from A to B to C and we have a methodology that we  
17 employed here, and in particular, we follow the  
18 funds until one of these following conditions  
19 happens. The XRP reaches the GRS -- or  
20 GSR-associated addresses.

21           We talked about that analysis in the  
22 previous section. I can go over that if you'd like,  
23 but that would be a long discussion.

24           XRP reaches an identified address such as  
25 a digital asset exchange. We obtain information on

1 [REDACTED] - 2/15/2022

2 digital asset exchanges through scraping multiple  
3 websites and understanding what their addresses are,  
4 their wallet addresses, so forth. That's how one  
5 identifies those.

6           And then XRP reaches a nonidentified  
7 address with over a thousand transactions. Those  
8 are labeled as high-activity addresses. Those may  
9 be the case that our algorithm -- we want to be  
10 conservative so we take an -- we take a approach  
11 that says even if we don't have the identity of the  
12 exchange, if there is over a thousand addresses  
13 moving to this, this may be some kind of dis- --  
14 this may be some kind of decentralized exchange or  
15 something that's there is not great data out on the  
16 internet.

17           The fourth one is it's returned to one of  
18 the Larsen addresses so if it goes back to the  
19 Larsen or Garlinghouse addresses, then it goes back.

20           Or the fifth component, if there's a  
21 small flow, then we -- we ignored it.

22           Now, the last feature is the 13 hops.  
23 And the reason we stopped with the 13 hops is  
24 because computing -- computing power gets to be  
25 fairly -- fairly intense as one moves to the 13

1 [REDACTED] - 2/15/2022

2 hops, and also, one can see from the analysis  
3 whether one moves from 12 hops to 13 hops, it's very  
4 marginal. So we could have done -- perhaps done  
5 more hops and found -- found a few more funds going  
6 to GSR, but that would not alter the conclusions at  
7 all, so it's no reason to continue that beyond this.

8 Q. So what I hear you saying is that amounts  
9 that -- of XRP that can be traced to one of these  
10 scenarios is then included in the amounts of XRP  
11 transferred or traced that you set out in  
12 Appendix E. Correct?

13 MS. GUERRIER: Objection.

14 A. I'm sorry. It's getting late in the day.  
15 Can you repeat that question? Sorry.

16 Q. So what I hear you saying is that if XRP  
17 is traced to one these scenarios, it's then included  
18 in the amounts that you say in Appendix E can be  
19 traced or transferred -- traced to particular  
20 addresses of -- of Larsen or Garlinghouse. Correct?

21 A. That's generally the case.

22 MS. GUERRIER: Same objection --

23 Q. Okay. So why -- why did --

24 MS. GUERRIER: Hold on. I'm sorry.

25 Let me just put my objection on. Same objection.

1 [REDACTED] - 2/15/2022

2 Go ahead.

3 Q. So why did you analyze whether XRP  
4 initially transferred by Mr. Larsen or  
5 Mr. Garlinghouse reached any of these scenarios in  
6 particular?

7 MS. GUERRIER: Objection.

8 A. I mean, the outline -- my assignment was  
9 to opine on the incentives that might have been  
10 present for Ripple to attempt to influence the price  
11 of XRP. So to the extent that the executives had  
12 funds and were selling those funds through GSR or  
13 some other service, that might affect the incentives  
14 that they had.

15 Q. But you don't actually set out in your  
16 report how much, if any, was sold by Mr. Larsen  
17 through an exchange or GSR. Correct?

18 MS. GUERRIER: Objection.

19 A. As I note -- I discuss in the report, I  
20 laid it out very clearly that often cryptocurrencies  
21 are sold on exchanges and that's the typical reason  
22 why they go to exchanges but that we don't have  
23 exchange-level data.

24 I don't know where I said that, but I did  
25 say that somewhere.

1 [REDACTED] - 2/15/2022

2 Q. Okay. If I could point you to --

3 MS. GUERRIER: Hold on a second. If  
4 you need to read your report just so that you can  
5 make your reference, please do that.

6 MS. BUNTING: We're going to get  
7 there now. I'm pointing him to the paragraph.

8 THE WITNESS: Okay.

9 MR. GUERRIER: All right.

10 Q. So, [REDACTED], if you look at  
11 Paragraph 69, you state that: It is impossible to  
12 infer that significant amounts of XRP originating  
13 from Larsen's and Garlinghouse's identified  
14 addresses were transferred and traced to GSR as well  
15 as digital asset platforms where they could have  
16 been sold.

17 Is there a reason why you were using the  
18 word "often sold" in your testimony today instead of  
19 "could have been sold" like you did in your report?

20 MS. GUERRIER: Objection to form.

21 A. I think both are correct.

22 Q. But, again, you did not do any analysis  
23 to show what amounts of XRP were sold by Mr. Larsen  
24 on an exchange or by GSR. Correct?

25 MS. GUERRIER: Objection to form.

1 [REDACTED] - 2/15/2022

2 Go ahead.

3 A. I guess if Mr. Larsen didn't sell any and  
4 just transferred that to the GSR to keep his assets  
5 there and didn't sell any, he could produce evidence  
6 that -- that he hadn't sold any and he could produce  
7 such evidence if he wanted to, I guess.

8 Q. And you don't know one way or another.  
9 Correct?

10 MS. GUERRIER: Objection to form.

11 A. I don't have -- as I noted in the report,  
12 I trace it to GSR. I know that that's a big service  
13 that GSR provides and that's the reason why people  
14 move money to exchanges is they want to change their  
15 cryptos into other assets. That's the common reason  
16 people move to the exchanges. They definitely don't  
17 want a custodian -- their shares on a digital asset  
18 exchange. We could look at, like, Mt. Gox, for  
19 instance, was hacked. That's a risky way to  
20 custodian your XRP.

21 So if you're moving them to an exchange,  
22 generally, people have a reason for that, they  
23 generally do sell at that. I have -- I have  
24 examined that in -- in the context of my academic  
25 paper that, yes, usually there is a relationship.

1 [REDACTED] - 2/15/2022

2 But, yes. So -- but there is, again, as I noted in  
3 my report, there's -- the precise timing and when  
4 those assets are sold, I'm not opining on.

5 Q. And you're also not opining on that point  
6 with respect to Mr. Garlinghouse. Correct?

7 A. That's correct.

8 MS. GUERRIER: Objection.

9 Q. And again, you're not opining that the  
10 amounts that were transferred to GSR or to digital  
11 exchanges were all ultimately sold by GSR or on the  
12 exchanges. Correct?

13 MS. GUERRIER: Objection to form.

14 A. I am showing that a lot of assets were  
15 transferred to GSR. Typically, that's -- typically,  
16 those assets are sold. I'm not opining that all  
17 assets -- all assets were -- were sold. If none of  
18 the assets were sold, I would -- and if -- if data  
19 is produced and it shows that none of the assets  
20 were sold, I -- I'd be happy -- or even most of the  
21 assets weren't sold, I'd be happy to incorporate  
22 that information in my -- in my report. But what  
23 I'm showing here is that a lot of funds went to GSR.  
24 There are contracts with GSR and most of the time  
25 people move funds to exchange to sell. That's



1 [REDACTED] - 2/15/2022

2 typically why they move it, but there could be other  
3 reasons.

4 Q. Were these scenarios chosen by you,  
5 [REDACTED]?

6 MS. GUERRIER: Objection to form.

7 A. What do you mean by scenarios chosen by  
8 me?

9 Q. So you say that XRP is traced until  
10 certain scenarios are reached. Correct?

11 A. Yes.

12 Q. And there is six scenarios. Correct?

13 A. Yes.

14 Q. Did you -- did you choose all these  
15 scenarios?

16 A. My team chose these scenarios at my -- my  
17 direction.

18 Q. And why did you direct them to -- what  
19 did you direct them to --

20 A. I guess --

21 MS. GUERRIER: Hold on.

22 THE WITNESS: Sorry.

23 MS. GUERRIER: Okay. I'm going to  
24 object to this. In fact, I'm going to instruct you  
25 not to answer that on grounds of work product.

1 [REDACTED] - 2/15/2022

2 Q. So how did you determine to apply these  
3 scenarios?

4 A. Well, these are -- I -- I do blockchain  
5 tracing as a function of our work at [REDACTED] also  
6 as a function of my academic work, and the  
7 question -- the -- the precise question that we're  
8 looking at here is the -- you know, is the  
9 relationship between money, moving out from Larsen  
10 or Garlinghouse accounts to GSR and what's that  
11 relationship, as well as looking at other addresses.

12 So I believe the methodology is  
13 appropriate in the sense it does -- it does also --  
14 we do note in the report that we have different  
15 levels of confidence for the direct traces versus  
16 the multiple hops. And we note that the analysis is  
17 more precise for -- I note that the analysis is more  
18 precise for the direct transfers, and if you look at  
19 my table, it talks about this.

20 Q. So, actually, let's go there, [REDACTED]  
21 [REDACTED], to paragraph --

22 MS. GUERRIER: I don't think he was  
23 done.

24 Q. Oh, sorry. Complete your answer.

25 A. Okay. I mean, maybe you're going to ask

1 [REDACTED] - 2/15/2022

2 me about this, anyway.

3 Table 2, if you look at Table 2, I show 1  
4 hop, the direct transfers. This is for Mr. Larsen.  
5 Table 2, 1 hop, these are direct transfers. These  
6 are transfers that -- that are going just directly  
7 from Larsen to GSR.

8 So in this case, there is -- you know,  
9 there is little doubt that the money is -- that the  
10 XRP is going to GSR. So in this case, it's -- this  
11 is on the blockchain. These are direct transfers.

12 Now, up to two hops and I show it up to  
13 7 hops on the -- on the graph. In this case, one  
14 didn't need to -- for Mr. Larsen to go above 8 hops  
15 because of basically that there is some -- such a  
16 trivial amount left at that point, it's a rounding  
17 error.

18 So one can see that really whether one  
19 does -- I mean, so one can say -- one could say,  
20 well, you know -- one can talk about the 1 hop to  
21 7 hops, various -- various levels of funds for each  
22 of those hops.

23 Q. And so I think what I -- let's actually  
24 turn to Paragraph 38.

25 A. Okay.

1 [REDACTED] - 2/15/2022

2 Q. And you say there that: Mr. Larsen sent  
3 at least 1.50 billion XRP to GSR via 1 hop, but he  
4 could have sent up to 1.90 billion XRP to GSR over  
5 up to 4 hops, or 1.93 billion, if tracing up to 7  
6 hops.

7 Correct?

8 A. That's correct.

9 Q. So you calculated the 1.93 billion number  
10 based on 7 hops because that is when the XRP  
11 initially transferred by Mr. Larsen purportedly  
12 reached GSR. Correct?

13 MS. GUERRIER: Objection to form.

14 A. Can you rephrase the question?

15 Q. Sure.

16 That 1.93 billion number is based on 7  
17 hops, because that's when the XRP initially  
18 transferred by Mr. Larsen purportedly reached a GSR  
19 wallet address at any point up to the 7 hops.  
20 Correct?

21 MS. GUERRIER: Same objection.

22 A. I wouldn't use the word "purportedly,"  
23 but according to the methodology, it reached a  
24 GSR -- it did reach a GSR address up to 7 hops.  
25 That's a fact.

1 [REDACTED] - 2/15/2022

2 One can criticize -- one can say with the  
3 methodology that perhaps it was sold to somebody  
4 else, but even if it was sold to somebody else, if  
5 it was sold to somebody else, then Larsen made money  
6 from that. So it's really -- would be irrelevant in  
7 that case whether it was sold to -- whether it was  
8 sold through GSR or sold through another  
9 intermediary. The point would still stand whether  
10 he sold it through GSR or sold it to somebody else,  
11 it's kind of irrelevant, but anyway, I don't know if  
12 I'm answering your question.

13 Q. Yeah. But, [REDACTED], just on  
14 that point --

15 A. Yes.

16 Q. -- Mr. Larsen could have gifted it to  
17 someone who then sold it through GSR. Correct? I  
18 think you admit that in your report.

19 A. Sure.

20 MS. GUERRIER: Object -- hold on.  
21 Objection to form.

22 Go ahead.

23 A. Mr. Larsen could have gifted that to  
24 someone else, could have gifted it to a charity,  
25 taken a tax write-off for it that offset his income.

1 [REDACTED] - 2/15/2022

2 That's possible. I don't examine that. Maybe that  
3 may be something that could be examined if the data  
4 was provided, but I didn't -- I did not examine --  
5 and as I note in my report, the GSR -- GSR tradings  
6 I said -- I say: This could be a reason why XRP  
7 reached GSR from Larsen's identified wallets up to a  
8 period of 7 hops.

9 Q. So your choice of 7 hops was driven by  
10 the fact that it encompassed all the XRP that  
11 reached GSR that was originally transferred from  
12 Mr. Larsen's wallets. Correct?

13 MS. GUERRIER: Objection to form.

14 A. I say in the table -- Table 2, I'd like  
15 to read that. For example, 1.496 million was  
16 directed to GSR over 1 hop, and 1.926 million was  
17 traced to GSR over 7 hops. There is a small amount  
18 of GSR traced -- GSR -- I'm sorry. There is a small  
19 amount of XRP traced to GSR over 8 hops that is not  
20 shown because of rounding. The blockchain analysis  
21 did not identify additional XRP sent to GSR above 8  
22 hops.

23 In other words, what I'm saying there is  
24 that, according to rounding, so in 7 hops, it's 599,  
25 you know, like .1, and the 8 hop is something like

1 [REDACTED] - 2/15/2022

2 599.3. So it's not going to -- given that I'm  
3 reporting two decimals in the table, it's not going  
4 to matter whether it went on the 8 hop or not. We  
5 could have reported that, discussed that more, but  
6 that -- there was nothing that went out over 8 hops,  
7 according to our tracing.

8 Q. So just turning back to Paragraph 38, you  
9 state: When analyzing blockchain transactions over  
10 multiple hops, the certainty that the initial owner  
11 of funds still controls them decreases as the number  
12 of hops increases.

13 Correct?

14 A. That's correct.

15 Q. Okay. And then let's turn to  
16 Paragraph 68 of your report, which is on Page 66,  
17 where you state -- I'm on Page 66.

18 A. Sorry.

19 Q. In general, fewer transfers of a digital  
20 asset provides more confidence that the digital  
21 asset is still in the possession of the original  
22 holder.

23 Correct?

24 MS. GUERRIER: Objection.

25 Make sure you read that paragraph

1 [REDACTED] - 2/15/2022

2 (unintelligible).

3 A. (Pause.)

4 Yeah, that -- in general, fewer transfers  
5 of digital assets provide more confidence that  
6 digital asset is still in the possession of the  
7 original holder.

8 That is correct, and that's why, as I  
9 showed, our analysis -- my analysis looked at 1 hop,  
10 2 hop, 3 hops, so forth, and one can see that most  
11 of the transfers actually went out at 1 hop.

12 So if one wants to criticize the  
13 methodology and say, Oh, even if the analogy --  
14 methodology was totally wrong, which it's not, but  
15 even if one believed that, then one could go to the  
16 1-hop analysis. And the conclusions are very  
17 similar, depending on the 1 hop versus the 7 hop.

18 So, you know, we can debate the  
19 assumptions, the trading algorithm. I think it's  
20 very reliable trading algorithm, but ultimately, my  
21 conclusions would be very similar, depending on 1  
22 hop or 7 hops.

23 Q. Okay. So is it fair to say that hop by  
24 hop, the tracing analysis becomes less reliable?

25 MS. GUERRIER: Objection.



1 [REDACTED] - 2/15/2022

2 A. In my report, I said that it -- the  
3 reliability decreases in the number of hops, or  
4 something to that manner.

5 Q. So why even analyze hops beyond a  
6 direct -- a direct transfer if the reliability  
7 decreases as you increase the hops?

8 A. Well, sometimes it's very important to  
9 examine multiple hops. For instance, in [REDACTED]  
10 [REDACTED] I show that when one looked at the  
11 multiple hops, one is able to see a relationship  
12 that wasn't there if you just look at direct  
13 transfers.

14 So you -- so I think it's a part of  
15 robustness analysis to see what went on. But,  
16 ultimately, as I showed in the report, the amount  
17 from 1 hop to 7 hops is a fairly small -- as a  
18 fraction of the total is fairly small, but it gives  
19 a more complete picture.

20 And if one looks at -- if one does look  
21 at, let's say, in the internet appendix -- I mean,  
22 not internet appendix, but that's what we call it in  
23 our academic papers. But if one looks at the  
24 appendix, the figure -- if one wanted to look at  
25 Figure 15, for instance, one could compare

1 [REDACTED] - 2/15/2022

2 Figure 13, where it's a direct analysis, to  
3 Figure 15, where it's over multiple hops.

4 Now, what one sees when one does that is  
5 that instead of just saying that -- other than  
6 addresses, one gets a fuller picture for what  
7 happened in terms of the accounts went to -- in  
8 Figure 15 for Larsen went to GSR liquidity  
9 extraction, a larger percentage of digital asset  
10 platforms. Again, those are common places where --  
11 where -- where secure -- where XRP -- digital asset  
12 platforms are common places where digital tokens are  
13 sold.

14 And NYDIG, which I have email evidence,  
15 there is an email talking about NYDIG here. In  
16 Footnote 107, NYDIG is a technology and financial  
17 services firm providing digital assets services to  
18 institutional and private clients. Larsen publicly  
19 disclosed that he was moving XRP to NYDIG in  
20 September 2020 via Twitter.

21 I reviewed that Twitter. He seems to be  
22 proposing that NYDIG is a good place to -- for one  
23 to trade. So it gives a fuller picture, I believe,  
24 of the activity, and I think it's a more complete  
25 analysis of what likely happened.

1 [REDACTED] - 2/15/2022

2 Q. Can we just pause for a moment on NYDIG?

3 A. Sure.

4 Q. So you said that Mr. Larsen thought that  
5 it would be a good place to trade. Is that correct?

6 MS. GUERRIER: Objection to form.

7 A. I was speaking off-the-cuff. There is an  
8 email about he publicly disclosed that he moved XRP  
9 to NYDIG in September 2020.

10 Q. Okay. So let's actually turn to  
11 Appendix C --

12 A. We can look at that --

13 Q. -- which is your list of documents.

14 A. We can look at that email, if we want.

15 Q. Yeah. I --

16 A. See exactly what it says. I don't  
17 remember exactly what that email says. It does say  
18 that he was -- he was moving funds to -- XRP to  
19 NYDIG.

20 Q. Do you know one way or another whether  
21 NYDIG does trading?

22 A. I would like to look at the  
23 communications between NYDIG and what he said on the  
24 Twitter account.

25 Q. Okay. Well, let's turn to Appendix C,

1 [REDACTED] - 2/15/2022

2 which is your list of documents relied upon, and I'm  
3 looking at Page 56 of this document.

4 A. 56?

5 Q. Yes. And I just direct you to the bottom  
6 of the page. And this actually states what's on the  
7 communication. Correct?

8 MS. GUERRIER: Objection to form.

9 A. Yes. This states the correction. I  
10 don't know if there was further -- I don't know if  
11 there was further communication on NYDIG or not, but  
12 they -- yes, this is -- this is what's on the --

13 Q. And then he writes in this communication:  
14 This is truly custody 2.0.

15 Correct?

16 A. That's correct.

17 Q. So what about this communication made you  
18 think that NYDIG was a trading platform?

19 MS. GUERRIER: Objection to form.

20 A. I -- to -- I -- NYDIG may not be a  
21 trading platform. That's not the testimony in my  
22 report. I was speaking off-the-cuff. I read  
23 something about NYDIG. I read this comment from  
24 NYDIG. It seemed like he was proposing NYDIG as  
25 being a good platform. I probably shouldn't have

1 [REDACTED] - 2/15/2022

2 used the word "trading." He was proposing that it  
3 was a good platform. That was my recollection, in  
4 that email he was a proponent of NYDIG.

5 "As you may notice, I moved to NYDIG. I  
6 even know the founders. I'm impressed by their  
7 security and top-notch standards, custodian 2 point  
8 (sotto voce) "

9 So to the extent I said it was "trading,"  
10 I misspoke. I may have -- I don't know precisely  
11 what the -- that's not part of my testimony. I  
12 don't assume in my analysis or my report that they  
13 did trading on behalf of him.

14 Q. But wasn't the purpose of your scenarios  
15 that you created to look at where Mr. Larsen could  
16 have potentially sold his XRP?

17 MS. GUERRIER: Objection to form.

18 A. The -- the scenarios I lay out here --  
19 when I laid out my summary numbers, I talk about the  
20 number of funds that go to GSR liquidity extraction,  
21 digital asset reports, NYDIG. I'm not saying -- I'm  
22 not saying that those funds were sold at NYDIG in  
23 the report.

24 Q. But if you look at Paragraph 68 of  
25 Appendix E, this sets out the scenario -- sorry --

1 [REDACTED] - 2/15/2022

2 Paragraph 65 of your report, we talked about the  
3 scenarios to which you traced XRPs. Correct?

4 MS. GUERRIER: Objection to form.

5 A. In which paragraph?

6 Q. Paragraph 65.

7 A. Yes.

8 Q. And you testified that the reason you  
9 chose these scenarios is because of where Mr. Larsen  
10 may have potentially sold his XRP?

11 MS. GUERRIER: Objection.

12 Q. That these were directly identifying  
13 where he potentially sold XRP. Correct?

14 MS. GUERRIER: Objection.

15 A. I did not say that all of this -- that he  
16 was selling -- selling all his funds on all these  
17 places. I did not -- I did not say that. I -- I  
18 talked about the reasons why I was doing transfers.  
19 I also noted that as you go multiple hops. Things  
20 are more -- less precise. Whether he custodiated a  
21 fraction of his shares at NYDIG, whether he sold  
22 those shares is not a -- is not really germane to  
23 this.

24 Q. So why did you include it in your report  
25 if it's not germane?

1 [REDACTED] - 2/15/2022

2 A. Because I'm including all the major  
3 places where -- where funds went and I note where  
4 the -- where the funds went we traced them to the  
5 major place where the funds -- where the funds went.

6 Q. Okay.

7 A. So we're -- we have a methodology,  
8 we're -- we're reporting where the funds went.

9 Q. So --

10 A. The funds at NYDIG, if it's only a  
11 custodian place, that could've gone from the  
12 custodian and then it could have later been sold,  
13 but if it's only a custodian then maybe the funds  
14 stayed there.

15 Q. Okay.

16 A. That's not -- that's not my testimony  
17 that -- we can talk about NYDIG, but it's a small  
18 fraction of the total, but anyway.

19 MS. GUERRIER: Make sure you finish  
20 your answer. Were you done?

21 THE WITNESS: Yeah.

22 A. I think NYDIG is a small fraction of the  
23 total and maybe that is where -- maybe XRP was being  
24 custodiated on for Mr. Larsen.

25 MS. GUERRIER: And we don't want you

1 [REDACTED] - 2/15/2022

2 to speculate Professor.

3 Q. So, [REDACTED], for the amounts  
4 that were transferred to GSR from Mr. Larsen's  
5 wallet, did you determine who owned or controlled  
6 any of the wallet addresses between the initial  
7 transfer and when the XRP reached GSR?

8 MS. GUERRIER: Objection to form.

9 A. Can you ask me that question again?

10 Q. So --

11 A. What exactly do you mean by "controlled  
12 the wallets"?

13 Q. Were they wallets that were controlled by  
14 Mr. Larsen?

15 MS. GUERRIER: Objection.

16 A. The -- are we talking about 1 hop, 2 hop,  
17 multiple hops? What are we talking about?

18 Q. Multiple hops.

19 A. The -- the wallets -- my understanding is  
20 that these -- these wallet addresses were wallet  
21 addresses that belonged to Larsen or Garlinghouse  
22 and I traced them through the methodology that's --  
23 that's stated here.

24 And as I note in the report, as one goes  
25 to multiple hops, the analysis is less precise.



1 [REDACTED] - 2/15/2022

2 But, again, my 1-hop analysis shows that quite a few  
3 funds are traded to GSR, so that used GSR's  
4 liquidity extraction. If you look at, for instance,  
5 my table -- if we look at my Table 2. Table 2, if  
6 we look at the total amounts that were done -- that  
7 were transferred from 1 hop with Professor Larsen,  
8 that's 495 million in Table 2, going to 7 hops, it's  
9 599. So, yes, it is \$104 million difference, but  
10 it's a different between 5 million versus 6. It's a  
11 20 percent increase.

12 So ultimately there's not a lot of  
13 difference between the 1-hop and 7-hop analysis, but  
14 I can understand that people want to focus on this,  
15 but ultimately my conclusions would be the same  
16 whether I just did 1 hop or 7 hops.

17 Q. Well, they wouldn't be the same, would  
18 they, because you would be attributing, I think, you  
19 said something like 105 million extra in terms of  
20 transfers. Correct?

21 MS. GUERRIER: Objection to form.

22 A. They would be qualitatively the same.  
23 They would not be exactly the same quantitatively.  
24 Yes, it's a 20 percent difference. I noted that.  
25 There's a 20 percent difference between the two.

1 [REDACTED] - 2/15/2022

2 But, ultimately, the fact is, what this analysis is  
3 showing is that there's a connection between GSR's  
4 liquidity extraction service and Larsen. And  
5 Larsen's moving funds to GSR. GSR has liquidity  
6 extraction service. That's what this analysis is --  
7 is showing.

8 Q. Okay. So in terms of -- so -- so, for  
9 example, if XRP is transferred from Mr. Larsen's  
10 wallet and then it reaches GSR after 7 hops, it's  
11 possible that it could've been transferred to other  
12 people other than Mr. Larsen between the initial  
13 transfer and it reaching GSR. Correct?

14 MS. GUERRIER: Objection; calls for  
15 speculation. But go ahead.

16 A. If -- if Mr. Larsen sold the funds to  
17 somebody else and then that person sold the funds to  
18 GSR, that would be a possibility. It's also -- they  
19 would have to be -- generally, those type of  
20 transactions take place between people that know  
21 each other.

22 But yes, that's a possibility that --  
23 that Mr. Larsen sold GSR to his friends or family  
24 member. It's a possibility, yes. It's -- again,  
25 that's why my report makes -- makes it clear that

1 [REDACTED] - 2/15/2022

2 the less hops the more certain the -- more certain  
3 the tracing is. But if he sold it to a friend -- if  
4 he sold it to a friend, the point is he would  
5 still -- he would have still sold it. So that  
6 conclusion wouldn't be the same for that  
7 transaction.

8 Now, that's a -- if we want to discuss  
9 this more, 1 hop versus 7 hops, I can.

10 Q. So I just want to direct your attention,  
11 Professor, to Paragraph 65 again, and, in fact,  
12 that's on Page 64. And you state there that: The  
13 first-in, first-out, or FIFO, forensic accounting  
14 methodology is applied to trace the flow of funds  
15 out of those Larsen-identified and  
16 Garlinghouse-identified addresses.

17 Correct?

18 A. Yes.

19 Q. You do not discuss that forensic  
20 accounting methodology anywhere else in your report.  
21 Correct?

22 MS. GUERRIER: Objection to form.

23 A. Yeah, this is in the appendix. I guess  
24 I'm getting out of wind here.

25 Q. And you describe it as a forensic

1 [REDACTED] - 2/15/2022

2 accounting methodology. Correct?

3 A. That's correct.

4 MS. GUERRIER: Objection to form.

5 Q. Where do you explain how you applied that  
6 forensic accounting methodology in your report?

7 MS. GUERRIER: Objection to form.

8 A. Well, it's a first-in -- first-in,  
9 first-out is a common accounting methodology. It  
10 means basically that if you're the first person to  
11 the bus, then when you get on the bus and the bus is  
12 full, you're the first person off the bus. And --  
13 and it's used in many accounting classes. I --  
14 it's -- it's very common in accounting methodology.  
15 Now, there's different ways one can do first-in,  
16 first-out. I mean -- I'm sorry. There's different  
17 ways that one can do tracing, but first-in,  
18 first-out is a common -- common method.

19 Q. Are you aware of any other experts in  
20 blockchain tracing that use FIFO when tracing?

21 A. Yes, there's a couple of papers that use  
22 first-in, first-out.

23 Q. Do you cite it here?

24 A. I don't cite it. It's a method we use  
25 in -- in [REDACTED] and I use it in [REDACTED] as

1 [REDACTED] - 2/15/2022

2 well.

3 Q. But you don't cite any sources for the  
4 use of it in your report. Correct?

5 MS. GUERRIER: Objection.

6 A. I don't think I need to. First-in,  
7 first-out is like the very basic principal that's  
8 used in accounting.

9 Q. Are you familiar with [REDACTED]?

10 A. Yes.

11 Q. Are you familiar --

12 A. I've heard the name, though you want to  
13 tell me more about it.

14 Q. Are you familiar with CipherTrace?

15 A. I've heard of CipherTrace.

16 Q. And have you heard of Unblock?

17 MS. GUERRIER: Objection.

18 A. I don't know if I know Unblock.

19 Q. The [REDACTED] and CipherTrace are at least  
20 blockchain tracing -- firms that offer blockchain  
21 tracing services. Correct?

22 MS. GUERRIER: Objection.

23 A. [REDACTED] and CipherTrace offer blockchain  
24 tracing, yes.

25 Q. Are you aware that [REDACTED] and

1 [REDACTED] - 2/15/2022

2 CipherTrace don't use FIFO in their blockchain  
3 tracing?

4 MS. GUERRIER: Objection to form.

5 A. I -- I would -- I would need to see  
6 exactly what context it is done in because the  
7 context matters a lot for the -- for the tracing.

8 So, for instance, if you're tracing on  
9 bitcoin versus another exchange, most of those  
10 crypto -- a lot of the crypto assets space is set up  
11 to trace on -- on bitcoin, and they have different  
12 protocol than one would use, say, on Ethe in a  
13 different -- different method. So you -- you might  
14 do it different on a bitcoin versus Eth, you have  
15 different tracing on them.

16 So, yeah, I don't know if you're talking  
17 about their bit -- are you talking about their  
18 bitcoin tracing? Are you talking about their XRP  
19 tracing?

20 Q. So I'm talking about XRP tracing.

21 A. Do they have XRP tracing on their  
22 platform?

23 Q. Are you aware of whether they do or  
24 don't?

25 A. I don't know. I'm asking -- I -- I don't

1 [REDACTED] - 2/15/2022

2 know whether your question was -- you made a  
3 statement that their XRP tracing was -- that they're  
4 first-in, first-out tracing -- and I don't know  
5 whether that is specific to bitcoin or specific to  
6 XRP.

7 Q. So did you consider using a different  
8 methodology other than FIFO in providing your  
9 opinions on blockchain tracing here?

10 A. No, I didn't.

11 Q. So you didn't consider, for example,  
12 Larsen first-out?

13 MS. GUERRIER: Objection to form.  
14 Asked and answered.

15 A. I could do it on last-in, first-out.  
16 Again, let me restate the obvious, which is that  
17 1-hop tracing doesn't depend on last-in,  
18 first-out -- first-in, first-out. So let's don't  
19 try to confuse the issue. If I did last --  
20 everything with 1 hop does not depend on -- does not  
21 depend on any kind of -- does not depend on last-in,  
22 first-out versus first-in, first-out.

23 So all my results would hold whether I  
24 used last-in, first-out, first-in, first-out or some  
25 other method because all my results are robust to 1

1 [REDACTED] - 2/15/2022

2 hop and I do 1-hop tracing, multiple-hop tracings.

3 If -- you know, if it's Profess- -- if  
4 it's Mr. Larsen or Mr. Garlinghouse's opinion that  
5 they didn't actually sell XRP, they made no profits  
6 from this, it seems like an easy way would just be  
7 to -- to turn over all the accounts and show that  
8 they, in fact, made no money from this.

9 Look, all I'm doing is I'm showing that  
10 the funds are going from their controlled accounts  
11 to GSR.

12 Q. So you described your opinion about 1-hop  
13 transfers as robust. Correct?

14 MS. GUERRIER: Objection.

15 A. I said all of my findings are robust  
16 whether it's seven hops or whether it's 1 hop.

17 Q. So did you analyze any industry criticism  
18 of FIFO before you used it in your methodology?

19 A. No, I didn't.

20 Q. Are you aware that FIFO has been subject  
21 to some criticism?

22 MS. GUERRIER: Objection.

23 A. Yes. I'm aware there is a debate about  
24 whether LIFO or FIFO is best.

25 It's like some people like peanut butter



1 [REDACTED] - 2/15/2022

2 and some people like jelly on their sandwich, but  
3 it -- again, whether I used LIFO or FIFO is not  
4 going to affect my results because all of my results  
5 are robust to 1 hop, and 1 hop does not depend on  
6 LIFO, FIFO, or Rhino, or whatever you want to put in  
7 there.

8 Q. But 13 hops does depend on that  
9 methodology. Correct?

10 MS. GUERRIER: Objection to form.

11 A. 13 hops -- I would need to analyze this,  
12 if this is -- I could redo this with LIFO and  
13 analyze the robustness to this, but a clearer method  
14 would be, I guess, if just the account -- banking  
15 account statements of all these people maybe that's  
16 been provided. They could provide banking accounts  
17 of exactly how much they've sold and all of the  
18 financials. That would probably be a cleaner way to  
19 look at this than the blockchain, but yeah.

20 Q. So one last question, [REDACTED].

21 MS. GUERRIER: Okay. Actually, it's  
22 seven hours, so we're done.

23 MS. BUNTING: Thank you, [REDACTED]

24 [REDACTED].

25 THE WITNESS: Thank you.

1 [REDACTED] - 2/15/2022

2 THE VIDEOGRAPHER: We're off the

3 record, 6:44

4 (Deposition concluded at 6:44 p.m.)

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

## ERRATA SHEET

Case Name: CIVIL ACTION NO. 20-CV-1 (AT) (SN)

Deposition Date: FEBRUARY 15, 2022

Deponent: [REDACTED]

Pg.	No.	Now Reads	Should Read	Reason
55	10,11	unbacked or	backed or	error
63	13	apt to	not apt to	error
64	15,19	MBR	NBER	error
68	24	public	publish	error
116	9	PHC	PHD	error
177	10,14,21	Plononiex	Poloniex	error
177	12,14	Plonono	Poloniex	error
184	3	.8-tenths	88 hundredths	correction
184	5,6	four tenths	4 hundredths	correction
184	22-4	(Clarification, See Page 349-3)		
185	12,13,15	four tenths	4 hundredths	correction
201	18	Larsen	Ferrell	correction
213	10	15TH	2015	error
238	23	beyond	behind	error

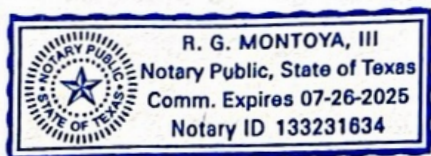
SUBSCRIBED AND SWORN BEFORE ME

THIS 19 DAY OF March, 2022.

*R. G. Montoya III*

(Notary Public)

MY COMMISSION EXPIRES: 07/26/2025





1 ERRATA SHEET

2 Case Name: CIVIL ACTION NO. 20-CV-1 (AT) (SN)

3 Deposition Date: FEBRUARY 15, 2022

4 Deponent: [REDACTED]

5 Pg.	No.	Now Reads	Should Read	Reason
6 240	24	bar	VAR	error
7 254	11	balance	imbalance	error
8 257	8,9	(Typographical Error, See Page 349-4)		
9 263	13	2000 --	Two thousand	error
10 284	3	pour	floor	error
11 299	2	(Typographical Error, See Page 349-4)		
12 316	19	GRS	GSR	error
13 328	18	GSR traced	GSR XRP traced	XRP error
14 341	6	wouldn't	would	error
15 344	12	ethe	ETH	error

16  
17  
18  
19  
20  
21  
22

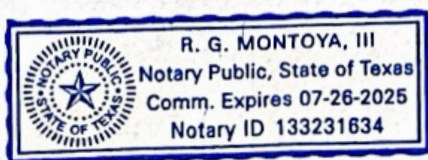
SUBSCRIBED AND SWORN BEFORE ME

23 THIS 19 DAY OF March, 2022.

24 R. G. Montoya, III

25 (Notary Public)

MY COMMISSION EXPIRES: 07/26/2025





## ERRATA SHEET SUPPLEMENTAL

Case Name: CIVIL ACTION NO. 20-CV-1 (AT) (SN)

Deposition Date: FEBRUARY 15, 2022

Deponent: [REDACTED]

Original Testimony at pg. 184: 22 - pg. 185: 4

"So you would take the difference, let's say 9 -- 9.2 divided by nine -- nine-tenths of 1 percent minus eight-tenths of 1 percent that's like a four-tenths of 1 percent and then you would divide it by the previous trade price so if the previous price was eight-tenths of 1 percent you divide it by that."

CLARIFICATION at pg. 184: 22 - pg. 185: 4

The process for determining overpayment is to first find the difference between amount paid (.0092) and last trade price (.0088). This difference (.0004) is then divided by the last trade price ( $.0004 / .0088 = .045$ ). In the given example the overpayment was 4.5%. The average of GSR overpayments was 1.5%.

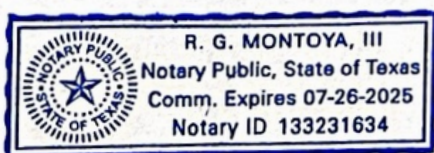
SUBSCRIBED AND SWORN BEFORE ME

THIS 19 DAY OF March, 2022.

R. G. Montoya III

(Notary Public)

MY COMMISSION EXPIRES: 07/26/2025





## ERRATA SHEET SUPPLEMENTAL

Case Name: CIVIL ACTION NO. 20-CV-1(AT) (SN)

Deposition Date: FEBRUARY 15, 2022

Deponent: [REDACTED]

TYPOGRAPHICAL ERROR at pg. 257: 8-9

Now Reads: Feude(phonetic) O'Connell & Schultze

Should Read: Froot, O'Connell, & Seasholes

TYPOGRAPHICAL ERROR at pg. 299: 2

Now Reads: Forester & Corolly

Should Read: Foerster and Karolyi

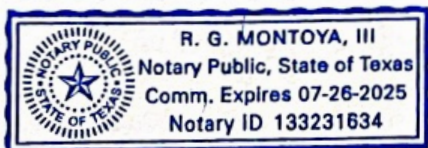
SUBSCRIBED AND SWORN BEFORE ME

THIS 19 DAY OF March, 2022.

R. G. Montoya III

(Notary Public)

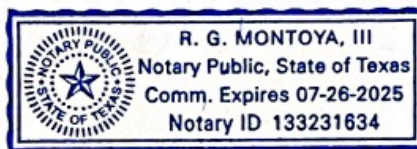
MY COMMISSION EXPIRES: 07/26/2025



## SIGNATURE PAGE

I, [REDACTED], have read the foregoing deposition and hereby affix my signature that same is true and correct, except as noted on the correction page.

[REDACTED]





1 UNITED STATES DISTRICT COURT  
2 SOUTHERN DISTRICT OF NEW YORK

3 SECURITIES AND EXCHANGE §  
COMMISSION, §  
4 § CIVIL ACTION NO.  
PLAINTIFF, § 20-CV-1 (AT) (SN)  
5 §  
AGAINST §  
6 §  
RIPPLE LABS, INC., §  
7 BRADLEY GARLINGHOUSE, §  
AND CHRISTIAN A. §  
8 LARSEN, §  
§  
9 DEFENDANTS. §

10  
11 REPORTER'S CERTIFICATION  
DEPOSITION OF [REDACTED]  
12 TAKEN FEBRUARY 15, 2022

13 I, TAMARA CHAPMAN, Certified Shorthand Reporter in  
14 and for the State of Texas, hereby certify to the  
15 following:

16 That the witness, [REDACTED], was duly  
17 sworn by the officer and that the transcript of the  
18 oral deposition is a true record of the testimony  
19 given by the witness;

20 That the original deposition was delivered to  
21 ANDREW CERESNEY;

22 That a copy of this certificate was served on all  
23 parties and/or the witness shown herein on

24 \_\_\_\_\_.

25 I further certify that pursuant to FRCP No.



1 30(f)(i) that the signature of the deponent:

2 X was requested by the deponent or a party  
3 before the completion of the deposition and that the  
4 signature is to be returned within 30 days from date  
5 of receipt of the transcript. If returned, the  
6 attached Changes and Signature Page contains any  
7 changes and the reasons therefor;

8 was not requested by the deponent or a party  
9 before the completion of the deposition.

10 I further certify that I am neither counsel for,  
11 related to, nor employed by any of the parties in  
12 the action in which this proceeding was taken, and  
13 further that I am not financially or otherwise  
14 interested in the outcome of the action.

15 Certified to by me this 16th day of February, 2022.

16

17

18



19

---

Tamara Chapman, CSR, RPR-CRR  
CSR NO. 7248; Expiration Date: 12-31-22  
TSG Reporting, Inc.  
Firm Registration No. 615  
Nationwide - Worldwide  
Phone: (877) 702-9580  
info@tsgreporting.com  
www.tsgreporting.com

20

21

22

23

24

25

# EXHIBIT 4

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

**SECURITIES AND EXCHANGE  
COMMISSION,**

Plaintiff,

*-against-*

**RIPPLE LABS, INC., BRADLEY  
GARLINGHOUSE,  
and CHRISTIAN A. LARSEN,**

Defendants.

Case No. 20-CV-10832 (AT)

**Rebuttal Expert Report of**

**Allen Ferrell, Ph.D.**

November 12, 2021

<b>I.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
A.	QUALIFICATIONS .....	1
B.	OVERVIEW OF DR. [REDACTED] OPINIONS .....	2
C.	ASSIGNMENT AND CONCLUSIONS .....	3
<b>II.</b>	<b>DR. [REDACTED] ANALYSIS OF RIPPLE’S “EFFORTS,” DEFINED IN A MANNER IN WHICH RIPPLE, MR. LARSEN, AND MR. GARLINGHOUSE DISTRIBUTED XRP, IS IRRELEVANT FOR ASSESSING WHETHER XRP HAS THE ECONOMIC CHARACTERISTICS OF AN INVESTMENT CONTRACT .....</b>	<b>8</b>
A.	DR. [REDACTED] CLAIMS OF RIPPLE’S AND MR. LARSEN’S NET PURCHASES POSITIVELY IMPACTING XRP PRICES ARE UNSUPPORTED .....	8
B.	DR. [REDACTED] ALLEGATIONS THAT RIPPLE, IN COORDINATION WITH GSR, TIMED XRP SALES TO “MINIMIZE THE NEGATIVE SELLING IMPACT ON THE PRICE OF XRP” ARE NOT UNIQUE TO INVESTMENT CONTRACTS .....	17
C.	DR. [REDACTED] CLAIMS THAT RIPPLE, IN COORDINATION WITH GSR, INCREASED XRP SALES FOLLOWING PRICE INCREASES ARE FUNDAMENTALLY FLAWED .....	21
<b>III.</b>	<b>MR. LARSEN’S AND MR. GARLINGHOUSE’S SALES OF THEIR PERSONAL HOLDINGS OF XRP ARE INDEPENDENT OF RIPPLE AND ARE IRRELEVANT FOR ASSESSING WHETHER XRP IS AN INVESTMENT CONTRACT.....</b>	<b>24</b>
<b>IV.</b>	<b>THE USE OF LOCK-UP RESTRICTION IS NOT UNIQUE TO SECURITIES AND CANNOT BE USED TO DISTINGUISH BETWEEN INVESTMENT CONTRACTS AND OTHER TYPES OF ASSETS .....</b>	<b>27</b>
<b>V.</b>	<b>DR. [REDACTED] CLAIMS ABOUT XRP BEING USED IN A SIMILAR MANNER AS COMPANIES USE STOCK IS IRRELEVANT FOR ASSESSING WHETHER XRP HAS THE ECONOMIC SUBSTANCE OF AN INVESTMENT CONTRACT .....</b>	<b>31</b>

## **I. INTRODUCTION**

### **A. QUALIFICATIONS**

1. I am an economist and the Greenfield Professor of Securities Law at Harvard Law School. I received a Ph.D. in economics from the Massachusetts Institute of Technology, with fields in econometrics and finance, and a J.D. from Harvard Law School. My Ph.D. dissertation concerned the relationship between stock prices and financial disclosures. After law school, I clerked for Judge Silberman of the United States Court of Appeals for the D.C. Circuit and Justice Kennedy of the Supreme Court of the United States.

2. I am also a faculty associate at the Kennedy School of Government at Harvard, a fellow at Columbia University's Program on the Law and Economics of Capital Markets, a research associate at the European Corporate Governance Institute, and a member of the editorial board of the Journal of Financial Perspectives. I formerly was a member of the Board of Economic Advisors to the Financial Industry Regulatory Authority ("FINRA"), an academic fellow at FINRA, Chairperson of Harvard's Advisory Committee on Shareholder Responsibility (which is responsible for advising the Harvard Corporation on how to vote shares held by its endowment), the ABA Task Force on Corporate Governance, the American Law Institute Project on the Application of U.S. Financial Regulations to Foreign Firms and Cross-Border Transactions, and an executive member of the American Law School section on securities regulation. My current curriculum vitae is listed in Appendix A. I am being compensated for my time on this matter at a rate of \$1,250 per hour. My compensation is not contingent on the outcome of this case. No element of my compensation is dependent on the opinions offered in this case.

3. The materials I have considered are listed in Appendix B.

4. This report is subject to change or modification should additional relevant information become available which bears on the analysis, opinions, or conclusions contained herein.

**B. OVERVIEW OF DR. [REDACTED] OPINIONS**

5. Ripple Labs Inc. (“Ripple”) is a San Francisco-based privately held payments technology company that utilizes distributed ledger technology, including the cryptocurrency XRP, in cross-border payment technology.<sup>1</sup> Plaintiff Securities and Exchange Commission (the “SEC”) alleges that defendants<sup>2</sup> engaged in the “unlawful offer and sale of securities in violation of Sections 5(a) and 5(c) of the Securities Act of 1933 (‘Securities Act’) [15 U.S.C. §§ 77e(a) and 77e(c)].”<sup>3</sup> The SEC presented five expert reports to support its allegations, including the Amended Expert Report of [REDACTED], served on October 13, 2021.<sup>4</sup>

6. Dr. [REDACTED] main opinions can be summarized as follows:

- a. Dr. [REDACTED] claims that Ripple and its executives directed market maker, GSR, to purchase XRP “in a manner consistent with i) pushing prices upward, or ii) providing a price floor to stabilize and keep prices from falling.”<sup>5</sup> According to Dr. [REDACTED], Ripple “employed trading strategies to protect the price of XRP”<sup>6</sup>

---

<sup>1</sup> Ripple Labs Inc., *Consolidated Financial Statements*, December 31, 2014 through December 31, 2020. As of September 15, 2014, Ripple has been incorporated in the State of Delaware. *See* Ripple Labs, *Good Standing Certificate*, December 1, 2014, at 1.

<sup>2</sup> Defendants are Ripple, Bradley Garlinghouse, and Christian A. Larsen.

<sup>3</sup> First Amended Complaint, *Securities and Exchange Commission v. Ripple Labs, et al.*, No. 1:20-cv-10832 (S.D.N.Y. February 18, 2021), at ¶ 9.

<sup>4</sup> Amended Expert Report of [REDACTED], October 13, 2021 (hereinafter, “[REDACTED] Report”).

<sup>5</sup> [REDACTED] Report, at ¶ 9.a.

<sup>6</sup> [REDACTED] Report, at ¶ 9.b.

by selling XRP to purchasers “in a manner designed to minimize downward pressure on the price of XRP.”<sup>7</sup>

- b. Dr. [REDACTED] further claims that lock-up restrictions contained in certain Ripple agreements “functioned similarly to lock-up restrictions in a traditional company’s Initial Public Offering, and allowed Ripple to protect the price of XRP from falling.”<sup>8</sup> He also contends that Ripple used XRP in a similar manner as companies use stock to incentivize employees and that XRP was used to “fund Ripple operations[<sup>9</sup>] and to enrich Ripple’s founders, directors, and early employees.”<sup>10</sup>
- c. Finally, Dr. [REDACTED] claims that Ripple and its executives were incentivized to “influence XRP prices in order to maximize the proceeds”<sup>11</sup> and that, in addition to Ripple’s sales of XRP, Mr. Larsen and Mr. Garlinghouse transferred large amounts of XRP to GSR.<sup>12</sup>

### C. ASSIGNMENT AND CONCLUSIONS

7. I have been asked by counsel for Ripple to assess the claims, summarized above, made in the [REDACTED] Report. Before doing so, I note that there is nothing in the [REDACTED] Report that has caused me to change or alter any of the opinions I expressed in my opening report.<sup>13</sup>

---

<sup>7</sup> [REDACTED] Report, at ¶ 9.b.

<sup>8</sup> [REDACTED] Report, at ¶ 9.c.

<sup>9</sup> Including “a funding gap of over \$800 million.” See [REDACTED] Report, at ¶ 9.e.

<sup>10</sup> [REDACTED] Report, at ¶ 9.f.

<sup>11</sup> [REDACTED] Report, at ¶ 9.d.

<sup>12</sup> [REDACTED] Report, at ¶ 9.d.

<sup>13</sup> Expert Report of Allen F. Ferrell, October 4, 2021 (hereinafter, “Ferrell Report”).

8. Overall, Dr. [REDACTED] opinions on coordination between GSR and, respectively, Ripple, Christian Larsen, and Bradley Garlinghouse to “buy in a manner consistent with i) pushing prices upward, or ii) providing a price floor to stabilize and keep prices from falling”<sup>14</sup>; his opinions on defendants’ alleged efforts in selling XRP (through market making firms) so as not to affect the price of XRP<sup>15</sup>; and his opinions on Ripple using XRP in “a similar manner as companies use stock”<sup>16</sup> — a misleading and disingenuous premise — are not supported by any methodology or analysis that supports an opinion that these actions resulted in any sustained impact on the market price of XRP. In any event, Dr. [REDACTED] opinions are irrelevant for assessing whether the economic substance of XRP constituted an investment contract.<sup>17</sup>

9. Dr. [REDACTED] analysis is flawed. Dr. [REDACTED] focuses on short-term trading patterns that he observes on select dates. As an initial matter, Dr. [REDACTED] does not (and cannot) explain why a handful of trades on just a few cherry-picked dates would have resulted in any long-term impact on the market price of XRP, much less caused purchasers of XRP to have any reasonable expectation of profits from Ripple’s conduct. Further, Dr. [REDACTED] discussion of the trading patterns lacks rigorous empirical analysis. He merely shows charts (Figures 1 through 6) on a

---

<sup>14</sup> See, e.g., [REDACTED] Report, at ¶ 9.a (“At specific times, Ripple and its executives directed GSR, a digital asset trading and market making firm,[footnote omitted] to buy XRP in a manner consistent with i) pushing prices upward, or ii) providing a price floor to stabilize and keep prices from falling.”).

<sup>15</sup> See, e.g., [REDACTED] Report, at ¶ 9.b (“Through market making firms, Ripple sold XRP to purchasers in a manner designed to minimize downward pressure on the price of XRP. Ripple employed trading strategies to protect the price of XRP.”).

<sup>16</sup> See, e.g., [REDACTED] Report, at ¶ 9 (“Ripple and its executives at specific times took steps to influence the price of XRP and their sales of XRP functioned similarly to that of a public equity offering for Ripple.”), at ¶ 53 (“Ripple used XRP in a similar manner as companies use stock.”).

<sup>17</sup> See, e.g., [REDACTED] Report, at ¶ 9.f (“Ripple used XRP in a similar manner as companies use stock.”).



few select days in a 2,694-day time period<sup>18</sup> when the alleged trading patterns “coincide[d]” with XRP price changes, which he links mostly to communications by Ripple around these dates.<sup>19, 20</sup>

10. Moreover, Dr. [REDACTED] purported findings of correlations between price changes in XRP and defendants’ trade executions do not support an opinion that defendants’ trading resulted in any price change. This is probably why Dr. [REDACTED] repeatedly casts his opinion in terms of his analysis being “consistent” with Ripple “attempting” to influence prices, or his vague observation that defendants’ actions “coincided” with XRP price changes. Indeed, he employs no statistical or rigorous analysis that demonstrates any such causation. Even if the trading patterns in question could have had an effect on prices, he does not quantify the amount of such an effect or show that it lasted beyond the time periods he selected. Dr. [REDACTED] single regression analysis, which he claims is consistent with the communications between Ripple and GSR “where Ripple expressed a desire to sell XRP when the price of XRP increased,”<sup>21</sup> at best demonstrates a correlation between imbalance — that is, total number of XRP purchased minus total number of XRP sold — and lagged XRP price return.<sup>22</sup>

---

<sup>18</sup> The number of days in the time period August 6, 2013 to December 20, 2020 is 2,694.

<sup>19</sup> See, e.g., [REDACTED] Report, at ¶ 18 (“GSR is then a large net buyer of XRP for the next five hours. During these five hours, XRP jumps from \$.0061 to a high of \$.0093, for a gain of \$.0032.”), at ¶ 23 (“GSR made several large purchases of XRP that both preceded and accompanied a dramatic rise in the price of XRP of over 15 percent within 24 hours.”), at ¶ 28 (“As can be seen in Figure 5, [Mr. Larsen’s] buying beginning on June 10 coincided with the price of XRP stabilizing around 0.00009 XRP/BTC, and later reversing its earlier decline.”).

<sup>20</sup> Examples of Dr. [REDACTED] vague, unsupported statements include, but are not limited to, his statement that “Ripple and certain of its executives directed GSR to trade XRP on behalf of Ripple in a way consistent with an attempt to increase or stabilize the price of XRP,” [REDACTED] Report, at ¶ 25 [emphasis added], and that “GSR also executed uneconomic trades whose purpose *appears to be* to push the price of XRP upward,” [REDACTED] Report, at ¶ 21 [emphases added].

<sup>21</sup> [REDACTED] Report, at ¶ 35 (“The findings from this regression analysis are also consistent with communications between Ripple and GSR where Ripple expressed a desire to sell XRP when the price of XRP increased.”).

<sup>22</sup> [REDACTED] Report, at ¶ 33 (“To better understand whether the behavior observed in the example shown in Figure 6 is persistent across a wider time period, I next examine whether Ripple’s market makers [REDACTED] and [REDACTED] tend to sell less when prices fall and sell more when prices are stabilized or rising. [...] Imbalance is defined as the total number of XRP purchased minus total number of XRP sold in a day normalized by the average circulating supply.”). See also [REDACTED] Report, at ¶ 29 ([REDACTED] and [REDACTED] “sold more XRP following

11. Based on my analysis, my review of the materials listed in Appendix B, and my general expertise and experience, I have concluded that:

- None of the alleged short-term trading patterns and XRP price changes Dr. [REDACTED] observes are lasting. Prices of XRP before and after his selected time periods do not show any long-term, sustained effect as a result of the alleged trading patterns of Ripple, Mr. Larsen, or Mr. Garlinghouse. The blips on the handful of days he selects are just “noise” that drops out when viewed against the long-term price movements of XRP.
- Dr. [REDACTED] allegations that Ripple and the individual defendants executed sales in a manner designed to minimize negative price impacts on the market price of XRP, and/or to increase its price, are not relevant to determining whether the economic substance of defendants’ offers and sales of XRP constitute an investment contract.
  - Foreign exchange or futures traders routinely manage the manner in which sales are executed to minimize adverse price impacts. The fact that market actors attempt to minimize the price impact associated with their sales is hardly surprising or novel, and does not support an opinion that XRP is a security.
  - Ripple has bona fide business reasons to increase the liquidity of XRP for use in settlements.
  - Dr. [REDACTED] opinion is based on select trading patterns on just a handful of dates across a multi-year period; he does not and cannot offer any explanation as to how trades by Ripple and the individual defendants on these few dates would lead

---

price increases”), at ¶ 34 (“I conclude that [REDACTED] and [REDACTED], on behalf of Ripple, sold more XRP when the price of XRP was increasing and relatively less when the price was decreasing on the previous day.”), and at ¶ 35 (“The findings from this regression analysis are also consistent with communications between Ripple and GSR where Ripple expressed a desire to sell XRP when the price of XRP increased.”).

unrelated purchasers of XRP to believe that they could expect profits on their holdings of XRP from Ripple's efforts.

- As the factor analysis presented in my opening report shows, the long-run prices of XRP were influenced, not by the efforts of Ripple, but by the changes in the value of cryptocurrencies generally; focusing, instead, on a handful of select days does not constitute a reliable scientific methodology.
- Dr. [REDACTED] contention that Ripple sold XRP to fund operations or repurchase Ripple equity is also irrelevant to whether the economic substance of those sales constitutes an investment contract. Contrary to Dr. [REDACTED] assertions, sales of XRP are not equivalent to a capital raise through a sale of securities. None of the defendants' sales of XRP gave the owners of XRP any right to future cash flows from Ripple, or to a share in Ripple's profits. As a matter of economic substance, holders of XRP are holders of a virtual currency.
- Using XRP as a component of executive compensation is equally irrelevant to whether the economic substance of XRP constitutes an investment contract. Such compensation does not give the employees any contractual right to a share of Ripple's profits if Ripple is successful in its ongoing efforts to manage and develop its business operations or impose any obligation on Ripple to expend ongoing efforts to increase the price of XRP.

**II. DR. [REDACTED] ANALYSIS OF RIPPLE’S “EFFORTS,” DEFINED IN A MANNER IN WHICH RIPPLE, MR. LARSEN, AND MR. GARLINGHOUSE DISTRIBUTED XRP, IS IRRELEVANT FOR ASSESSING WHETHER XRP HAS THE ECONOMIC CHARACTERISTICS OF AN INVESTMENT CONTRACT**

**A. DR. [REDACTED] CLAIMS OF RIPPLE’S AND MR. LARSEN’S NET PURCHASES POSITIVELY IMPACTING XRP PRICES ARE UNSUPPORTED**

12. Dr. [REDACTED] claims that at specific times GSR “traded in a manner consistent with the directions from Ripple executives to increase or stabilize the price of XRP”<sup>23</sup> or timed purchases to “maximize the price of XRP around large news announcements.”<sup>24</sup> Dr. [REDACTED] attempts to support his claims regarding Ripple’s alleged behavior with “plots of XRP transactions conducted by GSR” on six selected dates in 2016 and eleven dates in 2017.<sup>25</sup> His analysis does not include any consideration of the amount of these sales as compared with the global (or even specific exchange) sales of XRP on that date; nor does he engage in any analysis of the mechanics of price discovery for XRP on those days. Moreover, he fails to analyze XRP price returns on the full sample of days between August 2013 and December 2020, instead restricting his analysis to a limited number of days that he selected. In contrast, the factor analysis I presented in my opening report in Section III.C, analyzed XRP price returns over the entire time period at issue, and did not use trading volume from a single participant such as GSR. Before turning to the details of his examples, I will first make several general observations concerning Dr. [REDACTED] approach.

---

<sup>23</sup> [REDACTED] Report, at ¶ 15 (“Ripple has stated in its submissions in this litigation that Ripple and its executives ‘do not control the price of XRP’ and that the price of XRP is ‘not based on the efforts of Ripple.’ Yet, Ripple and its executives explicitly directed at least one of their market makers, GSR, to purchase or refrain from selling XRP at specific times with a stated intent of influencing the price of XRP. GSR traded in a manner consistent with the directions from Ripple executives to increase or stabilize the price of XRP as described in these emails and shown below.”).

<sup>24</sup> [REDACTED] Report, at ¶ 17 (“Based on emails from as early as 2016, Ripple executives worked directly with GSR to devise trading strategies to positively influence XRP prices. In some instances, these were timed to maximize the price of XRP around large news announcements.”).

<sup>25</sup> [REDACTED] Report, at Figure 1, Figure 2, Figure 3, Figure 4, and Figure 5.

13. Strikingly, Dr. [REDACTED] employs no statistical or formal analysis to analyze whether Ripple or Mr. Larsen actually influenced XRP prices, despite claiming that he reached an appropriately supported opinion that defendants took steps to influence the price of XRP.<sup>26</sup> His graphical representations on select dates merely show that GSR's purchases and sales of XRP, on behalf of Ripple and Mr. Larsen, happened at the same time as XRP price changes. Dr. [REDACTED], however, fails to put forth an analysis that actually shows that Ripple's and Mr. Larsen's trades *caused* those price changes. Of course, showing coinciding of events does not show causation. His one regression (which is flawed, as I will show in Section II.C.) itself shows a simple — but irrelevant — correlation, i.e., “sellers, on behalf of Ripple, sold more XRP when XRP was increasing and relatively less when the price was decreasing on the previous day.”<sup>27</sup>

14. Furthermore, the relevance of Ripple's temporary trading patterns to assessing whether XRP has the economic substance of an investment contract is neither obvious nor ever explained. For instance, Dr. [REDACTED] concludes Section IV of his report, which is focused on Ripple's temporary trading patterns on a handful of days, with the statement that it “seems” to Dr. [REDACTED] that GSR, on behalf of Ripple, was “partially successful” in positively influencing XRP prices in the “short term.”<sup>28</sup> The possible relevance of what “seems” to be “short term” price effects to the economic substance of XRP over the August 2013 to December 2020 time

---

<sup>26</sup> [REDACTED] Report, at ¶ 1 (“First, the SEC asked me to opine on whether Ripple Labs Inc. (‘Ripple’), Chris Larsen (‘Larsen’), and Brad Garlinghouse (‘Garlinghouse’) took steps to influence XRP prices. Second, I have also been retained to opine on the incentives that might have been present for Ripple to attempt to influence the price of XRP.”).

<sup>27</sup> [REDACTED] Report, at ¶ 34 (“A regression analysis of [REDACTED] and [REDACTED]’ trading activity shows that when the prior day returns of XRP increase, the amount of XRP that [REDACTED] and [REDACTED] sell also increases (Table 1) . . . . By selling more XRP the day after XRP prices rise, [REDACTED] and [REDACTED], on behalf of Ripple, were able to use rising XRP returns and increased demand to mitigate any potential negative effect of its XRP sales and thus keep XRP prices high.”).

<sup>28</sup> [REDACTED] Report, at ¶ 25 (“GSR also seems to have been at least partially successful in its targeted efforts in these directed cases as the price of XRP generally increased or stabilized in the short term at the prices GSR set.”).

period is bereft of explanation. As I demonstrated in my initial report, the long-term price of XRP for the period August 2013 to December 2020 is not related to Ripple’s efforts but rather to price movements of non-XRP cryptocurrencies. Accordingly, Dr. [REDACTED] report provides no support for a conclusion that purchasers of XRP had a reasonable expectation of obtaining profits from the efforts of Ripple.

15. Dr. [REDACTED] analysis further lacks scientific rigor insofar as he fails to quantify these alleged price effects, or measure their duration. He also fails to consider other factors outside GSR (or Ripple’s) control that could affect prices on the limited number of days he discusses. As I will show, the charts he presents are themselves highly incomplete. For instance, he only considers GSR XRP trading on behalf of Ripple on the XRP Ledger, and ignores the significant known amount of off-ledger trading at cryptocurrency exchanges.<sup>29</sup> Without consideration of whether there was a meaningful, sustained impact on the price of XRP beyond the select time periods he considers, Dr. [REDACTED] analysis is wholly unreliable. I will turn to the specific flaws in each of Dr. [REDACTED] examples in more detail below.

16. *Example 1:* Dr. [REDACTED] Figure 1 shows XRP transactions conducted by GSR in a 30-hour window on September 15 and 16, 2016.<sup>30</sup> He claims that GSR did not trade in the six-hour period prior to 1pm UTC on September 15, 2016, but thereafter began net buying at 1pm UTC at a time that he alleges “directly corresponds to the time that GSR was directed to trade by Ripple.”<sup>31</sup> There is, however, nothing unique about this pattern in GSR’s trading on behalf of

---

<sup>29</sup> Ferrell Report, Exhibit 14 shows the number of exchanges where XRP trades occurred between August 4, 2013 and December 20, 2020.

<sup>30</sup> [REDACTED] Report, at Figure 1, (“This figure plots XRP transactions conducted by GSR in the 30-hour window on September 15, and 16 around Ripple’s announcements on September 15, 2016. Transactions are sourced from the XRP Ledger.”). I use intra-day XRP trading volume at cryptocurrency exchanges from CryptoCompare as the market for XRP trades.

<sup>31</sup> [REDACTED] Report, at ¶ 18.

Ripple before and after 1pm UTC (which corresponds to 9am ET) on September 15, 2016, because the trading by other market participants at cryptocurrency exchanges follows a similar pattern. Exhibit 1 shows the trading volume of GSR and the volume of XRP trading at all cryptocurrency exchanges (as reported by CryptoCompare) in the six hours before and after 1pm UTC on September 15, 2016, and the trading volumes over the 30-hour window on September 15 and 16, 2016, which Dr. [REDACTED] discusses. As I show in Exhibit 1, less than 1 percent of the overall market trading during the 30-hour window took place in the six hours before 1pm UTC and approximately 55 percent of market trading took place in the six hours after 1pm UTC.

17. Dr. [REDACTED] points to a 53-percent increase in XRP's price during six hours on September 15 and 16, 2016 to support his claim that GSR allegedly followed Ripple's directive to purchase XRP "at specific times with a stated intent of influencing the price of XRP."<sup>32</sup> Dr. [REDACTED] overreaches. Even if Dr. [REDACTED] analysis shows that GSR's purchases *coincided* with a price increase, he does not perform any empirical assessment showing that GSR's purchases contributed to this price increase. Dr. [REDACTED], therefore, has no basis to claim that the 53-percent increase in XRP's price during this period was even related to GSR's purchases.

18. Even if one were to assume GSR's net purchases did affect XRP prices, Dr. [REDACTED] utilizes no methodology to determine the magnitude of the price impact of GSR's trading. Nor did he consider whether trading by other market participants — such as the amounts of purchases and sales by participants other than Ripple (GSR), or exogenous market factors such as price changes in other cryptocurrency prices — could have also contributed to the price increase at this time. I used a square-root price impact model to approximate the potential price

---

<sup>32</sup> [REDACTED] Report, at ¶ 15. *See also* [REDACTED] Report, at ¶ 18 ("This is a 53 percent price increase in five hours. By analyzing transactions publicly available on the XRP Ledger, I can confirm that GSR did in fact follow Ripple's directive to purchase XRP and that the activity appears successful as the price increased dramatically.").

changes that could reasonably be expected given GSR's trading volume.<sup>33</sup> Incorporating intra-day XRP price volatility and overall trading volume of XRP at cryptocurrency exchanges between 1:00 UTC and 18:00 UTC on September 15, 2016, the potential XRP price impact from GSR trading, estimated using the square-root model, is approximately 1.6 percent compared to the 41 percent XRP price return over this period.

19. Furthermore, Dr. [REDACTED] fails to show that this alleged price increase would last beyond the particular five-hour period between September 15 and 16, 2016. As a matter of economic theory, there is no point in Ripple attempting to impact the XRP price on a limited number of days if the goal is to achieve longer-term price appreciation for its holdings of XRP or the holdings of XRP purchasers in the marketplace. Once again, this highlights the importance of analyzing whether Ripple had the ability to affect XRP prices over the multi-year time period at issue and not just on a select date as Dr. [REDACTED] claims.

20. *Example 2:* Figure 2 in Dr. [REDACTED] report shows XRP transactions conducted by GSR on November 1, 2016. He claims that GSR's purchases during a one-hour period around an XRP price of \$0.008 are "consistent with implementation of a price floor just as directed by Ripple."<sup>34</sup>

---

<sup>33</sup> Academic literature, including Bouchaud et al. (2018) and Donier and Bonart (2015), uses a square-root impact model to quantify the price impact of a particular sized trade. According to this framework, total trading volume and price volatility are important when assessing the price impact of a trade. Dr. Griffin fails to consider these additional factors in his analysis. *See, e.g.,* Bouchaud, J., J. Bonart, J. Donier, and M. Gould, Trades, Quotes and Prices: Financial Markets Under the Microscope, Cambridge University Press, 2018, at 235-237. For a discussion of the square-root impact model more generally *see* Bouchaud, J., J. Bonart, J. Donier, and M. Gould, Trades, Quotes and Prices: Financial Markets Under the Microscope, Cambridge University Press, 2018. *See also* Donier, J., and J. Bonart, "A Million Metaorder Analysis Impact on the Bitcoin," *Market Microstructure and Liquidity* 1(2), 2015 for the application of this framework to Bitcoin.

<sup>34</sup> [REDACTED] Report, at ¶ 20 ("On November 1, 2016, Patrick Griffin instructed GSR to 'aim to protect a \$0.008 floor.' . . . Second, the trading seems to have succeeded in protecting XRP from dipping below \$0.008 USD as the price did not go below this level.").



21. Dr. [REDACTED] is incorrect in claiming that GSR's trading "seems to have succeeded in protecting XRP from dipping below \$0.008 as the price did not go below this level," but "reverted higher in the subsequent hour."<sup>35</sup> Dr. [REDACTED] ignores that, even though the alleged price floor of \$0.008 was supposedly established in October 2016, XRP prices were more often *below* that price floor in November and December 2016, than they were *before* the alleged price floor was established. As I show in Exhibit 2, XRP prices were below \$0.008 on approximately 42 percent of the days in October, 60 percent of the days in November, and 100 percent of the days in December 2016.

22. Moreover, Dr. [REDACTED] once again fails to quantify how much lower XRP's price would have been but for GSR's purchases, but speculates that an XRP price of \$0.008 would "permit [them] to maximize revenue from its own XRP sales, all else being equal."<sup>36</sup> Dr. [REDACTED] argument is flawed. First, even if GSR's purchases prevented XRP prices from dipping below \$0.008 during this one hour intra-day, as Dr. [REDACTED] alleges, it was at best short-lived and could not have affected XRP prices during the multi-year period when Ripple distributed XRP. Further, as my factor model demonstrates, the long-run XRP price return can be explained by exogenous cryptocurrency market factors that are outside Ripple's control.<sup>37</sup>

23. *Example 3:* Dr. [REDACTED] Figure 3 shows XRP transactions conducted by GSR on September 25 and 26, 2016. He alleges that "GSR made several large purchases of XRP that both preceded and accompanied a dramatic rise in the price of XRP of over 15 percent within 24 hours."<sup>38</sup> Dr. [REDACTED] graph shows GSR purchases coincided with price increases, but he did not

---

<sup>35</sup> [REDACTED] Report, at ¶ 20.

<sup>36</sup> [REDACTED] Report, at ¶ 19.

<sup>37</sup> Ferrell Report, at ¶¶ 91-99.

<sup>38</sup> [REDACTED] Report, at ¶ 23.

show, or attempt to show, that GSR's purchases caused this increase. Furthermore, my analysis of XRP price returns on the two days before and after the time period that Dr. [REDACTED] considers, September 25 to 26, 2016, shows that XRP price return is higher in the days before, and after, the alleged actions by Ripple in coordination with GSR. As I show in Exhibit 3, the XRP price return is 7.6 percent before September 25 and 13.6 percent after September 26, and 8.2 percent from September 25 to 26, 2016. Therefore, even if GSR's purchases coincided with increases in XRP prices, as Dr. [REDACTED] claims, there are even greater XRP returns after this period that he fails to analyze.

24. Dr. [REDACTED] claim that GSR "executed uneconomic trades whose purpose appears to be to push the price of XRP upward"<sup>39</sup> on these dates is not based on any economic analysis. He states that "GSR purchased XRP at a 1.5 percent premium compared to the last trade price"<sup>40</sup> but never compares GSR's purchases to an *actual* trade price. Rather, he attempts to show prices of GSR's trades relative to a "volume-weighted average price at 1-minute intervals across all trades on the XRP Ledger involving the XRP-USD trading pair."<sup>41</sup> Here, Dr. [REDACTED] ignores the possibility that the individual trades that comprise his "volume-weighted average" prices could have been higher or lower than GSR's prices.<sup>42</sup> In other words, his benchmark for GSR's trades, the volume-weighted average price, in fact aggregates a number of trades by averaging various trades rather than comparing GSR's prices to actual trades.

---

<sup>39</sup> [REDACTED] Report, at ¶ 21. *See also id.*, at ¶ 23 ("These uneconomic trades, i.e., buying XRP above market prices, coincide with XRP's increase in value on September 25 and the early morning of September 26.").

<sup>40</sup> [REDACTED] Report, at ¶ 23.

<sup>41</sup> [REDACTED] Report, at ¶ 21 and Figure 3. Panel B.

<sup>42</sup> Dr. [REDACTED] fails to provide information on the XRP Ledger prices and volumes he used to create the volume-weighted average prices used in Figure 3 of the [REDACTED] Report.

25. *Example 4:* Dr. [REDACTED] Figure 4 shows XRP transactions conducted by GSR on April 10 and 11, 2016. He alleges that GSR's net purchases on April 11, following a decrease in XRP prices on April 10, provide examples "consistent with an attempt to increase or stabilize the price of XRP."<sup>43</sup> Dr. [REDACTED] claims that "GSR reversed its programmatic sales *after the price of XRP continues to decline*."<sup>44</sup> But, in contrast to Dr. [REDACTED] claim, a more detailed analysis of intra-day prices shows that XRP prices increased approximately two hours *before* GSR became a net buyer, as the hourly XRP returns in Exhibit 4 show. The cumulative return for the five hours before and after the reversal is 6.2 percent when GSR was a net seller and a decline of 3.2 percent when GSR was a net buyer.

26. Even if the price of XRP increased for a few hours intra-day on April 11, the alleged increase in XRP price was short-lived. The daily return on April 11 was 1.9 percent followed by negative returns on April 12 and April 13, 2016.<sup>45</sup> Therefore, XRP return was lower and not higher, in contrast to Dr. [REDACTED] claim that "GSR executed trades with the stated motive of preventing the price of XRP from going down."<sup>46</sup>

27. *Example 5:* Dr. [REDACTED] Figure 5 shows XRP versus Bitcoin transactions that Mr. Larsen conducted through GSR from June 3 to 14, 2017 at the cryptocurrency exchange Poloniex. Dr. [REDACTED] picked twelve days in June 2017, a single cryptocurrency exchange (Poloniex), and a single trading pair (XRP/BTC). This is a highly selective example, from which

---

<sup>43</sup> [REDACTED] Report, at ¶ 25 ("The instances examined above provide specific examples of how Ripple and certain of its executives directed GSR to trade XRP on behalf of Ripple in a way consistent with an attempt to increase or stabilize the price of XRP.").

<sup>44</sup> [REDACTED] Report, at ¶ 24 ("As seen in Figure 4, at the direction of Ripple, GSR reversed its programmatic sales *after the price of XRP continues to decline*. Instead of net selling, XRP began net buying around 9:00am UTC.") [emphasis added].

<sup>45</sup> The daily XRP return was negative 2.7 percent on April 12 and negative 3.2 percent on April 13, 2016 using XRP prices from CoinMarketCap.

<sup>46</sup> [REDACTED] Report, at ¶ 25.

no conclusions can be drawn regarding Mr. Larsen's trading over time or as a whole as a scientific or logical matter. Dr. [REDACTED] nonetheless alleges that Mr. Larsen's purchases of XRP "are consistent with selection of an opportune time to purchase XRP to provide support similar to implementing a price floor to keep the price of XRP from further declining."<sup>47</sup> Dr. [REDACTED] opinions are flawed for several reasons.

28. First, even considering only the cherry-picked time, exchange, and trading pair that Dr. [REDACTED] considered, there is no relation between GSR's transactions on behalf of Mr. Larsen and the daily XRP/BTC price return at Poloniex during this time period. As I show in Exhibit 5, there is no directional relation between the daily XRP price returns and Mr. Larsen's buying and selling activity. For example, daily XRP/BTC price returns decreased by approximately 15 percent on June 2, 2017, a day when GSR sold XRP on behalf of Mr. Larsen, but XRP/BTC price returns also decreased by approximately 11 percent on June 10, 2017, a day when GSR purchased XRP on behalf of Mr. Larsen.

29. Further, on 90 percent of the days between April 15, 2017 and March 18, 2018, when GSR executed trades on behalf of Mr. Larsen, Mr. Larsen's trading volume, measured as total purchases and sales of XRP/BTC, was less than 0.5 percent of total trading volume on Poloniex and less than 0.1 percent of the XRP/BTC trading volume at cryptocurrency exchanges and reported by CryptoCompare.<sup>48</sup> Between June 2 and June 15, 2017, Mr. Larsen's volume was at most 1 percent and often less than 0.5 percent of total Poloniex XRP/BTC volume and at most 0.2 percent of overall cryptocurrency exchange volumes. There were many other market participants trading XRP/BTC during this time at Poloniex and at other cryptocurrency

---

<sup>47</sup> [REDACTED] Report, at ¶ 28.

<sup>48</sup> I calculate Mr. Larsen's trading volume as the total purchases and sales.

exchanges. Dr. [REDACTED] fails to take into account that trading by other market participants could also have contributed to the contemporaneous XRP/BTC prices. The approximate price impact, if any, of GSR's purchases and sales during this period was modest compared to the daily XRP/BTC return at Poloniex as I show in Exhibit 5.

30. Finally, Dr. [REDACTED] also claims that defendants' actions implemented, or were consistent with implementing, a "price floor."<sup>49</sup> Dr. [REDACTED] offers no evidence to support his contention that a price floor was in fact being created, or even that defendants' actions caused the alleged price floor. Dr. [REDACTED] relies on the assumption that the actions of a single market participant were causing the purported changes in the price of XRP. That is a baseless assumption considering how little of the total XRP trading volume defendants accounted for.

31. Taken together, my analysis shows that Dr. [REDACTED] analysis is unreliable and does not support his claims that GSR trading caused XRP price changes. Moreover, Mr. Larsen's decisions to buy or sell his XRP holdings are distinct from those of Ripple and are irrelevant to assessing the economic substance of an investment contract.

**B. DR. [REDACTED] ALLEGATIONS THAT RIPPLE, IN COORDINATION WITH GSR, TIMED XRP SALES TO "MINIMIZE THE NEGATIVE SELLING IMPACT ON THE PRICE OF XRP" ARE NOT UNIQUE TO INVESTMENT CONTRACTS**

32. Dr. [REDACTED] claims that "from January 2015 to at least September 2019, GSR appears to carefully time when XRP would be sold so as to minimize the negative selling impact on the price of XRP" and also that "Ripple turned to its programmatic selling partners to implement its XRP selling strategy."<sup>50</sup>

---

<sup>49</sup> [REDACTED] Report, at ¶ 9.a, ¶ 19 (Ripple), [REDACTED] Report, at ¶ 28 (Larsen).

<sup>50</sup> [REDACTED] Report, at ¶ 29 and ¶ 32.

33. Defendants’ alleged strategy of minimizing the potential price impact of their sales is irrelevant for assessing whether XRP is an investment contract because there are examples of other large holders of an asset that distribute the asset in a controlled manner so as not to affect prices.

34. For example, the use of algorithms to execute institutional trades in foreign exchange (“FX”) or futures markets is designed to minimize the potential impact of sales:

- a. “FX algorithmic trading and automated pricing has surged in the last year as traders seek best execution and minimal market impact, according to the head of Bloomberg’s FX electronic trading platform.”<sup>51</sup>
- b. “In institutional FX markets, implementation shortfall algorithms will try to avoid slippage and limit a large orders market impact by creating numerous child orders from the main or parent order. It will then spread those smaller orders across various execution venues and sources of liquidity. Such execution strategies also take account of the cost and or benefits of crossing the bid-offer spread.”<sup>52</sup>
- c. “Our suite of intelligent algorithms is designed to access liquidity, mitigate market impact and optimize your performance, by reacting rapidly to market dynamics. Our algorithms can also be customized in line with your execution goals. This guide is designed to help you identify the right algorithm for your specific requirements. It covers our global suite and provides an overview of each FX algorithm as well as when and how to use it.”<sup>53</sup>
- d. Futures trading uses “Execution Algos facilitate the next step in the process, where the trader has already decided what to trade and in what direction, but not necessarily when to trade it. These execution algorithms choose the timing of the predetermined trades. This benefits traders by minimizing trade slippage and market impact.”<sup>54</sup>

---

<sup>51</sup> Smith, A., “FX Algos and Auto-Pricing on the Rise as Traders Look to Minimize Market Impact, Says Bloomberg FXGO Head,” *The Trade News*, June 18, 2021, <https://www.thetradenews.com/fx-algos-and-auto-pricing-on-the-rise-as-traders-look-to-minimise-market-impact-says-bloomberg-fxgo-head/>.

<sup>52</sup> Sinden, D., “Citi Launches a New Suite of Futures Trading Algos,” *Finance Feeds*, January 22, 2021, <https://financefeeds.com/citi-launches-new-suite-futures-trading-algos/>.

<sup>53</sup> “A Guide to UBS Algorithms, UBS Electronic Execution - FX,” *UBS*, August 2019, at 3.

<sup>54</sup> Signorelli, J., “Futures Traders Use Execution Algorithms for Alpha and Timing,” *Futures Magazine*, January 6, 2020, <http://www.futuresmag.com/2020/01/06/futures-traders-use-execution-algorithms-alpha-and-timing>.

- e. “Execution algorithms [in futures] are not designed to generate trading decisions—the ‘what,’ ‘why’ and ‘when’—but rather the ‘how’ so as to minimize execution risk that could negate any trading alpha identified with the trade idea.”<sup>55</sup>

35. The use of block trades is another example where market participants use a particular strategy to minimize the price impact of their trading. As Harris (2003) explains, “[l]arge traders often have a significant impact on prices.”<sup>56</sup> Exchanges such as CME or ICE have specific rules for the execution of large trades.<sup>57</sup>

36. There is, therefore, nothing unique about defendants’ decision to execute their trades through GSR so as to minimize price impact. Indeed, it would be surprising if a large holder of an asset wishing to sell did not care about minimizing the price impact associated with those sales. Thus, Dr. [REDACTED] characterization of defendants’ strategy of trading in a manner designed to minimize the price impact on XRP leads nowhere as such behavior by market participants is not unique to securities. Indeed, these trading practices often fall under the rubric of “best execution,” which includes an attempt to minimize the negative price impact associated with a particularly sized trade.<sup>58</sup>

37. In Figure 6, Dr. [REDACTED] analyzes 18 days during which [REDACTED] and [REDACTED] [REDACTED] had respective

---

<sup>55</sup> Wood, G. “Transaction Cost Analysis for Futures,” *CME Group*, June 2011, at 35, <https://www.cmegroup.com/education/files/TCA-4.pdf>.

<sup>56</sup> Harris, L., *Trading & Exchanges: Market Microstructure for Practitioners*, Oxford University Press, 2003, at 322.

<sup>57</sup> See, e.g., “Market Regulation Advisory Notice,” *CME*, <https://www.cmegroup.com/rulebook/files/cme-group-Rule-526.pdf>.

<sup>58</sup> See, e.g., Harris, L., *Trading & Exchanges: Market Microstructure for Practitioners*, Oxford University Press, 2003. See also, Sinden, D., “Citi Launches a New Suite of Futures Trading Algos,” *Finance Feeds*, January 22, 2021, <https://financefeeds.com/citi-launches-new-suite-futures-trading-algos/>. Signorelli, J., “Futures Traders Use Execution Algorithms for Alpha and Timing,” *Futures Magazine*, January 6, 2020, <http://www.futuresmag.com/2020/01/06/futures-traders-use-execution-algorithms-alpha-and-timing>. Wood, G. “Transaction Cost Analysis for Futures,” *CME Group*, June 2011, at 35, <https://www.cmegroup.com/education/files/TCA-4.pdf>.

tenures as programmatic sellers, and claims that they allegedly coordinated with Ripple to execute “XRP sales in a manner consistent with stopping or reducing sales to mitigate impact when XRP prices are declining.”<sup>59</sup> Dr. [REDACTED] analysis is fundamentally flawed for at least three reasons.

38. First, Dr. [REDACTED] ignores any confounding factors, such as the relation between XRP price returns and returns of cryptocurrencies more generally. As I show in Exhibit 6.A., daily Bitcoin and XRP price returns are correlated over this period (the correlation is 87 percent). Indeed, this is consistent with the factor model I presented in my opening report, which also demonstrates that the long-run XRP price return can be explained by exogenous cryptocurrency market factors that are outside Ripple’s control.<sup>60</sup>

39. Second, Dr. [REDACTED] draws his conclusions based on 18 days but fails to show that the time period he has chosen is in fact representative of the entire period when [REDACTED] and [REDACTED] were active as programmatic sellers. I analyze overall trading from November 2014 to January 2017 and from June 2017 to at least September 2019, the period when Ripple enlisted [REDACTED] and the period when Ripple enlisted [REDACTED], namely September 2017 to at least September 2019.<sup>61</sup> Notably, this longer time period contains a number of other days with a more than 10-percent decline in XRP price return during each of the respective periods which Dr. [REDACTED] did not analyze.

40. Third, as I show in Exhibit 6.B, during the period when [REDACTED] and [REDACTED] were enlisted by Ripple there is effectively no difference in the percentage of GSR’s average net sales to trading volume on days when the XRP return exceeded a 10-percent decline compared to

---

<sup>59</sup> [REDACTED] Report, ¶ 32.

<sup>60</sup> Ferrell Report, at ¶¶ 91-100.

<sup>61</sup> [REDACTED] Report, at ¶ 32 and Figure 6. I used the data Dr. [REDACTED] provided in his backup for my analysis.



other days. Therefore, even if GSR halted sales for a short period intra-day, as Dr. [REDACTED] alleges, the programmatic sales of XRP as a percentage of volume, on average, remain unchanged regardless of XRP prices.

**C. DR. [REDACTED] CLAIMS THAT RIPPLE, IN COORDINATION WITH GSR, INCREASED XRP SALES FOLLOWING PRICE INCREASES ARE FUNDAMENTALLY FLAWED**

41. Dr. [REDACTED] uses a regression analysis to allegedly show that there is a relation between prior XRP returns and [REDACTED] and [REDACTED] purchases and sales: “Ripple’s market makers [REDACTED] and [REDACTED] tend to sell less when prices fall and sell more when prices are stabilized or rising” across a “wider time period.”<sup>62</sup> Again, even if true, such a claim does not indicate that XRP has the economic substance of an investment contract.

42. In any event, Dr. [REDACTED] analysis is conceptually flawed. Dr. [REDACTED] does not establish that GSR sold less on days when prices were falling. In fact, his regression shows a relation between higher sales by GSR *following* a day where prices increase. In general, the price could have increased or decreased the day after prices increased, and Dr. [REDACTED] does not establish that XRP prices did not decrease the day after an XRP price increase and before [REDACTED] and [REDACTED] could have executed their trades. Moreover, nothing in Dr. [REDACTED] regression analysis establishes that GSR sales decrease on days when prices increase.<sup>63</sup> Put

---

<sup>62</sup> [REDACTED] Report, at ¶ 33 (“To better understand whether the behavior observed in the example shown in Figure 6 is persistent across a wider time period, I next examine whether Ripple’s market makers [REDACTED] and [REDACTED] tend to sell less when prices fall and sell more when prices are stabilized or rising. ... Imbalance is defined as the total number of XRP purchased minus total number of XRP sold in a day normalized by the average circulating supply.”). *See also id.*, at ¶ 29 ([REDACTED] and [REDACTED] “sold more XRP following price increases.”), at ¶ 34 (“I conclude that [REDACTED] and [REDACTED], on behalf of Ripple, sold more XRP when the price of XRP was increasing and relatively less when the price was decreasing on the previous day.”), and at ¶ 35 (“The findings from this regression analysis are also consistent with communications between Ripple and GSR where Ripple expressed a desire to sell XRP when the price of XRP increased.”).

<sup>63</sup> [REDACTED] Report, at ¶ 34 (“By selling more XRP the day after XRP prices rise, [REDACTED] and [REDACTED], on behalf of Ripple, were able to *use rising XRP returns* and increased demand to mitigate any potential negative effect of its XRP sales and thus keep XRP prices high.”) [emphasis added].

differently, he does not show that there is any relation between GSR imbalances on a particular day and XRP prices on the same day.

43. To analyze the relation between GSR imbalances on a particular day and XRP prices on the same day, I added contemporaneous return as a control variable to Dr. [REDACTED] regression specification and it shows that there is no statistically significant relation between current XRP price returns and imbalances. As I show in column A.2. of Exhibit 7, the coefficient on the contemporaneous return is not statistically significant.

44. Further, Dr. [REDACTED] claims that his regression indicates that “Ripple systematically directed sales of XRP in a manner that was consistent with seeking to minimize the negative impact of sales on XRP prices.”<sup>64</sup> But Dr. [REDACTED] does not establish that there is a relation between imbalances and XRP price returns and, even if there were such a relation, he fails to show that it would have any long-term impact on XRP return. To analyze the relation between imbalances and XRP price return, I implement a regression model where XRP price return is the dependent variable, using contemporaneous imbalance, lagged imbalance, and lagged returns as independent variables:

$$XRP_{return_t} = a + \theta * Imbalance_t + \sum_{i=1}^5 \beta_i * XRP_{return_{t-i}} + \sum_{i=1}^5 \lambda_i * Imbalance_{t-i} + \varepsilon_t$$

where  $a$  is a constant term, and Imbalance is the number of XRP units purchased minus the number of XRP units sold per day by [REDACTED] and [REDACTED] on behalf of Ripple normalized by dividing by the daily circulating supply and  $\varepsilon$  denotes the error term.<sup>65</sup> In my return

---

<sup>64</sup> [REDACTED] Report, at ¶ 35.

<sup>65</sup> Note that I use Dr. [REDACTED] assumptions on number of lags and normalization in my model but do not endorse these assumptions he made. For example, Dr. [REDACTED] imbalance regression specifications are not robust to alternative specifications he could have chosen. Dr. [REDACTED] uses *circulating supply* to normalize imbalance whereas Chordia and Subrahmanyam (2004), which Dr. [REDACTED] cites, use *trading volume* to normalize imbalance. When I implement Dr. [REDACTED] imbalance regression model using *trading volume* to normalize imbalance, the coefficients on prior return are not statistically significant at the 5% level of significance. See

regression, I use the same number of lags on imbalance and return controls and the same normalization as in Dr. ██████ regression.<sup>66</sup>

45. I implemented my return regressions for the period from January 2015 to September 12, 2019. Exhibit 7, column A.3. (without the contemporaneous imbalance) and in column A.4. (with the contemporaneous imbalance).<sup>67</sup> Using this regression specification, I find that *none* of the coefficients on current imbalances, prior imbalances, or prior returns are statistically significant at the 5-percent level. Dr. ██████, therefore, has no basis for his claim that “Ripple systematically directed sales of XRP in a manner that was consistent with seeking to minimize the negative impact of sales on XRP prices.”<sup>68</sup> In order for this claim to be true, the regression coefficient on the imbalances must be statistically significant, and my return regression specification demonstrates that this is not the case. Dr. ██████ also has no basis for his claim that “these sellers, on behalf of Ripple, sold more XRP when the price of XRP was increasing and relatively less when the price was decreasing on the previous day,” and thus “were able to use rising XRP returns and increased demand to mitigate any potential negative effect of its XRP sales and thus keep XRP prices high.”<sup>69</sup> In order for this claim to be true, the

---

██████ Report, at Table 1 (“Imbalance is defined as the number of XRP purchased minus number of XRP sold per day by ██████ and ██████ on behalf of Ripple, normalized by dividing by the average daily circulating supply of XRP over the previous 30 calendar days.”) and Chordia, T., and A. Subrahmanyam, “Order imbalance and individual stock returns: Theory and evidence,” *Journal of Financial Economics* 72, 2004, at 494 (“Order imbalance is scaled by the total number of trades or by the total dollar trading volume so as to eliminate the impact of total trading activity.”).

<sup>66</sup> ██████ Report, at ¶ 34 (“Lagged 5-day returns and imbalances are added as controls.”).

<sup>67</sup> The time period from January 1, 2015 and September 12, 2019 corresponds to Dr. ██████ analysis in ██████ Report, Table 1.

<sup>68</sup> ██████ Report, at ¶ 35.

<sup>69</sup> ██████ Report, at ¶ 34 (“I conclude that these sellers, on behalf of Ripple, sold more XRP when the price of XRP was increasing and relatively less when the price was decreasing on the previous day. By selling more XRP the day after XRP prices rise, ██████ and ██████, on behalf of Ripple, were able to use rising XRP returns and increased demand to mitigate any potential negative effect of its XRP sales and thus keep XRP prices high.”).

regression coefficient on the prior returns must be statistically significant, and my return regression specification demonstrates that this is not the case

46. Dr. [REDACTED] regression does not support his claim that [REDACTED] and [REDACTED], on behalf of Ripple, were able to use rising XRP returns and increased demand to mitigate any potential negative effect of its XRP sales and thus keep XRP prices high.<sup>70</sup> There is, accordingly, no economic rationale for Ripple to use temporary imbalances to earn a profit from XRP sales over the long term. The factor model I implemented before also shows that the long-term XRP return is not related to any of Ripple's XRP distributions when controlling for other cryptocurrencies' returns.

### **III. MR. LARSEN'S AND MR. GARLINGHOUSE'S SALES OF THEIR PERSONAL HOLDINGS OF XRP ARE INDEPENDENT OF RIPPLE AND ARE IRRELEVANT FOR ASSESSING WHETHER XRP IS AN INVESTMENT CONTRACT**

47. Dr. [REDACTED] performed a tracing of funds on the blockchain that he alleges shows that Mr. Larsen and Mr. Garlinghouse "could have sent up to" respectively 1.93 billion XRP and 277 million XRP directly or indirectly to GSR over multiple "hops."<sup>71</sup> Sales of Mr. Larsen and Mr. Garlinghouse's personal holdings of XRP are independent from Ripple and Dr. [REDACTED] provides no basis for why his analysis of Mr. Larsen's and Mr. Garlinghouse's sales are relevant to the question of whether the economic substance of XRP constitutes an investment contract.

---

<sup>70</sup> [REDACTED] Report, at ¶ 34.

<sup>71</sup> [REDACTED] Report, at ¶ 38 ("As shown in Table 2, Larsen sent at least 1.50 billion XRP to GSR via one hop, but he could have sent up to 1.90 billion XRP to GSR over up to four hops, or 1.93 billion if tracing up to seven hops. It is worth noting that Larsen could have sold or gifted XRP to entities or individuals who subsequently transferred the XRP to GSR; this could be a reason why XRP reached GSR from Larsen's identified wallets over a series of up to seven hops."). *See also* [REDACTED] Report, at ¶ 39 ("Garlinghouse directly transferred 167 million XRP (\$104 million) to GSR out of a total of 377 million XRP (\$186 million) transferred out of his identified addresses. This can be seen in Figure 8 which shows the cumulative amount of XRP transferred out of Garlinghouse's identified addresses over time, including direct transfers to GSR. Other destinations receiving direct transfers of XRP from Garlinghouse identified addresses include digital asset platforms, Ripple, or unidentified addresses.") and [REDACTED] Report Table 2, and Table 3.

48. Dr. [REDACTED] purports to show cumulative transfers out of wallets owned by Mr. Garlinghouse or Mr. Larsen and claims that they made significant use of GSR's liquidity extraction services. Dr. [REDACTED] fails to explain the economic relevance of whether Mr. Larsen and Mr. Garlinghouse used GSR to sell XRP to assessing whether the "economic reality" of XRP constitutes an investment contract. Even assuming that Dr. [REDACTED] analysis of cumulative funds is accurate, his analysis is conceptually flawed for the following reasons:

49. Dr. [REDACTED] claims that the "contract provisions suggest that Larsen and Garlinghouse employed the services of GSR to minimize the negative impact their XRP sales could have on XRP prices."<sup>72</sup> As I alluded to above, selling an asset to minimize the negative impact is part of the best execution strategy of many sellers and is not unique to sales of securities or (even if true) to sales by Mr. Garlinghouse and Mr. Larsen.

50. Also, Dr. [REDACTED] claim that these sales were intended to minimize a potential negative impact on XRP prices presumes that Mr. Larsen and Mr. Garlinghouse have some economic control over the cumulative XRP transfers in Dr. [REDACTED] analysis.<sup>73</sup> But, as I explain below, Mr. Larsen and Mr. Garlinghouse placed no restriction on the amount of XRP or the timing of the intermediary transfers. In fact, Dr. [REDACTED] recognizes that the control of the original holder decreases after the original transfer.<sup>74</sup>

---

<sup>72</sup> [REDACTED] Report, at ¶ 36.

<sup>73</sup> [REDACTED] Report, at ¶ 38 ("If one traces these out as far as seven hops, the total amount that Larsen transferred to GSR could be as high as 1.9 billion XRP (\$599 million)."). Dr. [REDACTED] discusses tracing of Mr. Larsen's trades up to 7 hops, but his backup includes up to 13 hops. He claims that he excludes "traces beyond 13 hops because they are too small to show up in the charts and tables." See Dr. [REDACTED] backup, (SEC-LIT-EPROD-001851401).

<sup>74</sup> [REDACTED] Report, at ¶ 38 ("When analyzing blockchain transactions over multiple hops, the certainty that the initial owner of funds still controls them decreases as the number of hops increases.").

51. Exhibit 8 shows an example of an “indirect” XRP transfer from Mr. Larsen’s wallet that reached GSR after three hops.<sup>75</sup> The example shows an initial transfer of 20 million XRP from Mr. Larsen to another participant on May 22, 2017. On October 23, 2017 — more five months later — this participant transferred 2,083,333 XRP to yet another anonymous market participant, who then transferred a slightly smaller amount, 2,083,313, to GSR, almost a year later, on March 26, 2018. This “final-hop” reaches GSR after 307 days or almost one year after the original transfers by Mr. Larsen. In contrast, a direct transfer from Mr. Larsen to GSR typically reaches GSR within minutes on the day.

52. Exhibit 8 also shows an example of an “indirect” XRP transfer from Mr. Garlinghouse wallet that reaches GSR after two hops. This example shows an initial transfer of 31.2 million XRP from Mr. Garlinghouse to another, anonymous participant on June 10, 2010. On August 7, 2020, this participant transferred approximately 10 million XRP to GSR. This transfer reaches GSR after approximately 60 days.

53. Dr. [REDACTED] fails to demonstrate that either Mr. Larsen or Mr. Garlinghouse controlled or benefitted from the sales or transfers of XRP once it left their possession. As Dr. [REDACTED] acknowledges “the certainty that the initial owner of funds still controls them decreases as the number of hops increases.”<sup>76</sup> Moreover, XRP is a fungible virtual currency. Dr. [REDACTED] did not perform any analysis to show that subsequent transfers of XRP were related to the XRP owned by Mr. Larsen or Mr. Garlinghouse, or that the process of intermediary transfers was controlled by them. For example, other parties could have continued to receive XRP from other sellers, which they could have sent to yet another party or to GSR. Taken together, this means

---

<sup>75</sup> Dr. [REDACTED] did not provide any backup on his tracing algorithm, which he claims to be proprietary. I am not providing any opinion on the accuracy of his tracing methodology.

<sup>76</sup> [REDACTED] Report, at ¶ 38 (“When analyzing blockchain transactions over multiple hops, the certainty that the initial owner of funds still controls them decreases as the number of hops increases.”).

that Dr. [REDACTED] has no basis to conclude that Mr. Larsen and Mr. Garlinghouse could have affected XRP prices through these transfers. Dr. [REDACTED] tracing analysis is, therefore, irrelevant and speculative. Dr. [REDACTED] claims about indirect transfers fails to support his claims and lacks quantification of the alleged price impact.

#### **IV. THE USE OF LOCK-UP RESTRICTION IS NOT UNIQUE TO SECURITIES AND CANNOT BE USED TO DISTINGUISH BETWEEN INVESTMENT CONTRACTS AND OTHER TYPES OF ASSETS**

54. Dr. [REDACTED] claims that lock-up restrictions on certain over-the-counter sales of XRP “functioned similarly to lock-up restrictions in a traditional company’s Initial Public Offering,”<sup>77</sup> but he fails to explain why the use of a lock-up restriction is relevant for assessing whether the economic substance of XRP constitutes an investment contract.

55. Dr. [REDACTED] single citation to Field and Hanka (2001) explains that lock-up agreements with pre-Initial Public Offering (“IPO”) shareholders serve specific purposes that he fails to discuss: “[t]hey reassure the market that key employees will continue to exert themselves for at least a few months; they provide a credible signal that insiders are not attempting to cash out in advance of imminent bad news; and they may aid the underwriters’ price support efforts by temporarily constraining the supply of shares.”<sup>78</sup> Therefore, even if IPOs have lock-up provisions, as Dr. [REDACTED] points out, his analogy is irrelevant here.

56. Ripple did not undertake an IPO. Ripple’s use of lock-up periods in its sales to institutional purchasers was not equivalent to sales to “insiders and other pre-IPO

---

<sup>77</sup> [REDACTED] Report, at ¶ 9.c. and at ¶¶ 41-43.

<sup>78</sup> Field, L., and G. Hanka, “The Expiration of IPO Share Lockups,” *The Journal of Finance* 56 (2), April 2001, 471-500, at 471.

shareholders.”<sup>79</sup> Investors in IPOs “wish to maximize share price performance” and “IPOs are ideal opportunities for investors to obtain a sizeable stake in companies.”<sup>80</sup> By virtue of owning shares in a company, investors in an IPO are entitled to a share of a company’s profits. In contrast, institutional XRP purchasers that agreed to lock-up provisions were not shareholders of Ripple. Moreover, as I discussed before and discuss below, none of Ripple’s contracts with institutional XRP purchasers entitled those purchasers to a share of Ripple’s profits should Ripple be successful in its ongoing efforts to manage and develop its business operations, nor do the contracts impose any obligation on Ripple to expend ongoing efforts on behalf of those purchasers to increase the price of XRP.<sup>81</sup> This is also true for the institutional purchasers analyzed by Dr. [REDACTED]. Dr. [REDACTED] cites agreements with various wholesale purchasers and market makers, such as [REDACTED] or [REDACTED].<sup>82</sup> As I show below, none of these contracts obligate Ripple to generate any returns for these holders of XRP; they do not entitle them to receive future cash flows from Ripple or any other source, and they confer not right to share in Ripple’s profits.

57. [REDACTED] and [REDACTED] contracts with XRP II, LLC (“XRP II”) are purchase and sale agreements for a product and would fall into the “Contracts with Wholesale Purchasers” category of contracts I analyzed in my opening report.<sup>83</sup> [REDACTED] Master Purchase Agreements with XRP II describe the relationship between the parties as an arms-length transaction: “[n]othing in this Agreement will be construed as creating an employer-

---

<sup>79</sup> Field, L., and G. Hanka, “The Expiration of IPO Share Lockups,” *The Journal of Finance* 56 (2), April 2001, 471-500, at 471.

<sup>80</sup> Geddes, R., *IPOs and Equity Offerings*, Butterworth-Heinemann – The Securities Institute, 2003, at 3.

<sup>81</sup> Ferrell Report, at ¶ 34 and ¶ 41.

<sup>82</sup> [REDACTED] Report, at ¶¶ 42-43.

<sup>83</sup> Ferrell Report, at ¶¶ 35-41.



employee or agency relationship, a partnership or a joint venture between the parties.”<sup>84</sup>

██████████ agreement further describes the sale/purchase transaction: “[██████████] will purchase and XRP II will sell the Purchased XRP at the Purchase Order Price.”<sup>85</sup> ██████████ agreement similarly states that XRP II “will agree to transfer XRP, the digital asset native to the XRP Ledger, to the Purchaser [██████████] against the transfer of funds, typically U.S. dollars, by the Purchaser [██████████] to the Company.”<sup>86</sup> Further, upon delivery of XRP to the purchaser, “market risk and benefit [rests] solely with the Purchaser [██████████].”<sup>87</sup> Similarly, “[i]mmediately upon the Company’s delivery of the Purchased XRP to the Purchaser, all title to and risk of loss related to such XRP passes to the Customer [██████████].”<sup>88</sup> Neither one of these agreements entitle ██████████ nor ██████████ to a share of Ripple’s profits.

58. The contract between ██████████ and Ripple is a marketing and incentive contract, similar to the ones I analyzed in my opening report under section “Marketing and Incentive Contracts.”<sup>89</sup> ██████████ agreed to develop a mobile and web-based digital asset wallet that is compatible with the Interledger protocol (“ILP”) to market and publicize the wallet’s use of ILP to ██████████ 1.3 million users, and to actively contribute to the open source codebase of ILP.<sup>90</sup>

---

<sup>84</sup> ██████████ and XRP II, LLC, *Master Purchase Agreement*, November 29, 2014 (RPLI\_SEC 0259585, at 590); ██████████ and XRP II, LLC, *Master XRP Purchase Agreement*, February 22, 2018 (RPLI\_SEC 0233130, at 137).

<sup>85</sup> ██████████ and XRP II, LLC, *Master Purchase Agreement*, November 29, 2014 (RPLI\_SEC 0259585, at 586).

<sup>86</sup> ██████████ and XRP II, LLC, *Master XRP Purchase Agreement*, February 22, 2018 (RPLI\_SEC 0233130, at 130).

<sup>87</sup> ██████████ and XRP II, LLC, *Master Purchase Agreement*, November 29, 2014 (RPLI\_SEC 0259585, at 587).

<sup>88</sup> ██████████ and XRP II, LLC, *Master XRP Purchase Agreement*, February 22, 2018 (RPLI\_SEC 0233130, at 132).

<sup>89</sup> Ferrell Report, at ¶¶ 66-70.

<sup>90</sup> ██████████ and Ripple Labs, *XRP Incentive Agreement*, May 24, 2019 (RPLI\_SEC 0298094, at 094-095).

Ripple, in turn, agreed to pay [REDACTED] in XRP.<sup>91</sup> “Immediately upon the Ripple’s delivery of the XRP Incentive to [REDACTED], all title to and risk of loss related to such XRP passes to [REDACTED].”<sup>92</sup> [REDACTED] marketing and incentive contract is a transactional service contract between two parties and does not entitle [REDACTED] to a share of Ripple’s profits.

59. The contract between Ripple and [REDACTED] Dr. [REDACTED] cites is a programmatic market maker agreement, which is the same agreement I analyzed in my opening report<sup>93</sup> and found that “unlike the private equity ownership contracts, the contracts with market makers do not give these entities any contractual right to a share of Ripple’s profits if Ripple is successful in its ongoing efforts to manage and develop its business operations or impose any obligation on Ripple to expend ongoing efforts to increase the price of XRP. Regardless of whether Ripple’s efforts are ultimately successful, the market maker, such as [REDACTED] ... has a contractual right to the specified compensation if the market maker performs its obligations under the agreement.”<sup>94</sup>

60. The contract with [REDACTED] does not “give [REDACTED] any contractual right to a share of Ripple’s profits if Ripple is successful in its ongoing efforts to manage and develop its business operations or impose any obligation on Ripple to expend ongoing efforts to increase the price of XRP. In this sense, it is similar to an entity purchasing diamonds from De

---

<sup>91</sup> [REDACTED] and Ripple Labs, *XRP Incentive Agreement*, May 24, 2019 (RPLI\_SEC 0298094, at 094).

<sup>92</sup> [REDACTED] and Ripple Labs, *XRP Incentive Agreement*, May 24, 2019 (RPLI\_SEC 0298094, at 095).

<sup>93</sup> [REDACTED] and Ripple Markets, *Market Maker and Programmatic Market Activity Agreement*, February 14, 2017 (RPLI\_SEC 0899145); Ferrell Report, at ¶¶ 46-51.

<sup>94</sup> Ferrell Report, at ¶ 51.

Beers or barrels of oil from Exxon Corporation.”<sup>95</sup> Nothing Dr. [REDACTED] says changes this opinion I expressed in my opening report.

61. Lock-up provisions are also not unique to investment contracts. For example, art dealers use contractual terms that prevent buyers from reselling art for a fixed period of time.<sup>96</sup> This provision does not mean that art is a security or has the economic substance of a security. Certain homeowner associations have various rental restrictions, including “a mandatory waiting period; i.e., someone must own a unit for one year before renting it out.”<sup>97</sup> This provision does not mean that the homes are securities or have the economic substance of a security. Some employment contracts contain a non-compete clause, where an employee cannot work for a competitor in the same industry for a certain amount of time.<sup>98</sup> Such provisions do not mean that the employment contracts have the economic substance of a security.

62. Therefore, Ripple’s use of lock-up provisions, even if the lock-up was to limit immediate supply in the market, is irrelevant to assess whether XRP is an investment contract because it cannot be used to distinguish between investment and non-investment contracts.

**V. DR. [REDACTED] CLAIMS ABOUT XRP BEING USED IN A SIMILAR MANNER AS COMPANIES USE STOCK IS IRRELEVANT FOR ASSESSING WHETHER XRP HAS THE ECONOMIC SUBSTANCE OF AN INVESTMENT CONTRACT**

63. I demonstrated before that the economic substance of the various contracts Ripple entered into for the distribution of XRP are not similar in their economic substance to contracts

---

<sup>95</sup> Ferrell Report, at ¶ 41.

<sup>96</sup> “Dealers Try to Repel Speculators by Making Buyers Agree Not to Flip Their Art. But Can Those Contracts Actually Be Enforced?” *ArtNet News*, November 18, 2020, <https://news.artnet.com/art-world/galleries-legal-resale-clauses-1924336>.

<sup>97</sup> “Can an HOA Restrict Rentals? (Spoiler Alert: Yes)” *Million Acres*, December 16, 2019, <https://www.millionacres.com/real-estate-investing/rental-properties/can-hoa-restrict-rentals-spoiler-alert-yes/>.

<sup>98</sup> See, e.g., “How Noncompete Clauses Keep Workers Locked In,” *The New York Times*, May 13, 2017.

entered into by Ripple that created various equity and debt obligations. None of Ripple's contracts for the distribution of XRP entitles the holder of XRP to a share of Ripple's profits if Ripple is successful in its ongoing efforts to manage and develop its business operations and none of these contracts require Ripple to expend ongoing efforts to increase the price of XRP.<sup>99</sup>

64. For example, the executive compensation packages resulted in employees, as part of their compensation for their services, owning an asset (subject to various conditions such as vesting). Unlike the private equity ownership contracts, the compensation contracts do not give the employees any contractual right to a share of Ripple's profits if Ripple is successful in its ongoing efforts to manage and develop its business operations or impose any obligation on Ripple to expend ongoing efforts to increase the price of XRP.<sup>100</sup>

65. The fact that Ripple may have used the proceeds of its sales of XRP to help fund its own operations does not change the economic substance of the transaction or create any obligations on the part of Ripple to share its profits with the purchasers of XRP. Therefore, Dr. [REDACTED] claims about XRP being used in a similar manner as companies use stock is irrelevant for assessing whether XRP has the economic characteristics of an investment contract.

66. Even though sales of XRP generate revenue for Ripple's business, as Dr. [REDACTED] suggests, the sale of an asset, even if the seller uses it to fund other activities, does not create a relationship in which the buyer receives a right to future profits from the seller, or in which the seller is obligated to work to generate a future return on that asset. For example, de Beers sales of diamonds or Exxon Corporation sales of barrels of oil generates cash for these entities, but that

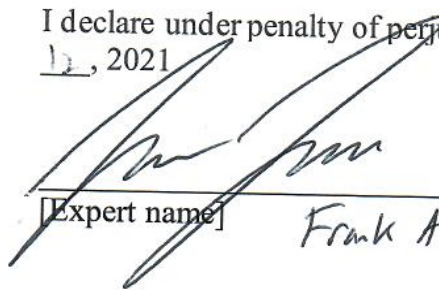
---

<sup>99</sup> Ferrell Report, at Section II.C.

<sup>100</sup> Ferrell Report, at Section II.C.

does not give diamonds or oil the economic substance of securities. XRP does not do that either, and Dr. [REDACTED] does not attempt to argue otherwise.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November  
12, 2021

  
[Expert name] Frank Allen Ferrell

**Exhibit 1**  
**Intra-Day Trading Volume on September 15, 2016**

Activity Period (UTC)	GSR XRP Ledger		Cryptocurrency Exchanges	
	Volume in Time Period	Share of Volume (%)	Volume in Time Period	Share of Volume (%)
07:00 to 13:00	0	0%	18909793	1%
13:00 to 19:00	21,038,351	30%	1,572,842,549	55%
Total Time Period	69,917,897	100%	2,841,556,077	100%

Sources: ██████████ Backup Materials; SEC-LIT-EPROD-001847955; SEC-LIT-EPROD\_001849640; CryptoCompare.

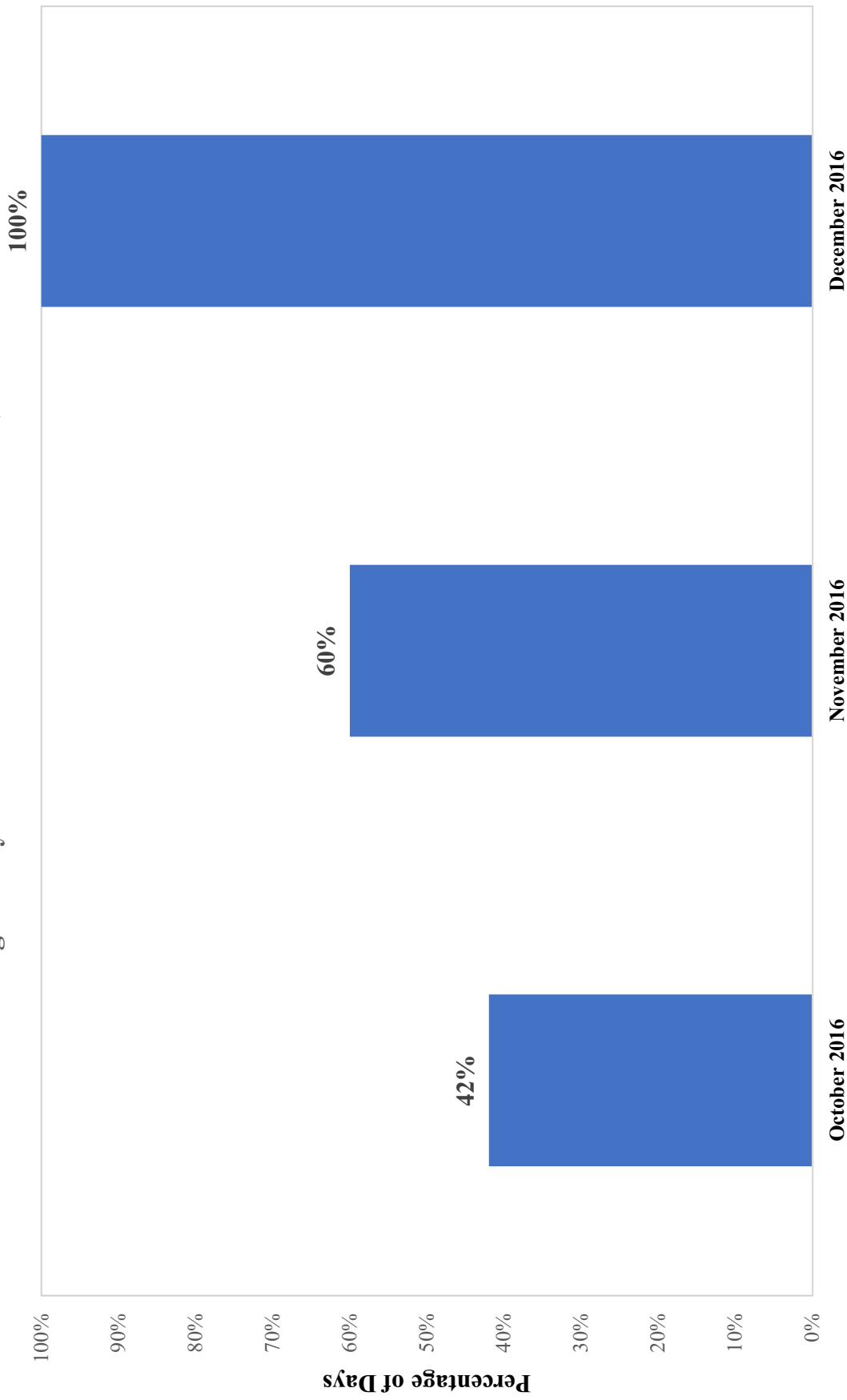
Notes:

[1] Share of volume is the share of the GSR or the exchange volume during the time period divided by the total GSR or the total exchange volume (reported by CryptoCompare) from 06:00 UTC September 15, 2016 to 13:00 UTC September 16, 2016.

[2] GSR volume equals the total purchases plus sales by GSR on the XRP ledger. Exchange volume is the total volume at cryptocurrency exchanges reported by CryptoCompare.

[3] Total Time Period is 06:00 UTC September 15, 2016 to 13:00 UTC September 16, 2016.

**Exhibit 2**  
**Percentage of Days With XRP Prices Lower Than \$0.008**



Source: SEC-LIT-EPROD-001848656.

Note: Percentage of Days is the percentage of days with a daily low price below \$0.008.



**Exhibit 3**  
**XRP Price Returns**  
**September 23, 2016 - September 28, 2016**

Date Range	XRP Price Return
9/23-9/24	7.6%
9/25-9/26	8.2%
9/27-9/28	13.6%

Source: SEC-LIT-EPROD-001848656.

Notes:

[1] All returns are from close-to-close price of XRP.

[2] Close is the XRP price as of midnight UTC.

**Exhibit 4**  
**GSR Purchases and Sales and Hourly XRP Returns**  
**April 11, 2016**

Hour Before and After GSR "Reversal"	GSR XRP Purchases	GSR XRP Sales	GSR Net Purchases and Sales	XRP Hourly Return	Cumulative Hourly Return
-5	187,318	-254,456	-67,138	-0.2%	-0.2%
-4	749,000	-959,553	-210,552	-0.4%	-0.7%
-3	647,039	-413,843	233,196	-0.1%	-0.7%
-2	1,838,348	-2,265,589	-427,241	4.8%	4.1%
-1	399,628	-3,124,961	-2,725,333	2.0%	<b>6.2%</b>
1	1,883,720	-401,119	1,482,601	1.0%	1.0%
2	1,005,048	-57,915	947,134	3.3%	4.4%
3	1,229,106	-400,707	828,399	-1.5%	2.8%
4	3,950,235	-475,237	3,474,999	-2.6%	0.2%
5	5,822,582	-283,410	5,539,172	-3.4%	<b>-3.2%</b>

Sources: █████ Backup Materials; SEC-LIT-EPROD-001847955; SEC-LIT-EPROD\_001849640; CryptoCompare.

Note: The thick blue line corresponds to the 0<sup>th</sup> hour or 9:00am UTC when GSR allegedly reversed their trading according to Dr. █████. See █████ Report, Figure 4 and ¶ 24 ("Instead of net selling, XRP began net buying around 9:00am UTC.")

**Exhibit 5**  
**GSR's Net XRP Purchases on Behalf of Mr. Larsen at Poloniex**

Date Range Shown in Dr. Figure 5		GSR Net Purchases of XRP/BTC at Poloniex		Absolute Value of Net Purchases of GSR as Percentage of Volume		Approximate Price Impact of Mr. Larsen Purchases and Sales	
				Daily XRP/BTC Return			
06/02/17		-363,155		-15.33%	0.11%		-0.26%
06/03/17		-465,792		-1.75%	0.21%		-0.49%
06/04/17		-310,157		0.88%	0.17%		-0.29%
06/05/17		-280,636		-7.63%	0.27%		-0.17%
06/06/17		-442,544		-8.15%	0.26%		-0.37%
06/07/17		-311,241		3.20%	0.15%		-0.20%
06/08/17		-281,308		-0.07%	0.21%		-0.18%
06/09/17		-408,377		-1.98%	0.34%		-0.27%
06/10/17		758,667		-10.56%	0.44%		0.38%
06/11/17		366,759		2.41%	0.32%		0.32%
06/12/17		1,497,937		1.29%	0.95%		0.48%
06/13/17		0		4.61%	0.00%		0.00%
06/14/17		0		9.73%	0.00%		0.00%
06/15/17		0		-4.78%	0.00%		0.00%

Sources: CIRCLE\_00001699; SEC-LIT-EPROD-001849685 to SEC-LIT-EPROD-001849715; GSR000000101 to GSR000000103; RPLI\_SEC 0679467; Poloniex.

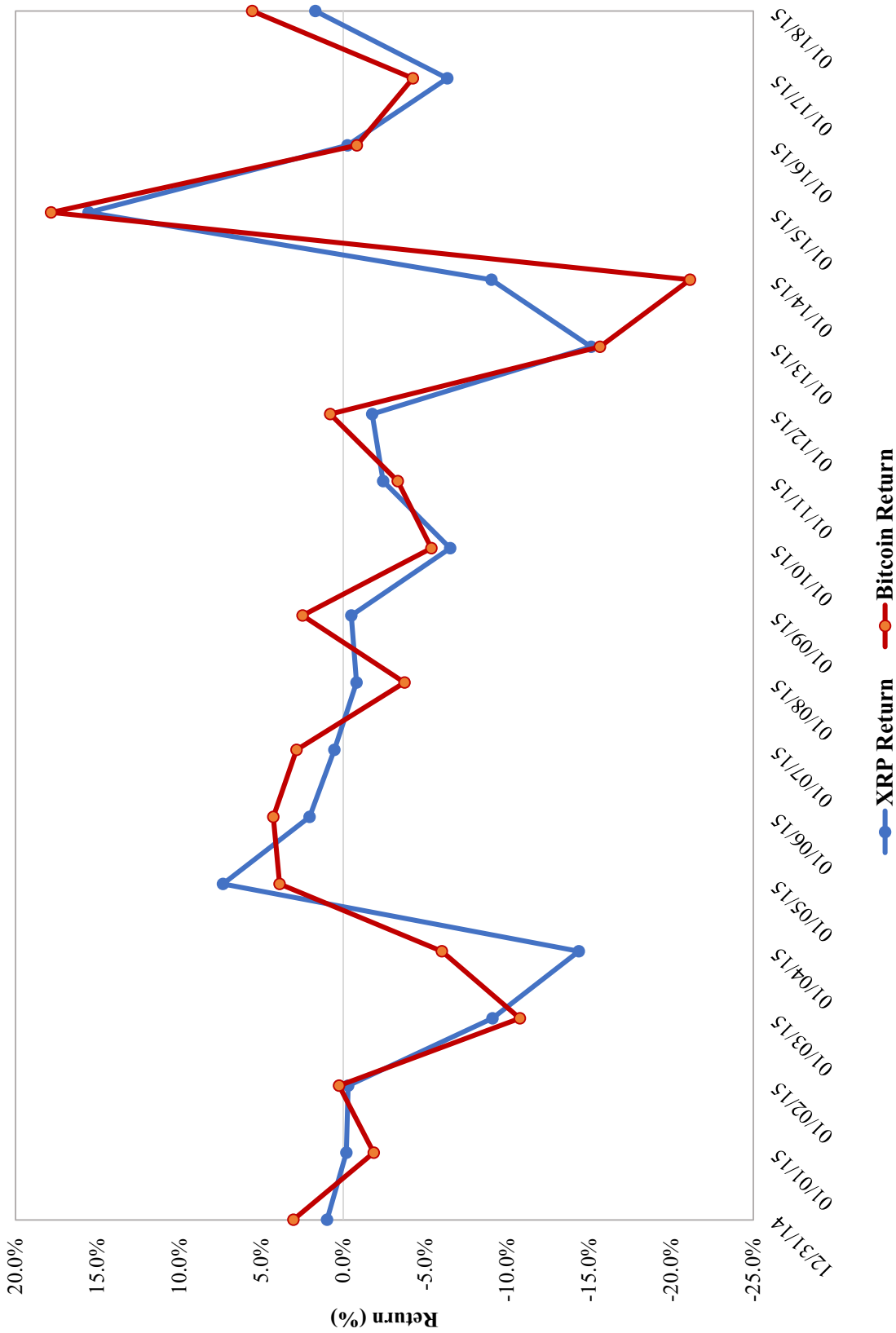
Notes:

[1] Daily Return is the return from the closing price on the previous day. Close is the XRP price as of midnight UTC.

[2] Net purchases is GSR's purchases minus sales of XRP/BTC at Poloniex. Volume is XRP/BTC volume at Poloniex.

[3] Price impact uses the formula based on Bouchaud, J., J. Bonart, J. Donier and M. Gould, Trades, Quotes and Prices: Financial Markets Under the Microscope, Cambridge University Press, 2018, at 235-237, and Donier, J., and J. Bonart, "A Million Metaorder Analysis Impact on the Bitcoin," *Market Microstructure and Liquidity* 1(2), 2015.

**Exhibit 6.A.**  
**Daily XRP Return Versus Daily BTC Return**



Source: CoinMarketCap.

**Exhibit 6.B.**

**Comparison of Net GSR Sales on Negative Return Days to Overall**

Date Range	Day with Negative Return of More than 10%		Overall	
	Ratio of Average Daily Net		Ratio of Average Daily Net	
	Number of Days	Sales to Average Daily Volume	Sales to Average Daily Volume	Sales to Average Daily Volume
11/1/2014 to 1/31/2017	39	3.30%		3.26%
6/1/2017 to 9/12/2017	7	0.11%		0.14%
9/13/2017 to 9/30/2019	31	0.10%		0.08%

Sources: GSR000000101 to GSR000000103; RPLI\_SEC 0679467; CryptoCompare; CoinMarketCap.

Note: The date ranges correspond to Dr. [REDACTED] date ranges when GSR was active.

**Exhibit 7**  
**Regressions of Imbalances and XRP Price Returns**

	[A]: Normalized by Circulating Supply				[B]: Normalized by Volume			
	Imbalance		Return		Imbalance		Return	
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
Constant	-2.26 *** (0.37)	-2.25 *** (0.37)	0.00 (0.00)	0.00 (0.00)	-0.00 *** (0.00)	-0.00 *** (0.00)	0.00 (0.00)	0.00 (0.00)
Return (t)		-4.94 (8.43)				0.01 (0.01)		
Return (t-1)	-14.96 *** (5.01)	-14.60 *** (4.87)	0.07 (0.07)	0.07 (0.07)	-0.01 (0.01)	-0.01 (0.01)	0.07 (0.07)	0.07 (0.07)
Return (t-2)	-6.89 (4.19)	-6.59 (4.09)	0.06 (0.09)	0.06 (0.09)	-0.01 (0.01)	-0.01 (0.01)	0.06 (0.09)	0.06 (0.09)
Return (t-3)	-0.02 (3.73)	-0.01 (3.69)	0.00 (0.03)	0.00 (0.03)	0.01 (0.00)	0.01 (0.01)	0.00 (0.03)	0.00 (0.03)
Return (t-4)	-2.59 (3.54)	-2.59 (3.57)	0.00 (0.03)	0.00 (0.03)	0 (0.00)	0 (0.00)	-0.01 (0.03)	-0.01 (0.03)
Return (t-5)	0.06 (3.37)	0.27 (3.33)	0.04 (0.04)	0.04 (0.04)	0 (0.00)	0 (0.00)	0.04 (0.04)	0.04 (0.04)
Imbalance (t)				-25.37 (44.60)				0.07 (0.06)
Imbalance (t-1)	0.45 *** (0.07)	0.45 *** (0.07)	8.25 (20.87)	19.72 (26.57)	0.32 *** (0.07)	0.31 *** (0.07)	0.12 (0.07)	0.09 (0.08)
Imbalance (t-2)	0.06 (0.05)	0.06 (0.05)	16.85 (20.30)	18.33 (20.48)	0.21 *** (0.06)	0.21 *** (0.06)	-0.06 (0.06)	-0.08 (0.06)
Imbalance (t-3)	0.03 (0.05)	0.03 (0.05)	-5.09 (15.23)	-4.38 (15.44)	0.10 (0.06)	0.10 (0.06)	0.010 (0.05)	0.010 (0.05)
Imbalance (t-4)	0.04 (0.05)	0.04 (0.05)	22.79 (17.10)	23.76 (17.35)	0.16 *** (0.04)	0.16 *** (0.04)	0.12 * (0.06)	0.11 * (0.06)
Imbalance (t-5)	0.09 ** (0.04)	0.09 ** (0.04)	4.35 (16.24)	6.51 (17.16)	0.07 * (0.04)	0.07 * (0.04)	-0.06 (0.07)	-0.07 (0.07)
Observations	1424	1424	1424	1424	1424	1424	1424	1424
Adjusted R2	0.29	0.29	0.01	0.01	0.51	0.51	0.01	0.01

Sources: GSR000000101; GSR000000102; GSR000000103; RPLI\_SEC 0679467; SEC- [REDACTED] E-0047622; SEC-LIT-EPROD-001848656.

Notes:

[1] Standard errors are robust to heteroskedasticity.

[2] \* indicates significance at the 10% level, \*\* at the 5% level, \*\*\* at the 1% level.

[3] Following Dr. [REDACTED] methodology, when I normalize by the circulating supply in columns A.1 - A.4, imbalances are scaled by 100,000 in the imbalance regressions but not in the return regression. See,

[REDACTED] Table 1.

[4] When I normalize by the volume, in columns B.1 - B.4, imbalances are scaled by 100,000 in the imbalance regressions and the return regression.

[5] In the volume-normalized columns imbalances are scaled up by 100,000.

[6] Volume is the total amount of currency exchanged as either a buy or sell according to CoinMarketCap.

Exhibit 8

Examples of Alleged Indirect Transfers of XRP from Mr. Larsen and Mr. Garlinghouse to GSR Traced by Dr. [REDACTED]

Hop Number	From Address ID	From Address	Timestamp of Transferred Units	Units of XRP Transferred	Destination Address ID	Destination Address	Units of XRP Traced by Dr. [REDACTED]	Cumulative Number of Days From Larsen or Garlinghouse Wallet Transfer
1	Larsen (Active)	[REDACTED]	5/22/17 6:30 PM	20,000,000	Another Party	[REDACTED]	2,083,313	0
2	Another Party	[REDACTED]	10/23/17 7:01 PM	2,083,333	Another Party	[REDACTED]	2,083,313	154
3	Another Party	[REDACTED]	3/26/18 2:45 AM	2,083,313	GSR	[REDACTED]	2,083,313	307
1	Garlinghouse (XRP Award 3)	[REDACTED]	6/10/20 6:45 PM	31,249,900	Another Party	[REDACTED]	9,999,900	0
2	Another Party	[REDACTED]	8/7/20 5:56 PM	9,999,900	GSR	[REDACTED]	9,999,900	58

Sources: SEC-LIT-EPROD-001851401; SEC-LIT-EPROD-001851404; SEC-LIT-EPROD-001851408; SEC-LIT-EPROD-001851409.

Note: SEC-LIT-EPROD-001851408 and SEC-LIT-EPROD-001851409 do not include the address IDs for the wallets in between the initial Garlinghouse and Larsen wallets and final destination wallet. When the Address ID has not been provided, "Another Party" is indicated above.

## Appendix A

October, 2021

### Allen Ferrell

Harvard Law School  
Cambridge, Massachusetts 02138  
Telephone: [REDACTED]  
Email: [REDACTED]

#### CURRENT POSITIONS

*Greenfield Professor of Securities Law*, Harvard Law School

*Visiting Professor*, Stanford Law School

*National Bureau of Economic Research*, Research Associate

*Member of Editorial Board*, Journal of Financial Perspectives

*Fellow*, Columbia University's Program on the Law and Economics of Capital Markets

*Faculty Associate*, Kennedy School of Government

*Research Associate*, European Corporate Governance Institute

#### EDUCATION

*Massachusetts Institute of Technology*, Ph.D. in Economics, 2005  
Fields in econometrics and finance

*Harvard Law School*, J.D., 1995, *Magna Cum Laude*

- Recipient of the *Sears Prize* (award given to the two students with the highest grades)
- Editor, *Harvard Law Review*

*Brown University*, B.A. and M.A., 1992, *Magna Cum Laude*

#### PREVIOUS POSITIONS

*Harvard University Fellow*  
Harvard Law School, 1997

*Law Clerk*, Justice Anthony M. Kennedy  
Supreme Court of the United States; 1996 Term

*Law Clerk*, Honorable Laurence H. Silberman  
United States Court of Appeals for the District of Columbia; 1995 Term



## **COURSES TAUGHT**

*Contracts*  
*Corporate Finance*  
*Law and Finance*  
*Securities Litigation & Regulation*

## **REFEREE FOR FOLLOWING JOURNALS**

*American Law and Economics Review*  
*Journal of Corporation Finance*  
*Journal of Finance*  
*Journal of Financial Perspectives*  
*Journal of Law and Economics*  
*Journal of Law, Economics and Organization*  
*Journal of Legal Studies*  
*Quarterly Journal of Economics*

## **CONSULTING AREAS**

Price Impact and Securities Damages, Valuation, Mergers & Acquisitions

## **Papers**

“Are Star Law Firms Better Law Firms?” with Manconi, Neretina, Powley & Renneboog, Working Paper (2021)

“How Accurate are Matrix Bond Prices?” with Drew Roper & Yibai Shu, Working Paper (2018)

“New Special Study of the Securities Markets: Intermediaries” with John Morley in SECURITIES MARKET ISSUES FOR THE 21ST CENTURY (2018) (editors Fox, Glosten, Greene and Patel)

“Socially Responsible Firms,” with Hao Liang and Luc Renneboog, 122 *Journal of Financial Economics* 586-606 (2016) (winner of Moskowitz Prize for outstanding quantitative research)

“Price Impact, Materiality, and *Halliburton II*” with Drew Roper, 93 *Washington University Law Review* 553 (2016)

“Introducing the CFGM Corporate Governance Database: Variable Construction and Comparison” with Cremers, Gompers and Andrew Metrick, Working Paper

“The Benefits and Costs of Indices in Empirical Corporate Governance Research,” in OXFORD HANDBOOK ON CORPORATE LAW AND GOVERNANCE (2016)

“Thirty Years of Shareholder Rights and Stock Returns,” with Martijn Cremers, *revise and resubmit Journal of Financial Economics*

“Thirty Years of Shareholder Rights and Firm Valuation,” with Martijn Cremers, 69 *Journal of Finance* 1167 (2014)

“Rethinking *Basic*,” with Lucian Bebchuk, 69 *Business Lawyer* 671 (2014)

“Calculating Damages in ERISA Litigation,” with Atanu Saha, 1 *Journal of Financial Perspectives* 93 (2013)

“Forward-casting 10b-5 Damages: A Comparison to other Methods”, with Atanu Saha, 37 *Journal of Corporation Law* 365 (2011)

“Event Study Analysis: Correctly Measuring the Dollar Impact of an Event” with Atanu Saha, Working Paper (2011)

“Legal and Economic Issues in Litigation arising from the 2007-2008 Credit Crisis,” with Jennifer Bethel and Gang Hu, in PRUDENT LENDING RESTORED: SECURITIZATION AFTER THE MORTGAGE MELTDOWN (2009)

“Securities Litigation and the Housing Market Downturn,” with Atanu Saha, 35 *Journal of Corporation Law* 97 (2009)

“The Supreme Court’s 2005-2008 Securities Law Trio: *Dura Pharmaceuticals*, *Tellabs*, and *Stoneridge*,” 9 *Engage* 32 (2009)

“What Matters in Corporate Governance?” with Lucian Bebchuk & Alma Cohen, 22 *Review of Financial Studies* 783 (2009)

“Do Exchanges, CCPs, and CSDs have Market Power?,” in GOVERNANCE OF FINANCIAL MARKET INFRASTRUCTURE INSTITUTIONS (Ruben Lee) (2009)

“An Asymmetric Payoff-Based Explanation of IPO ‘Underpricing’,” Working Paper, with Atanu Saha (2008)

“The Law and Finance of Broker-Dealer Mark-Ups,” commissioned study for NASD using proprietary database (2008)

“Majority Voting” in REPORT OF THE COMMITTEE ON CAPITAL MARKETS REGULATION (2008)

“The Loss Causation Requirement for Rule 10B-5 Causes of Action: The Implications of *Dura Pharmaceuticals v. Broudo*,” with Atanu Saha, 63 *BUSINESS LAWYER* 163 (2007)

“Mandated Disclosure and Stock Returns: Evidence from the Over-the-Counter Market,” 36 *Journal of Legal Studies* 1 (June, 2007)

“Policy Issues Raised by Structured Products,” with Jennifer Bethel, in BROOKINGS –NOMURA PAPERS IN FINANCIAL SERVICES (2007)

“The Case for Mandatory Disclosure in Securities Regulation around the World,” 2 *Brooklyn Journal of Business Law* 81 (2007)

“U.S. Securities Regulation in a World of Global Exchanges,” with Reena Aggarwal and Jonathan Katz, in *EXCHANGES: CHALLENGES AND IMPLICATIONS* (2007)

“Shareholder Rights” in *REPORT OF THE COMMITTEE ON CAPITAL MARKETS REGULATION* (2007)

“Creditor Rights: A U.S. Perspective,” 22 *Angler- und Glaubigerschutz bei Handelsgesellschaften* 49 (2006)

“Measuring the Effects of Mandated Disclosure,” 1 *Berkeley Business Law Journal* 369 (2004)

“If We Understand the Mechanisms, Why Don’t We Understand the Output?,” 37 *Journal of Corporation Law* 503 (2003)

“Why European Takeover Law Matters,” in *REFORMING COMPANY AND TAKEOVER LAW IN EUROPE* (2003)

“Does the Evidence Favor State Competition in Corporate Law?,” with Alma Cohen & Lucian Bebchuk, 90 *California L. Rev.* 1775 (2002)

“Corporate Charitable Giving,” with Victor Brudney, 69 *Univ. Of Chicago Law Review* 1191 (2002)

“A Comment on Electronic versus Floor-Based Securities Trading,” *Journal of Institutional and Theoretical Economics* (Spring 2002)

“Much Ado About Order Flow,” *Regulation Magazine* (Spring 2002)

“On Takeover Law and Regulatory Competition,” with Lucian Bebchuk, 57 *Business Lawyer* 1047 (2002)

“Federal Intervention to Enhance Shareholder Choice,” with Lucian Bebchuk, 87 *Virginia Law Review* 993 (2001)

“A New Approach to Regulatory Competition in Takeover Law,” with Lucian Bebchuk, 87 *Virginia Law Review* 111 (2001)

“A Proposal for Solving the ‘Payment for Order Flow’ Problem,” 74 *Southern California Law Review* 1027 (2001)

“Federalism and Takeover Law: The Race to Protect Managers from Takeovers,” with Lucian Bebchuk, 99 *Columbia L. Rev.* 1168 (1999)

## TESTIMONY LAST FOUR YEARS

*In re Robinhood Litigation*, Case No. 3:20-cv-01626-JD, Expert reports and deposition on September 30, 2021

*In re P3 Health Group Holdings, LLC*, Case No. 2021-0518-JTL, Expert report and deposition on August 26, 2021

*Securitized Asset Funding 2011-2 v. CIBC*, Case Index No. 653911/2015, Expert report and deposition on July 30, 2021

*Pearlstein et al. v. Blackberry Limited*, Case No. 1:13-cv-7060-CM, Expert report and deposition on November 3, 2020

*In re Grupo Televisa Securities Litigation*, Case No. 1:18-cv-01979-LLS, Expert report and deposition on February 21, 2020

*In re Snap Securities Litigation*, Case No. 2:17-cv-03679-SVW-AGR, Expert report and deposition on December 16, 2019

*People of the State of New York v. Exxon Mobil Corporation*, Index No. 452044/2018, Expert report and deposition on July 23, 2019 and trial testimony on November 6, 2019

*In re Signet Jewelers Limited Securities Litigation*, Case No. 1:16-cv-06728-CM, Expert report and deposition on May 14, 2019

*Trustees of DALI et al. v. Barrick Gold Corporation*, Case No. CV-14-502316-00CP, Ontario Superior Court of Justice, Expert reports and deposition on April 16, 2019

*Ramirez v. Exxon Mobil Corporation et al.*, Case No. 3:16-cv-031110K, Expert report and deposition on March 22, 2019

*CC IMA v. IMA Pizza*, JAMS Ref No. 1425026556, Testimony on September 13, 2018

*Bradley Cooper v. Thoratec Corporation et al.*, Case No. 4:14-cv-00360-CW, Expert report and deposition on April 11, 2018

*Blattman v. C3, Inc. et al.*, Case No. 1:15-cv-00530-GMS, Expert report and deposition on December 22, 2017

*United States v. Kaleil Tuzman*, 15 Criminal Case No. 536 (US Attorney for the Southern District of New York), testimony on December 15 and 18, 2017

## **Appendix B: Materials Considered**

### **Court Documents**

First Amended Complaint, *Securities and Exchange Commission v. Ripple Labs, et al.*, No. 1:20-cv-10832 (S.D.N.Y. February 18, 2021)

### **Expert Reports**

Expert Report of Allen F. Ferrell, October 4, 2021

Amended Expert Report of [REDACTED], October 13, 2021 and backup

### **Ripple Company Documents**

Ripple Labs, Inc., *Good Standing Certificate*, December 1, 2014

Ripple Labs, Inc., *Consolidated Financial Statements*, December 31, 2014 – December 31, 2020

### **Academic Literature, Regulatory, and Practitioner Publications**

Bouchaud, J., J. Bonart, J. Donier, and M. Gould, Trades, Quotes and Prices: Financial Markets Under the Microscope, Cambridge University Press, 2018

Chordia, T., and A. Subrahmanyam, “Order imbalance and individual stock returns: Theory and evidence,” *Journal of Financial Economics* 72 (2004) 485-518

Donier, J., and J. Bonart, “A Million Metaorder Analysis Impact on Bitcoin,” *Market Microstructure and Liquidity* 1(2), 2015

Field, L., and G. Hanka, “The Expiration of IPO Share Lockups,” *The Journal of Finance* 56(2), April 2001, 471-500

Geddes, R., IPOs and Equity Offerings, Butterworth-Heinemann – The Securities Institute, 2003

Harris, L., Trading & Exchanges: Market Microstructure for Practitioners, Oxford University Press, 2003

### **News Articles and Press Releases**

“A Guide to UBS Algorithms, UBS Electronic Execution - FX,” *UBS*, August 2019.

“Can an HOA Restrict Rentals? (Spoiler Alert: Yes)” *Million Acres*, December 16, 2019, <https://www.millionacres.com/real-estate-investing/rental-properties/can-hoa-restrict-rentals-spoiler-alert-yes/>

“Dealers Try to Repel Speculators by Making Buyers Agree Not to Flip Their Art. But Can Those Contracts Actually Be Enforced?” *ArtNet*, November 18, 2020, <https://news.artnet.com/art-world/galleries-legal-resale-clauses-1924336>

“How Noncompete Clauses Keep Workers Locked In,” *The New York Times*, May 13, 2017

“Market Regulation Advisory Notice,” *CME*, <https://www.cmegroup.com/rulebook/files/cme-group-Rule-526.pdf>.

Signorelli, J., “Futures Traders Use Execution Algorithms for Alpha and Timing,” *Futures Magazine*, January 6, 2020, <http://www.futuresmag.com/2020/01/06/futures-traders-use-execution-algorithms-alpha-and-timing>

Sinden, D., “Citi Launches a New Suite of Futures Trading Algos,” *Finance Feeds*, January 22, 2021, <https://financefeeds.com/citi-launches-new-suite-futures-trading-algos/>

Smith, A., “FX Algos and Auto-Pricing on the Rise as Traders Look to Minimize Market Impact, Says Bloomberg FXGO Head,” *The Trade News*, June 18, 2021, <https://www.thetradenews.com/fx-algos-and-auto-pricing-on-the-rise-as-traders-look-to-minimise-market-impact-says-bloomberg-fxgo-head/>

Wood, G. “Transaction Cost Analysis for Futures,” *CME Group*, June 2011, <https://www.cmegroup.com/education/files/TCA-4.pdf>

### **Bates-Stamped Documents**

RPLI\_SEC 0233130

RPLI\_SEC 0259585

RPLI\_SEC 0298094

RPLI\_SEC 0899145

### **Data Sources**

CryptoCompare

Poloniex